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, 2020, 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 2, 2020. 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 196 to 202 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 2021", "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 2021 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 2021" 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 and the expectation that oil prices will remain well below year-ago levels, 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, legal, conduct, regulatory and environmental and related social 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; 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 2020.

Changes made to our business segments

- We changed the way that we allocate capital to our strategic business units (SBUs). Previously, we utilized an economic capital model to attribute capital to our SBUs and calculate segmented return on equity. Effective November 1, 2019, capital is allocated to the SBUs based on the estimated amount of regulatory capital required to support their businesses. Segmented return on equity is a non-GAAP measure (see the "Non-GAAP measures" section for additional details).
- The transfer pricing methodology used by Treasury was enhanced to align with the changes that we made to our capital allocation methodology as discussed above. Concurrently with this change, we also made other updates and enhancements to our funds transfer pricing methodology as well as minor updates to certain allocation methodologies.

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.

Adoption of IFRS 16 "Leases"

Effective November 1, 2019, we adopted IFRS 16 "Leases" (IFRS 16) using the modified retrospective approach, without restatement of comparative periods.

Overview

CIBC is a leading North American financial institution with a market capitalization of $44 billion and a Basel III Common Equity Tier 1 (CET1) ratio of 12.1% as at October 31, 2020. Through our four SBUs – Canadian Personal and Business Banking, Canadian Commercial Banking and Wealth Management, U.S. Commercial Banking and Wealth Management, and Capital Markets – CIBC provides a full range of financial products and services to 10 million personal banking, business, public sector and institutional clients in Canada, the U.S. and around the world. We have approximately 44,000 employees dedicated to providing our clients with banking solutions for a modern world, delivering consistent and sustainable earnings growth for our shareholders, and giving back to our communities.

CIBC's strategy

At CIBC, our goal is to deliver superior client experience and top-tier shareholder returns while maintaining our financial strength. To achieve this, we are executing on three strategic priorities:

- Focusing on key client segments to accelerate our earnings growth;
- Simplifying and transforming to deliver a modern relationship-banking proposition; and
- Advancing our purpose-driven culture.

Performance against objectives

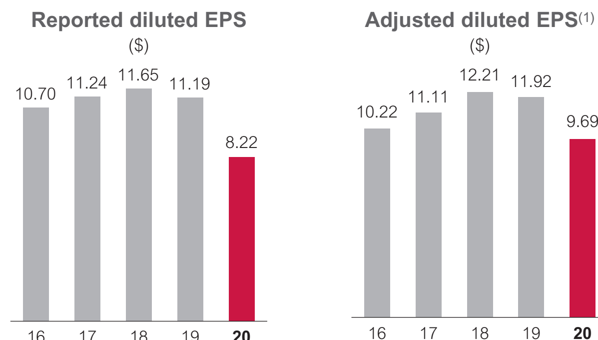
For many years, CIBC has reported a scorecard of financial measures that we use to evaluate and report on our progress to external stakeholders. These measures can be categorized into four key areas – earnings growth, operational efficiency, profitability, and balance sheet strength. We have set targets for each of these measures over the medium term, which we define as three to five years.

On March 11, 2020, the outbreak of COVID-19 was officially declared a pandemic by the World Health Organization (WHO). The COVID-19 pandemic has had a significant adverse impact on the global economy, and has negatively impacted our results in fiscal 2020. Until there is greater certainty concerning the dissemination of an effective mass-produced vaccine, the COVID-19 pandemic is expected to continue to impact our ability to achieve our performance objectives.

Earnings growth[1]

To assess our earnings growth, we monitor our earnings per share (EPS). Our through-the-cycle target is an average annual EPS growth of 5% to 10%. In 2020, against a backdrop of a challenging economic environment, reported and adjusted[1] diluted EPS declined by 27% and 19%, respectively.

Going forward, we are maintaining our target to deliver average annual EPS growth of 5% to 10% through the cycle.



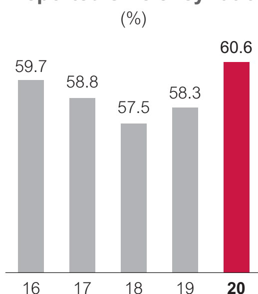
(1) Adjusted measures are non-GAAP measures. For additional information, see the "Non-GAAP measures" section.

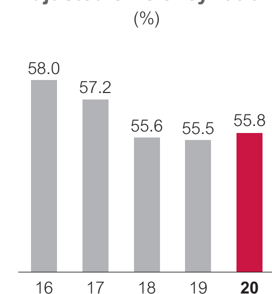
Operational efficiency

We have two metrics to measure operational efficiency:

1. Efficiency ratio[1]

To assess how well we use our resources to generate net income, we measure and monitor our efficiency ratio, defined as the ratio of non-interest expenses to total revenue. In 2020, our reported and adjusted[1] efficiency ratios were 60.6% and 55.8%, respectively, compared with 58.3% and 55.5% in 2019.

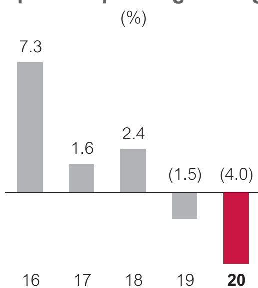


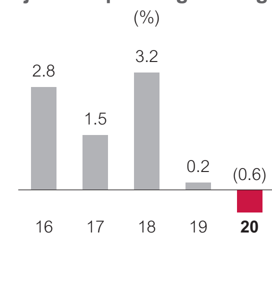


2. Operating leverage[1]

Operating leverage, defined as the difference between the year-over-year percentage change in revenue (on a taxable equivalent basis (TEB)) and year-over-year percentage change in non-interest expenses, is a measure of the relative growth rates of a bank's revenue and expenses. In 2020, our reported and adjusted[1] operating leverage was (4.0)% and (0.6)%, respectively.

Going forward, our target is to deliver positive operating leverage through the cycle, which will improve our efficiency ratio over time.





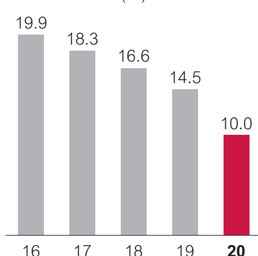
Profitability

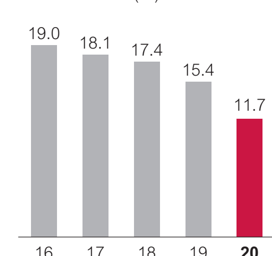
We have three metrics to measure profitability, including two shareholder value targets:

1. Return on common shareholders' equity (ROE)[1]

ROE is a key measure of profitability. In 2020, our reported and adjusted[1] ROE were at 10.0% and 11.7%, respectively.

Going forward, we will continue to target a strong ROE of at least 15% through the cycle.

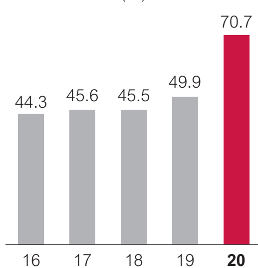


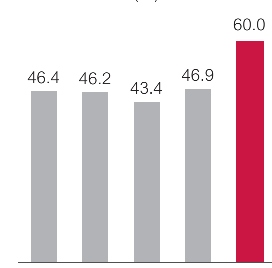


2. Dividend payout ratio[1]

We have consistently delivered adjusted[1] dividend payout ratios in the range of 40% to 50% of earnings to common shareholders. 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 through the cycle. In 2020, our reported and adjusted[1] dividend payout ratios were 70.7% and 60.0%, respectively.

Going forward, we will continue to target a dividend payout ratio of 40% to 50% through the cycle.

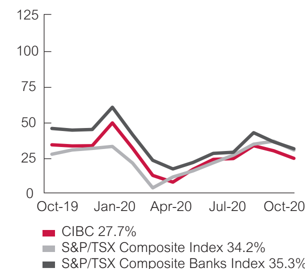




(1) Adjusted measures are non-GAAP measures. For additional information, see the "Non-GAAP measures" section.

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, 2020, our TSR was 27.7%, which was below the Banks Index return over the same period of 35.3%.

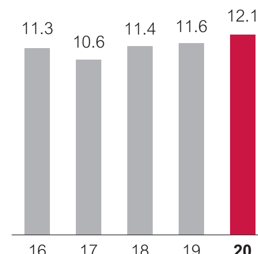


Balance sheet strength

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

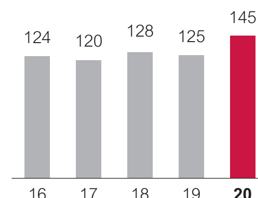
At the end of 2020, our Basel III CET1 ratio was 12.1%, well above the current regulatory target set by the Office of the Superintendent of Financial Institutions (OSFI) of 9.0%. In response to the COVID-19 pandemic, OSFI directed that all federally regulated financial institutions halt share buybacks and dividend increases until further notice.



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, 2020, our three-month daily average LCR was 145% compared to 125% for the same period last year.



Client experience

Our ambition is to be the leader in client experience as measured by external client surveys and our internal CIBC Enterprise Net Promoter Score (CIBC CXNPS). Our client-focused culture is resonating with the clients we serve as evidenced by our strongest scores to date from both the IPSOS Customer Service Index and the J.D. Power Client Satisfaction (SAT) study. Our internal CIBC CXNPS is a balanced weighting of internal net promoter scores across our businesses. As of October 31, 2020, the CIBC CXNPS score was 62.8, a 2-point increase over 2019.

CIBC was ranked the top performing brand during the pandemic as a result of our focus and commitment to clients. Over 90% of CIBC clients surveyed feel the same or more positive about CIBC as a result of our response to COVID-19. CIBC also received IPSOS Financial Service Excellence awards for our mobile banking, live agent telephone banking and ATMs.

Going forward, we will continue to build on this momentum to further enhance the quality and consistency of our service delivery to our clients in support of our purpose-driven culture and strategy to be a modern, innovative relationship-oriented bank.

Financial highlights

As at or for the year ended October 31		2020	2019	2018	2017	2016
Financial results ($ millions)						
Net interest income		**$ 11,044**	$ 10,551	$ 10,065	$ 8,977	$ 8,366
Non-interest income		**7,697**	8,060	7,769	7,303	6,669
Total revenue		**18,741**	18,611	17,834	16,280	15,035
Provision for credit losses		**2,489**	1,286	870	829	1,051
Non-interest expenses		**11,362**	10,856	10,258	9,571	8,971
Income before income taxes		**4,890**	6,469	6,706	5,880	5,013
Income taxes		**1,098**	1,348	1,422	1,162	718
Net income		**$ 3,792**	$ 5,121	$ 5,284	$ 4,718	$ 4,295
Net income attributable to non-controlling interests		**2**	25	17	19	20
Preferred shareholders and other equity instrument holders		**122**	111	89	52	38
Common shareholders		**3,668**	4,985	5,178	4,647	4,237
Net income attributable to equity shareholders		**$ 3,790**	$ 5,096	$ 5,267	$ 4,699	$ 4,275
Financial measures						
Reported efficiency ratio		**60.6 %**	58.3 %	57.5 %	58.8 %	59.7 %
Loan loss ratio (1)		**0.26 %**	0.29 %	0.26 %	0.25 %	0.31 %
Reported return on common shareholders' equity		**10.0 %**	14.5 %	16.6 %	18.3 %	19.9 %
Net interest margin		**1.50 %**	1.65 %	1.68 %	1.66 %	1.64 %
Net interest margin on average interest-earning assets (2)		**1.69 %**	1.84 %	1.88 %	1.85 %	1.88 %
Return on average assets (3)		**0.52 %**	0.80 %	0.88 %	0.87 %	0.84 %
Return on average interest-earning assets (2)(3)		**0.58 %**	0.89 %	0.99 %	0.97 %	0.96 %
Reported effective tax rate		**22.5 %**	20.8 %	21.2 %	19.8 %	14.3 %
Common share information						
Per share ($)	– basic earnings	**$ 8.23**	$ 11.22	$ 11.69	$ 11.26	$ 10.72
	– reported diluted earnings	**8.22**	11.19	11.65	11.24	10.70
	– dividends	**5.82**	5.60	5.32	5.08	4.75
	– book value	**84.05**	79.87	73.83	66.55	56.59
Closing share price ($)		**99.38**	112.31	113.68	113.56	100.50
Shares outstanding (thousands)	– weighted-average basic	**445,435**	444,324	443,082	412,636	395,389
	– weighted-average diluted	**446,021**	445,457	444,627	413,563	395,919
	– end of period	**447,085**	445,342	442,826	439,313	397,070
Market capitalization ($ millions)		**$ 44,431**	$ 50,016	$ 50,341	$ 49,888	$ 39,906
Value measures						
Total shareholder return		**(5.90)%**	4.19 %	4.70 %	18.30 %	5.19 %
Dividend yield (based on closing share price)		**5.9 %**	5.0 %	4.7 %	4.5 %	4.7 %
Reported dividend payout ratio		**70.7 %**	49.9 %	45.5 %	45.6 %	44.3 %
Market value to book value ratio		**1.18**	1.41	1.54	1.71	1.78
Selected financial measures – adjusted (4)						
Adjusted efficiency ratio (5)		**55.8 %**	55.5 %	55.6 %	57.2 %	58.0 %
Adjusted return on common shareholders' equity		**11.7 %**	15.4 %	17.4 %	18.1 %	19.0 %
Adjusted effective tax rate		**21.8 %**	20.6 %	20.0 %	20.3 %	16.6 %
Adjusted diluted earnings per share ($)		**$ 9.69**	$ 11.92	$ 12.21	$ 11.11	$ 10.22
Adjusted dividend payout ratio		**60.0 %**	46.9 %	43.4 %	46.2 %	46.4 %
On- and off-balance sheet information ($ millions)						
Cash, deposits with banks and securities		**$ 211,564**	$ 138,669	$ 119,355	$ 107,571	$ 101,588
Loans and acceptances, net of allowance		**416,388**	398,108	381,661	365,558	319,781
Total assets		**769,551**	651,604	597,099	565,264	501,357
Deposits		**570,740**	485,712	461,015	439,706	395,647
Common shareholders' equity		**37,579**	35,569	32,693	29,238	22,472
Average assets		**735,492**	639,716	598,441	542,365	509,140
Average interest-earning assets (2)		**654,142**	572,677	536,059	485,837	445,134
Average common shareholders' equity		**36,792**	34,467	31,184	25,393	21,275
Assets under administration (AUA) (6)(7)		**2,368,904**	2,425,651	2,303,962	2,192,947	2,041,887
Assets under management (AUM) (7)		**265,936**	252,007	225,379	221,571	183,715
Balance sheet quality (All-in basis) and liquidity measures						
Risk-weighted assets (RWA) ($ millions)						
Total RWA		**$ 254,871**	$ 239,863	n/a	n/a	n/a
CET1 capital RWA		**n/a**	n/a	$ 216,144	$ 203,321	$ 168,996
Tier 1 capital RWA		**n/a**	n/a	216,303	203,321	169,322
Total capital RWA		**n/a**	n/a	216,462	203,321	169,601
Capital ratios						
CET1 ratio (8)		**12.1 %**	11.6 %	11.4 %	10.6 %	11.3 %
Tier 1 capital ratio (8)		**13.6 %**	12.9 %	12.9 %	12.1 %	12.8 %
Total capital ratio (8)		**16.1 %**	15.0 %	14.9 %	13.8 %	14.8 %
Leverage ratio		**4.7 %**	4.3 %	4.3 %	4.0 %	4.0 %
LCR (9)		**145 %**	125 %	128 %	120 %	124 %
Other information						
Full-time equivalent employees		**43,853**	45,157	44,220	44,928	43,213

(1) The ratio is calculated as the provision for credit losses on impaired loans to average loans and acceptances, net of allowance for credit losses.
(2) 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 allowances, and certain sublease-related assets.
(3) Net income expressed as a percentage of average assets or average interest-earning assets.
(4) 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.
(5) Calculated on a TEB.
(6) 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 $1,861.5 billion as at October 31, 2020 (2019: $1,923.2 billion).
(7) AUM amounts are included in the amounts reported under AUA.
(8) Effective beginning in the second quarter of 2020, ratios reflect the expected credit loss (ECL) transitional arrangement announced by OSFI on March 27, 2020.
(9) Average for the three months ended October 31 for each respective year.
n/a Not applicable.

Economic and market environment

Year in review – 2020

The North American outbreak of COVID-19 that occurred in the first quarter of 2020 represented a major shock to CIBC's principal markets. Efforts to contain the pandemic in the spring of 2020, including the implementation of public health measures such as travel restrictions and physical distancing, resulted in a steep economic decline in Canada and the U.S., as governments on both sides of the border announced unprecedented fiscal and monetary stimulus measures to bolster the economy. The subsequent relaxation of these public health measures resulted in an uneven recovery that continues to leave both countries with a considerable gap to economic levels at the beginning of the year. Service industries in which physical distancing posed a major impediment were particularly hard-hit, along with the energy sector that faced a soft global demand environment. Impacts on household and business credit quality were cushioned but not eliminated by large-scale government assistance measures and deep cuts in interest rates in Canada and the U.S., with lower rates resulting in reduced lending margins in the banking system. In Canada, household credit growth slowed as sharply weaker non-mortgage credit demand offset growth in mortgages. Lower consumer spending had a negative impact on retail transaction volumes. Housing prices remained firm in most markets. Business credit demand picked up sharply early in the pandemic for liquidity needs, but then decelerated over the balance of the year on slower economic activity, while capital markets activity was boosted by strong corporate and government bond issuance. U.S. equity markets reached new highs in the summer, while Canadian equity markets recovered significantly from the initial lows.

Outlook for calendar year 2021

The COVID-19 pandemic continues to have a significant adverse impact on the near-term economic outlook for the global economy. Restrictions imposed by governments around the world to limit the impact of subsequent waves of infection, such as travel restrictions, physical distancing measures, and the closure of certain businesses, continue to disrupt the global economy, and will limit the scope for a further recovery until an effective mass-produced vaccine is in place. Recent positive developments related to vaccine development suggest regulatory approval and targeted usage could be expected by early 2021, but uncertainty remains surrounding the timing of mass production, distribution, public acceptance and the subsequent reduction in rates of infection. Our outlook assumes that mass vaccinations will be underway in mid-2021 and allow for stronger global recovery in the latter half of the year. Until then, we assume that temporary restraints on activity in response to subsequent waves will replace the near-complete restrictions that were in place in early and mid-2020. Growth will continue in sectors less impacted by physical distancing measures, but other sectors will experience periods of disruption when regulations are tightened in response to new waves of the virus. We generally expect to see stronger performance in the goods sector of the economy, but continued slack in the services sector. Constrained global activity and its implications on demand for fuel will also result in a slower recovery in crude oil prices through the first half of 2021.

In Canada, after a drop of approximately 5.5% in 2020, real gross domestic product (GDP) is expected to advance by about 4% in 2021, with more of the gains expected in the latter half of the calendar year. We expect that this will still leave the unemployment rate averaging over 8%, well above full employment levels. Both businesses and households will benefit from substantial government fiscal support through at least the first half of the year, which will reduce the impact of slower economic growth on insolvencies, business and household credit growth and retail transaction volumes relative to what would have occurred absent these measures. Government bond issuance will remain elevated to cover the resulting federal and provincial deficits. The Bank of Canada will maintain short-term interest rates at their current levels through 2021, although longer-term rates will drift higher as economic growth accelerates, and the central bank eases up on its asset purchase program.

In the U.S., real GDP is expected to grow by approximately 3.5% in 2021, after a similarly-scaled decline in 2020, with better gains expected in the latter half of next year. Our outlook assumes that the federal government will enact a second round of fiscal stimulus no later than early 2021 to provide enhanced support for households and businesses impacted by the pandemic, reducing its impact on insolvencies. With no growth over the two-year period of 2020–21, unemployment will average approximately 6.5% in 2021, well above full-employment levels. In response, we expect that the Federal Reserve will maintain near-zero short-term interest rates and continue to engage in asset purchases to slow the climb in long-term rates.

The economic challenges from the COVID-19 pandemic impact all our SBUs. From a credit perspective, all our loan portfolios will continue to be negatively impacted by the constrained economic activity associated with measures taken to contain the spread of infection, mitigated to an extent by large-scale government support and relief programs targeting both individuals and businesses. Deposit growth is likely to decelerate as businesses draw down on liquidity raised earlier in the pandemic, and as households spend a greater portion of their income as economic growth accelerates. The persistent low interest environment is expected to continue to have a negative impact on the net interest margins for all our SBUs.

For Canadian Personal and Business Banking, mortgage demand growth could see a deceleration, but will continue to remain well supported by low rates, while we expect to see a return to growth in non-mortgage credit demand as pandemic-related constraints begin to ease. Continued demand for business lending products is anticipated as small businesses look to weather the impact of the economic slowdown, but a slower pace of growth is expected relative to 2020.

Our Canadian and U.S. wealth management businesses are expected to benefit from a further economic recovery, with investors looking for alternatives to low rates on savings deposits.

Our Capital Markets business is expected to benefit from merger and acquisition activity as corporate consolidations increase in the aftermath of the pandemic, as well as increased equity issuance, but will be impacted by lower corporate bond issuance and lower trading revenues from the highs in 2020. Loan demand in our Canadian and U.S. commercial banking businesses could experience slower growth as the need for liquidity during the crisis eases, but will be supported by business expansion plans further into the year.

The economic outlook described above reflects numerous assumptions and uncertainties regarding the economic impact of the COVID-19 pandemic, which will ultimately depend on the speed at which an effective vaccine can be developed and administered on a mass scale, and the ability of governments, businesses and health-care systems to effectively limit the epidemiological and economic impacts of the current and possible future resurgences of the virus in the intervening period. The extent to which physical distancing policies restrict economic activity, and the level and effectiveness of government support during this intervening period are material to our expectations for the scale and timing of a further economic rebound in 2021. Expectations reflect currently available expert opinions and are subject to change as new information on transmissibility and epidemiology becomes available. As a result, actual experience may differ materially from expectations.

See the "Significant events" section for further details on the impact of the COVID-19 pandemic.

Significant events

Impact of COVID-19

On March 11, 2020, the outbreak of COVID-19 was officially declared a pandemic by the WHO. As discussed in the "Economic and market environment" section, the COVID-19 pandemic continues to have a significant adverse impact on the global economy. Measures undertaken in the second quarter to contain the spread of the virus, including the closure of non-essential businesses, succeeded in curbing the initial spread of infection, allowing for partial easing of these measures in the third and fourth quarters. As a result, certain sectors of the economy have seen a resumption of activity. However there is a risk that the recent retightening of these measures enacted by governments and businesses in response to the resurgence in infection rates could impact economic activity beyond levels that were previously anticipated. The overall economy continues to operate below pre-pandemic levels in Canada, the U.S. and other regions where we operate. As a result, the COVID-19 pandemic continues to significantly impact our clients, our team, and our business.

Supporting our clients, team members, and communities during the COVID-19 pandemic

Initial measures to curb COVID-19 resulted in the closure or reduced operating hours at a number of our banking centre locations, as well as the provision of certain expanded benefits to our team members in light of the challenges posed by COVID-19. As governments subsequently eased physical distancing measures, we worked closely with regional authorities to align our business practices with prevailing guidelines in the regions in which we operate, resulting in the reopening of our banking centres and adjustment to the expanded employee benefits. We continue to work closely with the relevant government and health authorities as regions respond to the second wave of the pandemic to ensure the safety of our team members and clients. Steps taken to keep our team members and clients safe include the continued support of remote working arrangements and enhanced safety procedures and cleaning protocols. We also continue to support the organizations and charities that are taking care of our communities during this crisis.

We have been actively engaged in lending activities to support our clients who were experiencing financial hardship caused by the COVID-19 pandemic, including providing payment deferral programs on various products for personal, corporate and commercial banking clients, and voluntarily reducing interest rates on select credit cards. A number of these programs have now drawn to a close, with the number of additional clients seeking relief reducing significantly relative to prior quarters, resulting in a reduction in the outstanding balances for these programs. See the "CIBC client relief programs in response to COVID-19" section for further details.

We continue to be actively engaged with governments, monetary authorities and regulators in the jurisdictions in which we operate, and continue to support our clients through government-led relief programs. See the "Government lending programs in response to COVID-19" and "Off-balance sheet arrangements" sections and Note 2 to our consolidated financial statements for further details regarding our participation in these programs.

Impact on financial results

COVID-19 has negatively impacted our results in 2020. See the "2020 Financial results review" and "Strategic business units overview" sections for further details on our financial performance in 2020, including the impact of the COVID-19 pandemic.

On pages 2 to 4 of our 2020 Annual Report, we provided disclosure regarding our scorecard of financial measures that we use to evaluate our performance against our strategic objectives, including the targets that we have set for each of these measures over the medium term. Until there is greater certainty concerning the dissemination of an effective mass-produced vaccine, the COVID-19 pandemic is expected to continue to impact our ability to achieve our performance objectives.

The extent to which the COVID-19 pandemic continues to negatively impact our business, results of operations, reputation and financial condition, as well as our regulatory capital and liquidity positions, will depend on future developments, which are highly uncertain. See the "Economic and market environment" section and Note 6 to our consolidated financial statements for further details on how the COVID-19 pandemic has impacted our economic outlook.

Impact on risk environment

We enacted our business continuity plans in the second quarter upon the WHO declaring COVID-19 a pandemic and we developed business priorities and an operating model to support our clients, team members and communities throughout this crisis. See the "Top and emerging risks" section for further details on additional risks associated with the COVID-19 pandemic.

Unprecedented regulatory and central bank support

Governments, monetary authorities, regulators and financial institutions continue to take actions to support the economy, increase liquidity, mitigate unemployment, provide public assistance, provide regulatory flexibility and implement other measures intended to mitigate or counterbalance the adverse economic consequences of the pandemic. See the "Regulatory developments arising from the COVID-19 pandemic" section for further details on regulatory flexibility provided during the quarter in response to the COVID-19 pandemic, and the "Regulatory developments concerning liquidity" section for details on relevant funding and liquidity programs instituted to support market liquidity during this crisis.

Impact on significant accounting judgments and estimates

Ongoing economic uncertainty, including reduced short- and medium-term growth due to the decline in economic activity associated with physical distancing measures and market volatility impact our significant accounting estimates and judgments. While economic activity started to recover in the third and fourth quarters, we continue to be faced with unprecedented circumstances which lead to significant uncertainty regarding the ultimate outcome of the COVID-19 pandemic and its impact on economic growth and consumer behaviour. This results in higher inherent risk associated with estimating the impact of the COVID-19 pandemic on our consolidated financial statements and requires management to exercise significant judgment in certain areas, in particular in relation to determining the impact of the COVID-19 pandemic on ECL allowances. Further details can be found in the "Accounting and control matters" section, as well as in Note 2 to our consolidated financial statements.

Restructuring

During the first quarter of 2020, we recognized a restructuring charge of $339 million ($250 million after-tax) associated with ongoing efforts to transform our cost structure and simplify our bank, shown as an item of note. This charge consisted primarily of employee severance and related costs and was recognized in Corporate and Other. For additional information, see Note 23 to our consolidated financial statements.

Sale of FirstCaribbean International Bank Limited

On November 8, 2019, we announced that we had entered into a definitive agreement to sell 66.73% of the outstanding shares of FirstCaribbean International Bank Limited (CIBC FirstCaribbean) to GNB Financial Group Limited (GNB) for total consideration of approximately US$797 million, comprised of approximately US$200 million in cash and secured financing provided by CIBC for the remainder, subject to closing adjustments to reflect certain changes in CIBC FirstCaribbean's book value. The closing of this transaction would result in CIBC retaining a 24.9% minority interest in CIBC FirstCaribbean, which would be accounted for as an investment in associate using the equity method.

In the fourth quarter of 2019, we recognized a goodwill impairment charge of $135 million as a result of the valuation implied from the definitive agreement with GNB. Commencing in the first quarter of 2020, the assets and liabilities of CIBC FirstCaribbean were treated as held for sale, and measured at the lower of their aggregate carrying amount and fair value less costs to sell, on the basis that the transaction was highly probable to close in 2020 subject to regulatory approvals. In the second quarter of 2020, we recognized an additional goodwill impairment charge of $28 million based on the estimated impact of the COVID-19 pandemic on the recoverable value of the 24.9% interest in CIBC FirstCaribbean that we expected to retain.

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 regarding the likelihood and timing of closing of a potential transaction, we concluded in the fourth quarter of 2020 that held for sale accounting is no longer appropriate. As a result, we were required to assess the recoverable amount of the remaining goodwill based on current market conditions rather than the definitive agreement with GNB. This assessment reflected revised expectations concerning the impact of the COVID-19 pandemic and led to the recognition of an additional goodwill impairment charge of $220 million. While we discontinued the application of held for sale accounting, we continue to pursue the transaction and the regulatory review process.

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 2020. A review of our SBU results follows on pages 19 to 28. Refer to page 14 for a review of our financial performance for 2019.

2020 Financial results review

Reported net income for the year was $3,792 million, compared with $5,121 million in 2019.

Adjusted net income[1] for the year was $4,447 million, compared with $5,444 million in 2019.

Reported diluted EPS for the year was $8.22, compared with $11.19 in 2019.

Adjusted diluted EPS[1] for the year was $9.69, compared with $11.92 in 2019.

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.

2019

Net income was affected by the following items of note:

- $227 million ($167 million after-tax) charge for a payment made to Air Canada, including related sales tax and transaction costs, to secure our participation in the new loyalty program (Canadian Personal and Business Banking);
- $135 million ($135 million after-tax) goodwill impairment charge related to our controlling interest in CIBC FirstCaribbean (Corporate and Other);
- $109 million ($82 million after-tax) amortization of acquisition-related intangible assets ($7 million after-tax in Canadian Personal and Business Banking, $1 million after-tax in Canadian Commercial Banking and Wealth Management, $65 million after-tax in U.S. Commercial Banking and Wealth Management, and $9 million after-tax in Corporate and Other);
- $67 million ($49 million after-tax) of interest income related to the settlement of certain income tax matters (Corporate and Other);
- $45 million ($33 million after-tax net positive impact) in purchase accounting adjustments net of transaction and integration-related costs[2] associated with the acquisitions of The PrivateBank, Geneva Advisors and Wellington Financial (income of $25 million after-tax in U.S. Commercial Banking and Wealth Management, and $8 million after-tax in Corporate and Other); and
- $28 million ($21 million after-tax) increase in legal provisions (Corporate and Other).

The above items of note increased revenue by $101 million and non-interest expenses by $488 million, and decreased income taxes by $64 million. In aggregate, these items of note decreased net income by $323 million.

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

(2) Transaction costs include legal and other advisory fees and interest adjustments relating to the obligation payable to dissenting shareholders. Integration costs 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. Purchase accounting adjustments, shown as an item of note from the fourth quarter of 2017 to the fourth quarter of 2019, include changes in the fair value of contingent consideration relating to the Geneva Advisors and Wellington Financial acquisitions. These items are recognized in Corporate and Other.

Net interest income and margin

$ millions, for the year ended October 31	2020	2019	2018
Average interest-earning assets	**$ 654,142**	$ 572,677	$ 536,059
Net interest income	**11,044**	10,551	10,065
Net interest margin on average interest-earning assets	**1.69 %**	1.84 %	1.88 %

Net interest income was up $493 million or 5% from 2019, primarily due to volume growth across our businesses, higher trading income 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.

Net interest margin on average interest-earning assets was down 15 basis points, primarily due to narrower margins largely due to the factors discussed above and excess liquidity costs.

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	2020	2019	2018
Underwriting and advisory fees	**$ 468**	$ 475	$ 420
Deposit and payment fees	**781**	908	877
Credit fees	**1,020**	958	851
Card fees	**410**	458	510
Investment management and custodial fees [1][2]	**1,382**	1,305	1,247
Mutual fund fees [2]	**1,586**	1,595	1,624
Insurance fees, net of claims	**386**	430	431
Commissions on securities transactions	**362**	313	357
Gains (losses) from financial instruments measured/designated at fair value through profit or loss (FVTPL), net [3]	**694**	761	603
Gains (losses) from debt securities measured at fair value through other comprehensive income (FVOCI) and amortized cost, net	**9**	34	(35)
Foreign exchange other than trading	**234**	304	310
Income from equity-accounted associates and joint ventures [1]	**79**	92	121
Other	**286**	427	453
	$ 7,697	$ 8,060	$ 7,769

(1) Custodial fees directly recognized by CIBC are included in Investment management and custodial fees. Our proportionate share of CIBC Mellon's custodial fees 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 unrelated to the amount of AUA (e.g., flat fees on a per account basis).
(3) Includes $31 million of loss (2019: $54 million of loss; 2018: $46 million of income) relating to non-trading financial instruments measured/designated at FVTPL.

Non-interest income was down $363 million or 5% from 2019.

Deposit and payment fees were down $127 million or 14%, primarily due to lower client transaction activity in Canadian Personal and Business Banking as a result of the pandemic.

Credit fees were up $62 million or 6%, primarily due to growth in commercial loans.

Card fees were down $48 million or 10%, primarily due to lower client transaction activity as a result of the pandemic and an interchange rate change in Canadian Personal and Business Banking.

Investment management and custodial fees were up $77 million or 6%, primarily due to asset growth in our wealth management businesses.

Commissions on securities transactions were up $49 million or 16%, primarily due to higher trading volume in our retail brokerage business.

Gains (losses) from financial instruments measured/designated at FVTPL, net were down $67 million or 9%, primarily due to lower trading income, partially offset by Treasury activities.

Foreign exchange other than trading was down $70 million or 23%, primarily due to Treasury activities.

Other was down $141 million or 33%, primarily due to lower sublease revenue relating to our adoption of IFRS 16 in the current year that was largely offset in interest income and non-interest expenses, and mark-to-market losses related to economic hedges of certain non-trading activities that were largely offset in net interest income.

Trading activities (TEB)

$ millions, for the year ended October 31	**2020**	2019	2018
Trading income consists of:			
Net interest income [1]	**$ 904**	$ 633	$ 856
Non-interest income	**725**	815	557
	$ 1,629	$ 1,448	$ 1,413
Trading income by product line:			
Interest rates	**$ 528**	$ 300	$ 246
Foreign exchange	**674**	585	573
Equities	**280**	386	452
Commodities	**182**	117	94
Other	**(35)**	60	48
	$ 1,629	$ 1,448	$ 1,413

(1) Includes TEB adjustment of $183 million (2019: $177 million; 2018: $278 million) reported within Capital Markets. See "Strategic business units overview" section for further details.

Trading income was up $181 million or 13% from 2019, primarily due to higher interest rates, foreign exchange and commodities trading income, partially offset by lower equity trading income.

Net interest income comprises interest and dividends relating to financial assets and liabilities associated with trading activities, 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 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	**2020**	2019	2018
Provision for (reversal of) credit losses – impaired			
Canadian Personal and Business Banking	**$ 640**	$ 809	$ 760
Canadian Commercial Banking and Wealth Management	**162**	159	15
U.S. Commercial Banking and Wealth Management	**133**	68	67
Capital Markets	**106**	90	8
Corporate and Other	**24**	21	102
	1,065	1,147	952
Provision for (reversal of) credit losses – performing			
Canadian Personal and Business Banking	**579**	87	(19)
Canadian Commercial Banking and Wealth Management	**141**	4	(10)
U.S. Commercial Banking and Wealth Management	**354**	5	12
Capital Markets	**175**	63	(38)
Corporate and Other	**175**	(20)	(27)
	1,424	139	(82)
	$ 2,489	$ 1,286	$ 870

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, mainly due to increased provisions related to 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 programs and government support, partially offset by higher provisions in business and government loans.

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	**2020**	2019	2018
Employee compensation and benefits			
Salaries	**$ 3,529**	$ 3,081	$ 2,934
Performance-based compensation	**1,948**	1,873	1,966
Benefits	**782**	772	765
	6,259	5,726	5,665
Occupancy costs	**944**	892	875
Computer, software and office equipment	**1,939**	1,874	1,742
Communications	**308**	303	315
Advertising and business development	**271**	359	327
Professional fees	**203**	226	226
Business and capital taxes	**117**	110	103
Other	**1,321**	1,366	1,005
	$ 11,362	$ 10,856	$ 10,258

Non-interest expenses were up $506 million or 5% from 2019.

Employee compensation and benefits were up $533 million or 9%, primarily due to a restructuring charge primarily related to employee severance, shown as an item of note, higher performance-based compensation and additional employee benefits provided to support our employees during the COVID-19 pandemic, partially offset by a gain as a result of plan amendments related to pension and other post-employment plans, shown as an item of note.

Occupancy costs were up $52 million or 6%, primarily due to a charge related to the consolidation of our real estate portfolio associated with our upcoming move to our new global headquarters, shown as an item of note, partially offset by lower occupancy costs related to adoption of IFRS 16 in the current year that were largely offset by higher interest expenses.

Advertising and business development were down $88 million or 25%, primarily due to lower spending driven by the impact of the COVID-19 pandemic.

Other expenses were down $45 million or 3%, as the prior year included a charge for a payment made to Air Canada, including related sales tax and transaction costs, to secure our participation in the new loyalty program, partially offset by higher goodwill impairment relative to the prior year, and an increase in legal provisions, with all of these shown as items of note.

Taxes

$ millions, for the year ended October 31	**2020**	2019	2018
Income taxes	**$ 1,098**	$ 1,348	$ 1,422
Indirect taxes [(1)]			
Goods and Services Tax (GST), Harmonized Sales Tax (HST) and sales taxes	**411**	418	354
Payroll taxes	**292**	271	271
Capital taxes	**79**	76	68
Property and business taxes	**76**	72	77
Total indirect taxes	**858**	837	770
Total taxes	**$ 1,956**	$ 2,185	$ 2,192
Reported effective tax rate	**22.5 %**	20.8 %	21.2 %
Total taxes as a percentage of net income before deduction of total taxes	**34.0 %**	29.9 %	29.3 %

(1) Certain amounts are based on a paid or payable basis and do not factor in capitalization and subsequent amortization.

Income taxes include those imposed on CIBC as a Canadian legal entity, as well as on our domestic and foreign subsidiaries. Indirect taxes comprise GST, HST and sales, payroll, capital, property and business taxes. Indirect taxes are included in non-interest expenses.

Total income and indirect taxes were down $229 million from 2019.

Income tax expense was $1,098 million, down $250 million from 2019. This was primarily due to lower income, partially offset by an unfavourable impact of changes in the proportion of income subject to varying rates of tax in different jurisdictions. The prior year also included a net tax recovery of $38 million resulting from the Enron settlement discussed below, largely offset by a $28 million revaluation of certain deferred tax assets due to tax rate changes enacted by the Barbados government in the first quarter of 2019.

Indirect taxes were up $21 million, primarily due to increased payroll taxes, including social security contributions.

The U.S. Tax Cuts and Jobs Act (U.S. tax reforms) reduced the U.S. federal corporate income tax rate effective in 2018 and introduced other important changes to U.S. corporate income tax laws including a Base Erosion Anti-Abuse Tax (BEAT) that subjects certain payments from a U.S. corporation to foreign related parties to additional taxes. The Internal Revenue Service periodically releases proposed and final regulations to implement aspects of the U.S. tax reforms, including BEAT. CIBC continues to evaluate the impact of these regulations on our U.S. operations.

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 approximately $1,115 million of additional income tax by denying the tax deductibility of certain 2011 to 2015 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. 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.

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	**2020 vs. 2019**	2019 vs. 2018	2018 vs. 2017
Estimated increase (decrease) in:			
Total revenue	**$ 50**	$ 124	$ (55)
Provision for credit losses	**9**	7	(2)
Non-interest expenses	**26**	66	(30)
Income taxes	**3**	5	(3)
Net income	**12**	46	(20)
Impact on EPS:			
Basic	**$ 0.03**	$ 0.10	$ (0.05)
Diluted	**0.03**	0.10	(0.05)
Average USD appreciation (depreciation) relative to CAD	**1.1 %**	3.2 %	(1.5)%

Fourth quarter review

$ millions, except per share amounts, for the three months ended	2020				2019 (1)			
	Oct. 31	**Jul. 31**	**Apr. 30**	**Jan. 31**	Oct. 31	Jul. 31	Apr. 30	Jan. 31
Revenue								
Canadian Personal and Business Banking	**$ 2,139**	**$ 2,056**	**$ 2,079**	**$ 2,214**	$ 2,225	$ 2,240	$ 2,126	$ 2,164
Canadian Commercial Banking and Wealth Management	**1,028**	**1,013**	**1,025**	**1,055**	1,026	1,019	998	984
U.S. Commercial Banking and Wealth Management (2)	**515**	**514**	**518**	**507**	502	509	474	479
Capital Markets (2)	**792**	**1,000**	**824**	**871**	740	752	756	712
Corporate and Other (2)	**126**	**125**	**132**	**208**	279	212	188	226
Total revenue	**$ 4,600**	**$ 4,708**	**$ 4,578**	**$ 4,855**	$ 4,772	$ 4,732	$ 4,542	$ 4,565
Net interest income	**$ 2,792**	**$ 2,729**	**$ 2,762**	**$ 2,761**	$ 2,801	$ 2,694	$ 2,460	$ 2,596
Non-interest income	**1,808**	**1,979**	**1,816**	**2,094**	1,971	2,038	2,082	1,969
Total revenue	**4,600**	**4,708**	**4,578**	**4,855**	4,772	4,732	4,542	4,565
Provision for credit losses	**291**	**525**	**1,412**	**261**	402	291	255	338
Non-interest expenses	**2,891**	**2,702**	**2,704**	**3,065**	2,838	2,670	2,588	2,760
Income before income taxes	**1,418**	**1,481**	**462**	**1,529**	1,532	1,771	1,699	1,467
Income taxes	**402**	**309**	**70**	**317**	339	373	351	285
Net income	**$ 1,016**	**$ 1,172**	**$ 392**	**$ 1,212**	$ 1,193	$ 1,398	$ 1,348	$ 1,182
Net income (loss) attributable to:								
Non-controlling interests	**$ 1**	**$ 2**	**$ (8)**	**$ 7**	$ 8	$ 6	$ 7	$ 4
Equity shareholders	**1,015**	**1,170**	**400**	**1,205**	1,185	1,392	1,341	1,178
EPS – basic	**$ 2.21**	**$ 2.56**	**$ 0.83**	**$ 2.64**	$ 2.59	$ 3.07	$ 2.96	$ 2.61
– diluted	**2.20**	**2.55**	**0.83**	**2.63**	2.58	3.06	2.95	2.60

(1) Certain prior period information has been revised. See the "External reporting changes" section for additional details.
(2) Capital Markets and U.S. Commercial Banking and Wealth Management 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 Q4/19

Net income for the quarter was $1,016 million, down $177 million or 15% from the fourth quarter of 2019.

Net interest income was down $9 million, primarily due to narrower margins, lower treasury revenue and interest income related to the settlement of certain income tax matters in the same quarter last year, shown as an item of note, partially offset by volume growth across our businesses, higher trading income and higher revenue from financing activities in Capital Markets.

Non-interest income was down $163 million or 8%, primarily due to lower trading income, and lower deposit and payment fees.

Provision for credit losses was down $111 million or 28% from the same quarter last year. Provision for credit losses on performing loans was up $41 million, primarily due to an unfavourable impact of model parameter updates in Canadian Personal and Business Banking and negative credit migration in U.S. Commercial Banking and Wealth Management. Provision for credit losses on impaired loans was down $152 million, largely due to lower insolvencies and write-offs in credit cards and personal lending, reflecting the impact of the client relief programs and government support.

Non-interest expenses were up $53 million or 2%, primarily due to charges related to the consolidation of our real estate portfolio and goodwill impairment related to our controlling interest in CIBC FirstCaribbean, both shown as items of note. The increase was partially offset by a gain as a result of plan amendments related to pension and other post-employment plans this quarter, and an increase in legal provisions in the same quarter last year, both shown as items of note, and lower performance-based compensation this quarter.

Income tax expense was up $63 million or 19%, despite lower income, primarily due to the goodwill impairment charge related to our controlling interest in CIBC FirstCaribbean, which is not deductible for tax purposes.

Compared with Q3/20

Net income for the quarter was down $156 million or 13% from the prior quarter.

Net interest income was up $63 million or 2%, primarily due to volume growth in Canadian Personal and Business Banking and higher trading income.

Non-interest income was down $171 million or 9%, primarily due to lower trading income.

Provision for credit losses was down $234 million or 45% from the prior quarter. Provision for credit losses on performing loans was down $112 million, primarily due to an unfavourable change to our economic outlook in the third quarter, partially offset by increased provisions due to various model parameter updates and unfavourable credit migration in certain portfolios this quarter. Provision for credit losses on impaired loans was down $122 million, due to lower insolvencies and write-offs in personal lending, reflecting the impact of the client relief programs and government support, along with lower provisions in business and government loans.

Non-interest expenses were up $189 million or 7%, primarily due to charges for goodwill impairment related to our controlling interest in CIBC FirstCaribbean and the consolidation of our real estate portfolio, both shown as items of note. The increase was partially offset by a gain as a result of plan amendments related to pension and other post-employment plans this quarter and an increase in legal provisions in the prior quarter, both shown as items of note.

Income tax expense was up $93 million or 30%, despite lower income, primarily due to the goodwill impairment charge related to our controlling interest in CIBC FirstCaribbean, which is not deductible for tax purposes.

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

Canadian Personal and Business Banking revenue has benefited from volume growth, as well as margins widening earlier in the period, with headwinds due to margins and fee income arising in the second to fourth quarters of 2020 due to the COVID-19 pandemic.

Canadian Commercial Banking and Wealth Management has continued to benefit from increases in both commercial banking deposit and loan volumes, although recent periods have seen muted loan growth as a result of the impact of the government's public health measures on a number of businesses across Canada due to the COVID-19 pandemic. In wealth management, recent market volatility has impacted AUA and AUM balances.

U.S. Commercial Banking and Wealth Management revenue reflects recent net interest margin pressure, offset by the impact of strong organic growth through to the second quarter of 2020, and fee income growth.

Capital Markets revenue is influenced, to a large extent, by market conditions affecting client trading and underwriting activity. The first and third quarters of 2020 included higher trading revenue.

Corporate and Other included the impact of changes relating to our adoption of IFRS 16 in the current year that were largely offset in non-interest expenses (see Note 8 to our consolidated financial statements for further details regarding the impact of our transition to IFRS 16). The fourth quarter of 2019 included interest income related to the settlement of certain income tax matters.

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 economic outlook. As a result of the impact of the COVID-19 pandemic beginning in the second quarter of 2020, our loan portfolios were negatively impacted by the decline in economic activity associated with physical distancing measures, mitigated to an extent by large-scale government support and relief programs targeting both individuals and businesses. There is considerable judgment involved in the estimation of credit losses in the current environment. The ultimate impact of the COVID-19 pandemic will depend on the speed at which an effective vaccine can be administered on a mass scale, and the ability of governments, businesses and health-care systems to effectively limit the epidemiological and economic impacts of expected resurgences of the virus in the intervening period. The extent to which the recommended public health measures restrict economic activity and the level and effectiveness of government support during this intervening period are material to our expectations for a continued economic rebound in 2021 and our resulting provision for credit losses.

The significant increase in provision for credit losses on performing loans in the second and, to a lesser extent, in the third and fourth quarters of 2020 reflects the impacts of the COVID-19 pandemic and continued pressure on oil prices, and has impacted all of our SBUs. We also recognized provisions on performing loans throughout 2019, reflective of the impact of certain unfavourable changes to our economic outlook over that period.

In Canadian Personal and Business Banking, the fourth quarter of 2019 included higher provision on impaired loans in the personal lending portfolio. The third and fourth quarters of 2020 included lower insolvencies and write-offs in credit cards. The decrease in insolvencies was in line with the national Canadian trend, as a result of limited consumer filing channels. The low level of write-offs was due to assistance offered to clients from our payment deferral programs, as well as from government support.

In Canadian Commercial Banking and Wealth Management, there were higher provisions on impaired loans since the first quarter of 2019 compared with the second half of 2018. The first, third and fourth quarters of 2020, and the fourth quarter of 2019, included provisions on one fraud-related impairment.

In U.S. Commercial Banking and Wealth Management, the third quarter of 2019 and the second half of 2020 included higher provisions on impaired loans. Impaired loan provisions in the U.S. remain elevated with no industry or sector trends.

In Capital Markets, the first quarter of 2019 included higher provisions on impaired loans due to an impaired loan in the utility sector. The second half of 2019 and the second and third quarters of 2020 included higher provisions on impaired loans in the oil and gas sector.

In Corporate and Other, provisions on impaired loans remained relatively stable across 2019 and 2020.

Non-interest expenses

Non-interest expenses have fluctuated over the period largely due to changes in employee-related compensation and benefits, spending on strategic initiatives, and movement in foreign exchange rates. The first quarter of 2019 included a charge for a payment made to Air Canada, including related sales tax and transaction costs, to secure our participation in its new loyalty program. The fourth quarter of 2019 and the second and fourth quarters of 2020 included a goodwill impairment charge related to our controlling interest in CIBC FirstCaribbean. The fourth quarter of 2019 and the third quarter of 2020 included increases in legal provisions in Corporate and Other, shown as an item 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 included a charge related to the consolidation of our real estate portfolio as a result of our upcoming move to our new global headquarters and 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 2019 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
2019 [2]	Net interest income	$ 6,372	$ 1,205	$ 1,381	$ 1,253	$ 340	$ 10,551
	Non-interest income	2,383	2,822	583	1,707	565	8,060
	Total revenue	8,755	4,027	1,964	2,960	905	18,611
	Provision for (reversal of) credit losses	896	163	73	153	1	1,286
	Non-interest expenses	4,745	2,106	1,119	1,516	1,370	10,856
	Income (loss) before income taxes	3,114	1,758	772	1,291	(466)	6,469
	Income taxes	825	471	90	337	(375)	1,348
	Net income (loss)	$ 2,289	$ 1,287	$ 682	$ 954	$ (91)	$ 5,121
	Net income (loss) attributable to:						
	Non-controlling interests	$ –	$ –	$ –	$ –	$ 25	$ 25
	Equity shareholders	2,289	1,287	682	954	(116)	5,096
2018 [2]	Net interest income	$ 6,151	$ 1,091	$ 1,231	$ 1,432	$ 160	$ 10,065
	Non-interest income	2,444	2,745	529	1,503	548	7,769
	Total revenue	8,595	3,836	1,760	2,935	708	17,834
	Provision for (reversal of) credit losses	741	5	79	(30)	75	870
	Non-interest expenses	4,395	2,067	1,023	1,492	1,281	10,258
	Income (loss) before income taxes	3,459	1,764	658	1,473	(648)	6,706
	Income taxes	919	478	97	387	(459)	1,422
	Net income (loss)	$ 2,540	$ 1,286	$ 561	$ 1,086	$ (189)	$ 5,284
	Net income (loss) attributable to:						
	Non-controlling interests	$ –	$ –	$ –	$ –	$ 17	$ 17
	Equity shareholders	2,540	1,286	561	1,086	(206)	5,267

(1) Capital Markets and U.S. Commercial Banking and Wealth Management revenue and income taxes are reported on a TEB 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, 2019 and 2018.

Overview

Net income for 2019 was $5,121 million, compared with $5,284 million in 2018. The decrease in net income of $163 million was due to higher non-interest expenses and a higher provision for credit losses, partially offset by higher revenue.

Consolidated CIBC

Net interest income

Net interest income was up $486 million or 5% from 2018, primarily due to volume growth across our businesses, wider spreads in Canadian Personal and Business Banking, and the impact of foreign exchange translation, partially offset by lower trading income and narrower spreads in U.S. Commercial Banking and Wealth Management. 2019 also included interest income related to the settlement of certain income tax matters, shown as an item of note.

Non-interest income

Non-interest income was up $291 million or 4% from 2018, primarily due to an increase in trading income and credit fees.

Provision for credit losses

Provision for credit losses was up $416 million or 48% from 2018. Provision for credit losses on performing loans was up $221 million from 2018, as 2018 included a reduction in allowance driven by an economic outlook that had improved since our adoption of IFRS 9 "Financial Instruments" (IFRS 9) on November 1, 2017, while 2019 included an increase in allowance, reflective of the impact of certain unfavourable changes to our economic outlook, as well as unfavourable credit migration in certain portfolios. Provision for credit losses on impaired loans was up $195 million, due to higher provisions including one fraud-related impairment in Canadian Commercial Banking and Wealth Management, higher provisions in the utility and the oil and gas sectors within Capital Markets, higher provisions and write-offs in personal lending within Canadian Personal and Business Banking, partially offset by lower provisions in CIBC FirstCaribbean, included in Corporate and Other, as 2018 included losses on sovereign loans resulting from the Barbados government debt restructuring, of which $28 million was shown as an item of note in the fourth quarter of 2018.

Non-interest expenses

Non-interest expenses were up $598 million or 6% from 2018, primarily due to a charge for a payment made to Air Canada, including related sales tax and transaction costs, to secure our participation in the new loyalty program, a goodwill impairment charge related to our controlling interest in CIBC FirstCaribbean, and an increase in legal provisions, all shown as items of note, and higher spending on strategic initiatives.

Income taxes

Income tax expense was down $74 million or 5% from 2018, primarily due to net tax adjustments, resulting from the U.S. tax reforms enacted in the first quarter of 2018, shown as an item of note, as well as lower income in 2019, partially offset by lower tax-exempt income and the goodwill impairment charge related to our controlling interest in CIBC FirstCaribbean, which is not deductible for tax purposes. 2019 also included a net tax recovery of $38 million resulting from the Enron settlement, largely offset by a $28 million revaluation of certain deferred tax assets due to tax rate charges enacted by the Barbados government in the first quarter of 2019.

Revenue by segment

Canadian Personal and Business Banking

Revenue was up $160 million or 2% from 2018, primarily due to wider spreads and volume growth, partially offset by lower fee income.

Canadian Commercial Banking and Wealth Management

Revenue was up $191 million or 5% from 2018. Commercial banking revenue was up primarily due to volume growth from loans and deposits, and higher fees. Wealth management revenue was up primarily due to higher investment management and custodial fees driven by higher AUM and AUA, wider spreads, and volume growth, partially offset by lower commission revenue and mutual fund fees.

U.S. Commercial Banking and Wealth Management

Revenue was up $204 million or 12% from 2018. Commercial banking revenue was up primarily due to volume growth, and the impact of foreign exchange translation, partially offset by narrower spreads and lower revenue from the accretion of the acquisition date fair value discount on the acquired loans of The PrivateBank, shown as an item of note. 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 spreads.

Capital Markets

Revenue was up $25 million or 1% from 2018. Global markets revenue was up primarily due to higher revenue from our interest rate trading business, global markets financing activities, and our commodities and equity trading business, largely offset by lower revenue from our equity derivatives trading business. Corporate and investment banking revenue was down primarily due to lower investment portfolio gains, lower equity underwriting activity, and lower revenue from our run-off business, partially offset by higher corporate banking and advisory revenue.

Corporate and Other

Revenue was up $197 million or 28% from 2018. International banking revenue was up as 2018 included incremental ECL on debt securities in CIBC FirstCaribbean, as a result of the Barbados government restructuring its public debt, of which $61 million was shown as an item of note in the fourth quarter of 2018. 2019 also reflected a favourable impact from foreign exchange translation and better performance in CIBC FirstCaribbean. Other revenue was up primarily due to a lower TEB adjustment and interest income related to the settlement of certain income tax matters, shown as an item of note, partially offset by lower treasury revenue and lower income from equity-accounted associates and joint ventures.

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 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 results remove items of note from reported results and are used to calculate our adjusted measures noted below. 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.

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.

Allocated common equity

Common equity is allocated to the SBUs based on the estimated amount of regulatory capital required to support their businesses. 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.

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 an allocation of regulatory capital to our SBUs. As a result, segmented return on equity is a non-GAAP measure. 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.

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	**2020**	2019	2018	2017	2016
Operating results – reported					
Total revenue	**$ 18,741**	$ 18,611	$ 17,834	$ 16,280	$ 15,035
Provision for credit losses	**2,489**	1,286	870	829	1,051
Non-interest expenses	**11,362**	10,856	10,258	9,571	8,971
Income before income taxes	**4,890**	6,469	6,706	5,880	5,013
Income taxes	**1,098**	1,348	1,422	1,162	718
Net income	**3,792**	5,121	5,284	4,718	4,295
Net income attributable to non-controlling interests	**2**	25	17	19	20
Net income attributable to equity shareholders	**3,790**	5,096	5,267	4,699	4,275
Diluted EPS ($)	**$ 8.22**	$ 11.19	$ 11.65	$ 11.24	$ 10.70
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	**–**	–	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	–
Gain, net of related transaction costs, on the sale of our minority investment in American Century Investments	**–**	–	–	–	(428)
Gain, net of related transaction and severance costs, on the sale of a processing centre	**–**	–	–	–	(59)
Loss (income) from the structured credit run-off business	**–**	–	–	–	(19)
Amortization of acquisition-related intangible assets (4)	**–**	–	–	–	1
Impact of items of note on revenue	**–**	(101)	(2)	(305)	(505)
Provision for credit losses					
Incremental losses on debt securities and loans in CIBC FirstCaribbean resulting from the Barbados government debt restructuring	**–**	–	(28)	–	–
Transaction and integration-related costs as well as purchase accounting adjustments (5)	**–**	–	–	(35)	–
Increase (decrease) in collective allowance (6)	**–**	–	–	18	(109)
Loan losses in our exited European leveraged finance portfolio	**–**	–	–	–	(40)
Impact of items of note on provision for credit losses	**–**	–	(28)	(17)	(149)
Expenses					
Amortization of acquisition-related intangible assets (4)	**(105)**	(109)	(115)	(41)	(29)
Transaction and integration-related costs as well as purchase accounting adjustments (5)	**–**	11	(79)	(78)	–
Charge related to the consolidation of our real estate portfolio	**(114)**	–	–	–	–
Gain as a result of plan amendments related to pension and other post-employment plans	**79**	–	–	–	–
Restructuring charge (7)	**(339)**	–	–	–	(134)
Goodwill impairment (8)	**(248)**	(135)	–	–	–
Increase in legal provisions (2)	**(70)**	(28)	–	(45)	(77)
Charge for payment made to Air Canada (9)	**–**	(227)	–	–	–
Fees and charges related to the launch of Simplii Financial and the related wind-down of President's Choice Financial	**–**	–	–	(95)	–
Gain, net of related transaction and severance costs, on the sale of a processing centre	**–**	–	–	–	(6)
Loss (income) from the structured credit run-off business	**–**	–	–	–	(16)
Impact of items of note on expenses	**(797)**	(488)	(194)	(259)	(262)
Total pre-tax impact of items of note on net income	**797**	387	220	(29)	(94)
Settlement of certain income tax matters (2)	**–**	(18)	–	–	–
Transaction and integration-related costs as well as purchase accounting adjustments (3)(5)	**–**	(12)	2	31	–
Amortization of acquisition-related intangible assets (4)	**25**	27	30	13	8
Charge related to the consolidation of our real estate portfolio	**30**	–	–	–	–
Gain as a result of plan amendments related to pension and other post-employment plans	**(21)**	–	–	–	–
Restructuring charge (7)	**89**	–	–	–	36
Increase in legal provisions (2)	**19**	7	–	12	21
Charge for payment made to Air Canada (9)	**–**	60	–	–	–
Incremental losses on debt securities and loans in CIBC FirstCaribbean resulting from the Barbados government debt restructuring	**–**	–	19	–	–
Charge from net tax adjustments resulting from U.S. tax reforms	**–**	–	(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 (6)	**–**	–	–	(5)	29
Gain, net of related transaction costs, on the sale of our minority investment in American Century Investments	**–**	–	–	–	(45)
Gain, net of related transaction and severance costs, on the sale of a processing centre	**–**	–	–	–	(6)
Loss (income) from the structured credit run-off business	**–**	–	–	–	(1)
Loan losses in our exited European leveraged finance portfolio	**–**	–	–	–	10
Income tax recovery due to the settlement of transfer pricing-related matters	**–**	–	–	–	30
Income tax recovery arising from a change in our expected utilization of tax loss carryforwards	**–**	–	–	–	15
Impact of items of note on income taxes	**142**	64	(37)	24	97
Total after-tax impact of items of note on net income	**655**	323	257	(53)	(191)
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	**655**	323	252	(53)	(191)
Impact of items of note on diluted EPS ($)	**$ 1.47**	$ 0.73	$ 0.56	$ (0.13)	$ (0.48)

For footnotes, see next page.

$ millions, for the year ended October 31	2020	2019	2018	2017	2016
Operating results – adjusted [10]					
Total revenue [11]	**$ 18,741**	$ 18,510	$ 17,832	$ 15,975	$ 14,530
Provision for credit losses	**2,489**	1,286	842	812	902
Non-interest expenses	**10,565**	10,368	10,064	9,312	8,709
Income before income taxes	**5,687**	6,856	6,926	5,851	4,919
Income taxes	**1,240**	1,412	1,385	1,186	815
Net income	**4,447**	5,444	5,541	4,665	4,104
Net income attributable to non-controlling interests	**2**	25	22	19	20
Net income attributable to equity shareholders	**4,445**	5,419	5,519	4,646	4,084
Adjusted diluted EPS ($)	**$ 9.69**	$ 11.92	$ 12.21	$ 11.11	$ 10.22

(1) Reflects the impact of items of note on our adjusted results as compared with our reported results.
(2) Recognized in Corporate and Other.
(3) Includes the accretion of the acquisition date fair value discount on the acquired loans of The PrivateBank, shown as an item of note from the fourth quarter of 2017 to the fourth quarter of 2019, recognized in U.S. Commercial Banking and Wealth Management.
(4) 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.

	2020	2019	2018	2017	2016
Canadian Personal and Business Banking (pre-tax)	**$ (8)**	$ (9)	$ (12)	$ (5)	$ (6)
Canadian Personal and Business Banking (after-tax)	**(6)**	(7)	(9)	(4)	(5)
Canadian Commercial Banking and Wealth Management (pre-tax)	**(1)**	(1)	(1)	(1)	(1)
Canadian Commercial Banking and Wealth Management (after-tax)	**(1)**	(1)	(1)	(1)	(1)
U.S. Commercial Banking and Wealth Management (pre-tax)	**(83)**	(88)	(91)	(27)	(11)
U.S. Commercial Banking and Wealth Management (after-tax)	**(61)**	(65)	(65)	(16)	(6)
Corporate and Other (pre-tax)	**(13)**	(11)	(11)	(8)	(11)
Corporate and Other (after-tax)	**(12)**	(9)	(10)	(7)	(9)

(5) Transaction costs include legal and other advisory fees and interest adjustments relating to the obligation payable to dissenting shareholders. Integration costs 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. Purchase accounting adjustments, shown as an item of note from the fourth quarter of 2017 to the fourth quarter of 2019, include changes in the fair value of contingent consideration relating to the Geneva Advisors and Wellington Financial acquisitions. These items are recognized in Corporate and Other.
(6) 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.
(7) 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.
(8) 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 and $220 million recognized in the fourth quarter of 2020.
(9) 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.
(10) Adjusted to exclude the impact of items of note.
(11) Excludes TEB adjustments of $183 million (2019: $179 million; 2018: $280 million). Our adjusted efficiency ratio is calculated on a TEB.

$ 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
2020	**Reported net income (loss)**	**$ 1,962**	**$ 1,202**	**$ 380**	**$ 1,131**	**$ (883)**	**$ 3,792**
	After-tax impact of items of note	**6**	**1**	**61**	**–**	**587**	**655**
	Adjusted net income (loss) [1]	**$ 1,968**	**$ 1,203**	**$ 441**	**$ 1,131**	**$ (296)**	**$ 4,447**
2019 [2]	Reported net income (loss)	$ 2,289	$ 1,287	$ 682	$ 954	$ (91)	$ 5,121
	After-tax impact of items of note	174	1	40	–	108	323
	Adjusted net income (loss) [1]	$ 2,463	$ 1,288	$ 722	$ 954	$ 17	$ 5,444
2018 [2]	Reported net income (loss)	$ 2,540	$ 1,286	$ 561	$ 1,086	$ (189)	$ 5,284
	After-tax impact of items of note	9	1	27	–	220	257
	Adjusted net income (loss) [1]	$ 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	(170)	1	19	–	97	(53)
	Adjusted net income (loss) [1]	$ 2,250	$ 1,139	$ 222	$ 1,090	$ (36)	$ 4,665
2016	Reported net income (loss)	$ 2,160	$ 991	$ 87	$ 992	$ 65	$ 4,295
	After-tax impact of items of note	(25)	2	6	28	(202)	(191)
	Adjusted net income (loss) [1]	$ 2,135	$ 993	$ 93	$ 1,020	$ (137)	$ 4,104

(1) Non-GAAP measure.
(2) 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 form part of 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 2020 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. Consistent with the external reporting changes made in the first quarter of 2020 (see the "External reporting changes" section for additional details), 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. The residual financial results associated with Treasury activities are reported in Corporate and Other, with the exception of certain Treasury activities in U.S. Commercial Banking and Wealth Management, which are reported in that SBU. Capital is attributed to the SBUs in a manner that 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. Effective November 1, 2019, capital is attributed to the SBUs based on the estimated amount of regulatory capital required to support their businesses (see the "External reporting changes" section for additional details). We review our transfer pricing methodologies on an ongoing basis to ensure they reflect changing market environments and industry practices.

To measure and report the results of operations of the lines of business within our Canadian Personal and Business Banking and Canadian Commercial Banking and Wealth Management SBUs, we use a Product Owner/Customer Segment/Distributor Channel allocation management model. The model uses certain estimates and methodologies to process internal transfers between lines of business for sales, renewals and trailer commissions. 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

The 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, products and services through banking centres, as well as through direct, mobile and remote channels.

Our business strategy

Our goal is to build a modern consumer and small business relationship bank to help our clients achieve their ambitions by focusing on three key strategic priorities:

- Winning at relationships
- Delivering market-leading solutions
- Being easy to bank with

2020 progress

In 2020, we continued to make progress on our strategy while managing against the challenges brought on by the COVID-19 pandemic. The change in the economic environment due to the pandemic resulted in lower client transaction activity and associated fee income, and the shift in client spending and savings patterns resulted in lower demand for certain lending products and strong growth in deposit balances. Our continued focus on our three key strategic priorities served us well at a time where clients needed us most.

Winning at relationships

- Led the way during the COVID-19 pandemic by being first to announce convenient ways to access financial relief for personal clients and business owners, including mortgage deferral options and credit card interest rate relief; reducing banking centre locations and hours and having team members work from home to help flatten the curve; providing special support and care for seniors and persons with disabilities, including the "You're Next" policy; and implementing income protection for team members.
- Proactively reached out to clients throughout the COVID-19 pandemic by email and personal phone calls to offer assistance. This includes reaching out to hundreds of thousands of seniors by telephone to help them with their banking.
- Worked with the Federal Government to make it easy for clients to access government programs in response to the COVID-19 pandemic.
- Expanded our business banking specialist team in support of our relationship-based strategy focused on entrepreneurs at all life stages, from start up to expansion, to managing cash flow and business transition.
- Helped our clients build their financial knowledge and confidence by offering financial literacy seminars and national education events. Topics included women and wealth and cash flow planning, as well as financial literacy for parents with young children, newcomers, seniors and business owners.
- Selected a new client relationship management platform to further transform banking experiences for our clients, with a focus on end-to-end digitization, advanced analytics, and speed to market.
- Supported 10 Indigenous communities across the Yukon as the new community banking services partner, providing specialized financial services to First Nations and other local governments, businesses, communities and community organizations.
- Recognized frontline health-care workers with 30 million Aventura points to help them recharge and reconnect with family.

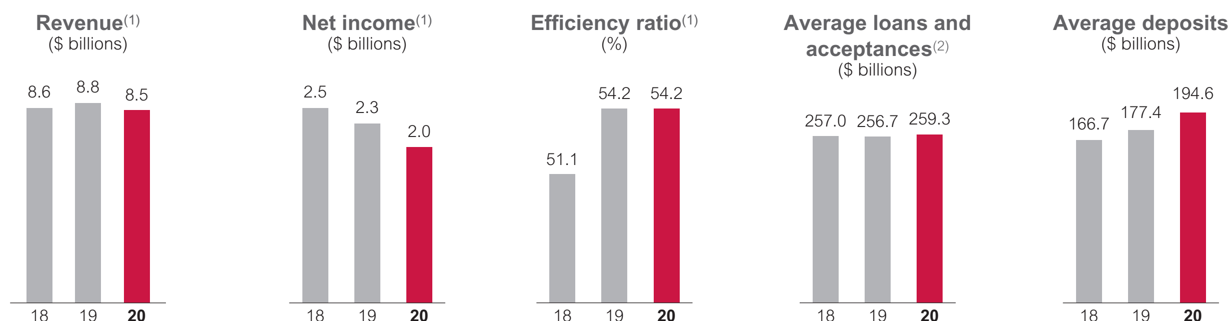
Delivering market-leading solutions

- Rolled out CIBC Goal Planner, a holistic financial planning tool, allowing our Imperial Service advisors to better understand our clients' ambitions and spend more time with our clients having advice conversations.
- Introduced new alerts to our mobile banking functionality, including the CIBC Smart Balance Alert which proactively notifies clients when they are short of funds for an upcoming scheduled payment.
- Announced Revival Rewards to help restart the economy and support local restaurants, by offering our clients 2x points, miles or cash back when using their CIBC credit card to dine-in or take-out from local restaurants.
- Launched our CIBC Aventura Visa Infinite Privilege Card, which offers a premium travel experience and exceptional benefits to our clients.
- Partnered with Parkland Fuel Corporation on a new Journie Rewards program, to help our clients save at over 1,300 Ultramar, Pioneer, and Chevron stations in Canada.
- Started the CIBC Internationally Trained Dentist Program to help newcomers realize their ambition to become accredited, practicing dentists in Canada.

Being easy to bank with

- Expanded Global Money Transfer for Business to over 20 additional countries, increasing our reach to over 90 countries where clients can send money overseas.
- Achieved the largest year-over-year Net Promoter Score (NPS) growth of the top 5 Canadian banks in the IPSOS Customer Service Index.
- Achieved our highest annual score in the 2020 J.D. Power Client Satisfaction (SAT) study.
- Earned top ranking in customer satisfaction for mobile banking apps by J.D. Power.
- Named best consumer digital bank in North America by Global Finance, based on servicing digital customers, success in getting clients to use digital offerings, breadth of product offerings, as well as web/mobile site design and functionality.
- Continued to significantly invest in technology and innovation to make it easier for our clients to bank with us including expanding our e-signature tool, redesigning business borrowing pages on cibc.com, and introducing eStatements for Personal Line of Credit accounts.
- Launched Advice for Today to provide timely online financial advice and information to help Canadians through the COVID-19 pandemic.

2020 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.

Our focus for 2021

Our objective is to deliver sustainable, market-leading performance with a focus on helping our clients achieve their ambitions. Our strategy is comprised of three key priorities:

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

Results[1]

$ millions, for the year ended October 31	2020	2019 [2]	2018 [2]
Revenue	**$ 8,488**	$ 8,755	$ 8,595
Provision for (reversal of) credit losses			
Impaired	**640**	809	760
Performing	**579**	87	(19)
Provision for credit losses	**1,219**	896	741
Non-interest expenses	**4,603**	4,745	4,395
Income before income taxes	**2,666**	3,114	3,459
Income taxes	**704**	825	919
Net income	**$ 1,962**	$ 2,289	$ 2,540
Net income attributable to:			
Equity shareholders	**$ 1,962**	$ 2,289	$ 2,540
Efficiency ratio	**54.2 %**	54.2 %	51.1 %
Return on equity [3]	**28.8 %**	35.7 %	40.7 %
Average allocated common equity [3]	**$ 6,808**	$ 6,403	$ 6,245
Average assets ($ billions)	**$ 262.0**	$ 259.1	$ 259.1
Average loans and acceptances ($ billions)	**$ 259.3**	$ 256.7	$ 257.0
Average deposits ($ billions)	**$ 194.6**	$ 177.4	$ 166.7
Full-time equivalent employees	**12,879**	13,431	14,086

(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.

Financial overview

Net income was down $327 million or 14% from 2019, primarily due to higher provision for credit losses and lower revenue, partially offset by lower non-interest expenses.

Revenue

Revenue was down $267 million or 3% 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.

Provision for credit losses

Provision for credit losses was up $323 million or 36% from 2019. The current year included a higher provision for credit losses on performing loans related to the COVID-19 pandemic and an unfavourable impact from model parameter updates. Provision for credit losses on impaired loans was down due to lower insolvencies and write-offs in credit cards and personal lending, mainly due to the impact of client relief programs and government support.

Non-interest expenses

Non-interest expenses were down $142 million or 3% from 2019, primarily due to a charge for a payment made to Air Canada to secure our participation in its new loyalty program last year, shown as an item of note, partially offset by higher spending on strategic initiatives and additional employee benefits provided to support our employees during the COVID-19 pandemic.

Income taxes

Income taxes were down $121 million or 15% from 2019, primarily due to lower income.

Average assets

Average assets were up $2.9 billion or 1% from 2019, 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:

- Delivering and deepening client relationships through a full service, solutions-based approach that includes commercial and private banking, as well as wealth management services
- Continuing to invest in financial planning to further our role as a leader in financial advice
- Simplifying and optimizing our business to align with changing market dynamics to better meet the needs of our clients

2020 progress

In 2020, despite an uncertain economic operating environment and volatile markets we continued to make progress on our strategic priorities of deepening client relationships and providing market leading financial advice. In commercial banking, we saw slower loan growth and elevated levels of deposit growth as our clients were prudently conserving cash flow, strengthening their financial position, and adjusting to the challenging environment. In wealth management, we responded to our clients' needs with an increased level of technology enabled touch-points, providing reassurance and financial advice as market volatility created uncertainty.

Delivering and deepening client relationships through a full service, solutions-based approach that includes commercial and private banking, as well as wealth management services

- Increased partnership referrals to deepen client relationships across CIBC and better meet the needs of our clients.
- Expanded CIBC Innovation Banking coverage focused on growing geographies and segments, in order to extend our service offering to technology and innovation clients across North America.
- Continued to closely collaborate with clients to meet their needs during this difficult period while actively monitoring and managing credit exposure.

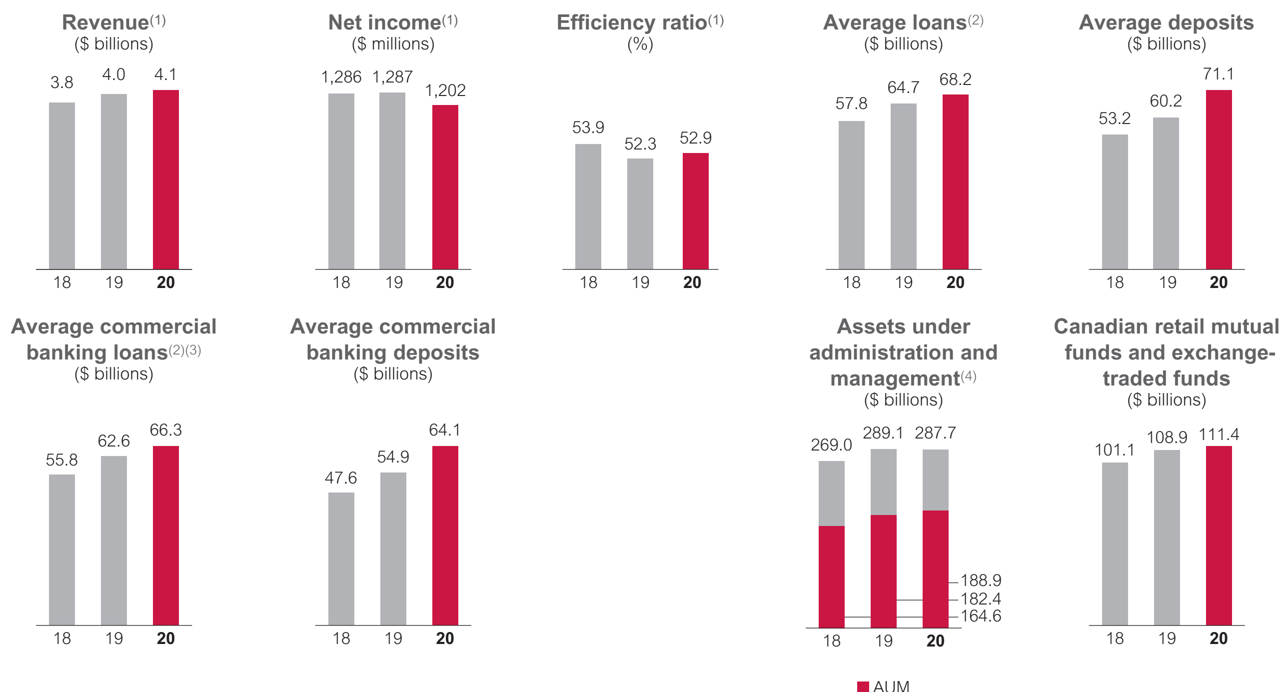
Continuing to invest in financial planning to further our role as a leader in financial advice

- Upgraded the financial planning capabilities and capacity of our team through the addition of new analytical tools to support deeper advisory conversations.
- Leveraged our Integrated Wealth Offer to bring differentiated value to clients through enhanced financial planning services and expertise from across our bank.
- Expanded our Private Banking team capabilities in order to be at the cross-section of all high-net-worth client needs.

Simplifying and optimizing our business to align with changing market dynamics to better meet the needs of our clients

- Continued momentum with our CIBC Smart Investment Solutions — all-in-one portfolios that blend active and passive investment strategies to deliver on value and expertise.
- Further modernized our investment fulfillment and solutions, driving efficiencies and savings for both our clients and our shareholders.

2020 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) 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 2021

To build on our momentum across Canadian Commercial Banking and Wealth Management, we will continue to help our clients achieve their ambitions by:

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

Results[1]

$ millions, for the year ended October 31	2020	2019 [2]	2018 [2]
Revenue			
Commercial banking	**$ 1,663**	$ 1,633	$ 1,461
Wealth management	**2,458**	2,394	2,375
Total revenue	**4,121**	4,027	3,836
Provision for (reversal of) credit losses			
Impaired	**162**	159	15
Performing	**141**	4	(10)
Provision for credit losses	**303**	163	5
Non-interest expenses	**2,179**	2,106	2,067
Income before income taxes	**1,639**	1,758	1,764
Income taxes	**437**	471	478
Net income	**$ 1,202**	$ 1,287	$ 1,286
Net income attributable to:			
Equity shareholders	**$ 1,202**	$ 1,287	$ 1,286
Efficiency ratio	**52.9 %**	52.3 %	53.9 %
Return on equity [3]	**18.6 %**	21.7 %	23.7 %
Allocated common equity [3]	**$ 6,454**	$ 5,929	$ 5,417
Average assets ($ billions)	**$ 65.8**	$ 62.6	$ 55.7
Average loans ($ billions)	**$ 68.2**	$ 64.7	$ 57.8
Average deposits ($ billions)	**$ 71.1**	$ 60.2	$ 53.2
AUA ($ billions)	**$ 287.7**	$ 289.1	$ 269.0
AUM ($ billions)	**$ 188.9**	$ 182.4	$ 164.6
Full-time equivalent employees	**4,984**	5,048	4,999

(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.

Financial overview

Net income was down $85 million or 7% from 2019, primarily due to a higher provision for credit losses and higher non-interest expenses, partially offset by higher revenue.

Revenue

Revenue was up $94 million or 2% from 2019.

Commercial banking revenue was up $30 million or 2%, primarily due to volume growth and the impact of an additional day in the current year, partially offset by narrower margins and lower fees.

Wealth management revenue was up $64 million or 3%, 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.

Provision for credit losses

Provision for credit losses was up $140 million from 2019. The current year included a higher provision for credit losses on performing loans related to the COVID-19 pandemic. Provision for credit losses on impaired loans was comparable with the prior year.

Non-interest expenses

Non-interest expenses were up $73 million or 3% from 2019, primarily due to higher employee-related compensation and higher spending on strategic initiatives.

Income taxes

Income taxes were down $34 million or 7% from 2019, primarily due to lower income.

Average assets

Average assets were up $3.2 billion or 5% from 2019, primarily due to growth in commercial loans.

Assets under administration

AUA were comparable with 2019. AUM amounts are included in the amounts reported under AUA.

U.S. Commercial Banking and Wealth Management

U.S. Commercial Banking and Wealth Management delivers 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 families.

Our business strategy

Our focus is on developing deep, profitable relationships leveraging the full complement of CIBC's products and services across our North American platform. To deliver on this, our three key strategic priorities are:

- Adding new client relationships in commercial banking and wealth management while maintaining our focus on asset quality as well as loan and deposit portfolio diversification
- Expanding relationships with existing clients by leveraging cross border and cross business capabilities
- Investing appropriately in the growth of our business while managing expenses

2020 progress

In 2020, 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 in turn, coupled with diligent expense control, 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 process, technology and client needs.

Adding new client relationships in commercial banking and wealth management while maintaining our focus on asset quality as well as loan and deposit portfolio diversification

- Maintained focus on strong asset quality especially as clients managed through impacts of the pandemic-related economic downturn.
- At the onset of the pandemic, leveraged our relationship banking approach to reach out to commercial businesses and ensure they had access to various government relief programs and other options to manage their short-term cash flow.
- Drove solid loan and deposit growth given market conditions, including continued expansion of our private banking business with existing commercial and wealth clients.
- Generated strong growth in AUM and AUA, bolstered by the performance of our investment strategies through a volatile year.

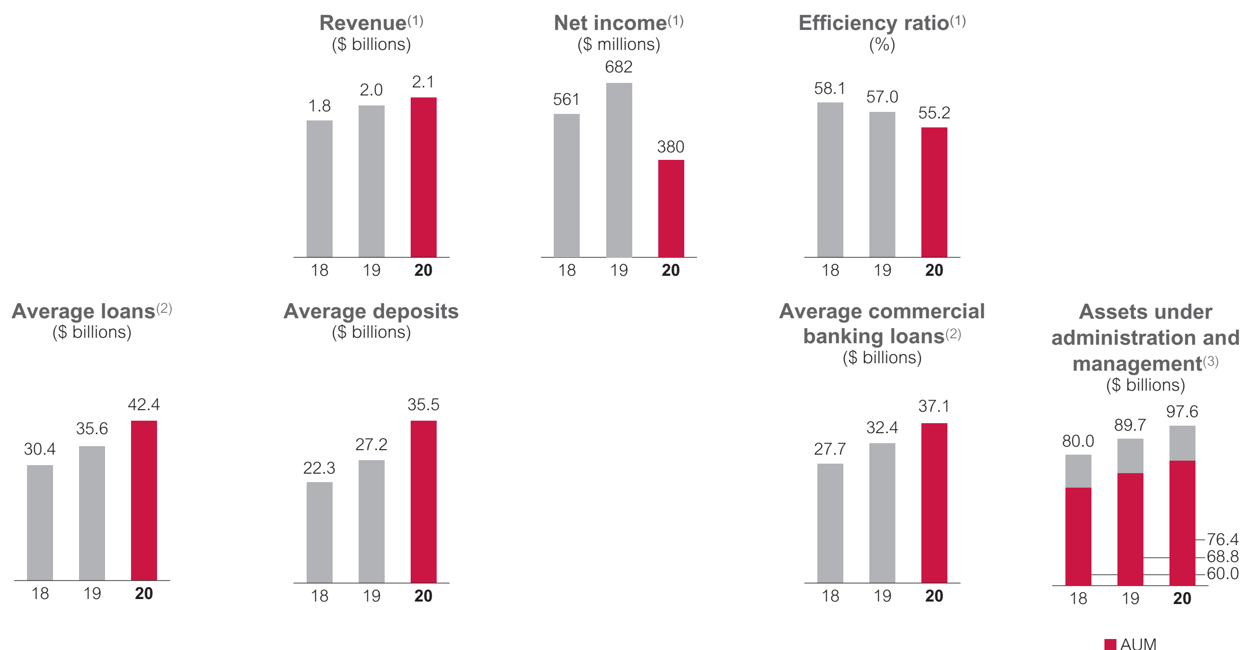
Expanding relationships with existing clients by leveraging cross border and cross business capabilities

- Leveraged a strong partnership with Capital Markets to provide a wider range of products and services to U.S. commercial and wealth clients, contributing to non-interest income.
- Advanced the implementation of CRM initiatives to further the connectivity between teams, providing a consolidated view of client needs and making it easier to engage the broader team in meeting the full relationship needs of our clients.
- Continued to refine client-facing processes, making it easier for clients to bank with us, including offering remote account open capabilities to retail banking clients and enhancing our servicing platform for our commercial banking clients to create efficiencies for our teams in meeting client needs.

Investing appropriately in the growth of our business while managing expenses

- Maintained a disciplined approach to expenses while investing for growth and enabling our team to work efficiently in the pandemic environment.
- Continued to maintain a diversified funding strategy through our commercial, private banking and retail clients.

2020 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) AUM amounts are included in the amounts reported under AUA.

Our focus for 2021

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:

- Continuing to grow organically with new clients as well as expanding our services to existing clients across commercial, private wealth and capital markets;
- Leveraging our national footprint, including within our specialty banking groups; and
- Investing appropriately in the growth of our business in order to improve our client experience while also achieving greater scale and efficiencies.

Results[1]

$ millions, for the year ended October 31	**2020**	2019 [2]	2018 [2]
Revenue			
Commercial banking [3]	**$ 1,432**	$ 1,353	$ 1,194
Wealth management	**622**	611	566
Total revenue [4][5]	**2,054**	1,964	1,760
Provision for (reversal of) credit losses			
Impaired	**133**	68	67
Performing	**354**	5	12
Provision for credit losses	**487**	73	79
Non-interest expenses	**1,133**	1,119	1,023
Income before income taxes	**434**	772	658
Income taxes [4]	**54**	90	97
Net income	**$ 380**	$ 682	$ 561
Net income attributable to:			
Equity shareholders	**$ 380**	$ 682	$ 561
Efficiency ratio	**55.2 %**	57.0 %	58.1 %
Return on equity [6]	**4.1 %**	7.9 %	7.2 %
Allocated common equity [6]	**$ 9,266**	$ 8,616	$ 7,822
Average assets ($ billions)	**$ 55.2**	$ 47.5	$ 41.2
Average loans ($ billions)	**$ 42.5**	$ 35.6	$ 30.4
Average deposits ($ billions)	**$ 35.5**	$ 27.2	$ 22.3
AUA ($ billions)	**$ 97.6**	$ 89.7	$ 80.0
AUM ($ billions)	**$ 76.4**	$ 68.8	$ 60.0
Full-time equivalent employees	**2,101**	2,113	1,947

(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) Certain information has been reclassified to conform to the presentation adopted in the first quarter of 2020. Commercial banking now includes the Other line of business, which includes the treasury activities relating to CIBC Bank USA, as these activities primarily support the commercial banking line of business.
(4) Revenue and income taxes are reported on a TEB. Accordingly, revenue and income taxes include a TEB adjustment of nil (2019: $2 million; 2018: $2 million). The equivalent amounts are offset in the revenue and income taxes of Corporate and Other.
(5) Included $20 million of income relating to the accretion of the acquisition date fair value discount on the acquired loans of The PrivateBank (2019: $35 million; 2018: $55 million).
(6) For additional information, see the "Non-GAAP measures" section.

Financial overview

Net income was down $302 million or 44% from 2019, primarily due to higher provision for credit losses, partially offset by higher revenue.

Revenue

Revenue was up $90 million or 5% from 2019.

Commercial banking revenue was up $79 million or 6%, primarily due to volume growth and the impact of foreign exchange translation, partially offset by narrower margins.

Wealth management revenue was up $11 million or 2%, 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.

Provision for credit losses

Provision for credit losses was up $414 million from 2019. The current year included a higher provision for credit losses on performing loans primarily related to the COVID-19 pandemic. Provision for credit losses on impaired loans was up mainly due to impairments as a result of certain borrower-specific issues across various sectors.

Non-interest expenses

Non-interest expenses were up $14 million or 1% from 2019, primarily due to higher employee-related compensation, the impact of foreign exchange translation, and higher spending on strategic initiatives, partially offset by lower business development costs, driven by the impact of the COVID-19 pandemic.

Income taxes

Income taxes were down $36 million or 40% from 2019, primarily due to lower income.

Average assets

Average assets were up $7.7 billion or 16% from 2019, primarily due to growth in loans, including loans made under the Paycheck Protection Program (PPP).

Assets under administration

AUA were up $7.9 billion or 9% from 2019, primarily due to the impact of foreign exchange rates, net sales, and market appreciation. 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 corporate, commercial, government and institutional clients around the world.

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

2020 progress

In 2020, despite an uncertain economic environment and volatile markets we continued to make progress on our strategic priorities of deepening client relationships, growing in the U.S. and enhancing connectivity across the bank. Global markets had a strong year. Revenue was up as we worked closely with our clients to help them manage their exposures and access global markets. Corporate and investment banking had solid growth this year as a result of higher loans, debt issuances and deposits as we helped manage the funding and liquidity needs of our clients.

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

- Delivered on our purpose by meeting the needs of our clients, helping them through the pandemic by managing their funding and liquidity needs with expert advice for the long term.
- Supported our clients by investing in our talent, further developing our proprietary technology, expanding our structuring expertise and advice, and leveraging our market expertise.
- Continued to hold leadership positions in syndicated loans, debt and equity underwriting, advisory services, equity trading, commodities and foreign exchange.
- Strengthened our platform by continuing to evolve our research coverage framework and provide specialized advice and solutions, aligned to the macro trends influencing the global economy and our clients, including renewable energy, private capital, technology and innovation.
- Established our first continental Europe office in Luxembourg to deliver enhanced capital markets capabilities for clients and provide more options for corporate and institutional investors in Canada and the U.S. to access global markets.

Building a North American client platform with global capabilities

- Continued to drive growth in the U.S. through a strong partnership across our business and close connectivity with U.S. Commercial Banking and Wealth Management.
- Issued our inaugural Green Bond Framework to help mobilize capital and develop market-based solutions to support investments that shape a more sustainable economy.
- Issued our inaugural Green Bond to help finance new and existing green projects, assets and businesses that mitigate the risks and effects of climate change.
- Established our Sustainability Advisory team to meet the needs of clients as they transition to the lower-carbon economy of the future, and expanded research coverage in the renewables and clean energy sector, building on our client-focused growth strategy.

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

- Expanded CIBC's Global Money Transfer service by increasing partnerships and product enhancements, supporting payment solutions to over 130 countries.
- Engaged with clients virtually to help them navigate volatile markets by hosting conference calls and podcasts, and providing industry-leading economic research and insights.

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

- Exclusive financial advisor and sole underwriter to Starlight Investments and Kingsett Capital on the acquisition of Northview Apartment REIT for $4.9 billion and associated acquisition financing, also lead on the initial public offering of units of Northview Canadian High Yield Residential Fund, a newly-formed, three-year closed end fund, in connection with the transaction;
- Joint lead arranger on WESCO Distribution Inc.'s US$3.215 billion senior unsecured bond bridge facility, joint bookrunner on the US$1.5 billion 5-year and US$1.325 billion 8-year senior notes offerings, joint bookrunner and joint lead arranger on the US$1.1 billion ABL Revolver and participant in the US$1.025 billion securitization; net proceeds of the transactions were used to support the parent company, WESCO International, Inc.'s transformational US$4.5 billion acquisition of Anixter International, Inc. and to refinance existing debt;
- Exclusive financial advisor and private placement agent to Superior Plus Corp. on a US$260 million equity investment by Brookfield Asset Management through exchangeable preferred stock;
- Exclusive financial advisor to Ontario Teachers' Pension Plan on its sale of BluEarth Renewables LP to DIF Infrastructure;
- Exclusive financial advisor, lead debt underwriter, lead swap agent and sole deal contingent hedge counterparty to a Korean-based consortium comprised of Shinhan Investment Corp., Samtan Co., Ltd, EIP Investment Corp. and KDB KIAMCO on its acquisition of Riverstone Holdings LLC's 50% interest in Utopia Pipeline, a 268-mile ethane pipeline;
- Coordinating lead arranger, administrative agent and depository agent on the construction and operation financing of D.E. Shaw Renewable Investments' (DESRI) 198-megawatt Illinois solar portfolio; the transaction marks CIBC's fifth lending transaction with DESRI since August 2017, solidifying the bank's relationship with one of the most active developers in the U.S. renewables market; and
- As a leading Canadian underwriter of Green Bonds, CIBC acted as a Senior Co-Lead Manager for the Province of Ontario's $1.5 billion Green Bond offering as well as Joint Bookrunner (lead-left) for Brookfield Renewable Partners' $425 million Green Medium Term Note offering.

Capital Markets awards and recognition

- Ranked the most accurate foreign exchange forecaster globally for Q1 2020 by Bloomberg
- Named Canadian Structured Product Issuer of the Year by mtn-i
- Named North American financial advisor of the year in 2020 for 20 deals closed in 2019 with a valuation of US$25 billion by *Infrastructure Journal*
- Named the Best Consumer Digital Bank in North America by *Global Finance* magazine, as part of its World's Best Digital Banks 2019 Report
- Global M&A Network
  - U.S.A. Middle Markets Small Mid-Markets Deal of the Year (Healthcare) for the sale of Applewhite Dental Partners LLC, a portfolio company of Tonka Bay Equity Partners, to Coredental Group, a portfolio company of NMS Capital

2020 financial review

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

Our focus for 2021

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	2020	2019 [2]	2018 [2]
Revenue			
Global markets	**$ 2,143**	$ 1,729	$ 1,694
Corporate and investment banking	**1,344**	1,231	1,241
Total revenue [3]	**3,487**	2,960	2,935
Provision for (reversal of) credit losses			
Impaired	**106**	90	8
Performing	**175**	63	(38)
Provision for (reversal of) credit losses	**281**	153	(30)
Non-interest expenses	**1,634**	1,516	1,492
Income before income taxes	**1,572**	1,291	1,473
Income taxes [3]	**441**	337	387
Net income	**$ 1,131**	$ 954	$ 1,086
Net income attributable to:			
Equity shareholders	**$ 1,131**	$ 954	$ 1,086
Efficiency ratio	**46.9 %**	51.2 %	50.8 %
Return on equity [4]	**16.8 %**	15.4 %	20.7 %
Allocated common equity [4]	**$ 6,731**	$ 6,188	$ 5,234
Average assets ($ billions)	**$ 221.1**	$ 184.6	$ 166.2
Full-time equivalent employees	**1,470**	1,449	1,396

(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 $183 million (2019: $177 million; 2018: $278 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.

Financial overview

Net income was up $177 million or 19% from 2019, primarily due to higher revenue, partially offset by a higher provision for credit losses and higher non-interest expenses.

Revenue

Revenue was up $527 million or 18% from 2019.

Global markets revenue was up $414 million or 24%, 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 $113 million or 9%, primarily due to higher debt and equity underwriting activity and higher corporate banking revenue, partially offset by lower advisory revenue.

Provision for (reversal of) credit losses

Provision for credit losses was up $128 million from 2019. The current year included a higher provision for credit losses on performing loans related to the impact of the COVID-19 pandemic and continued pressure on oil prices. Provision for credit losses on impaired loans was up, primarily due to higher provisions in the oil and gas sector, partially offset by lower provisions in the utility sector.

Non-interest expenses

Non-interest expenses were up $118 million or 8% from 2019, primarily due to higher spending on strategic initiatives and higher employee-related compensation.

Income taxes

Income taxes were up $104 million or 31% from 2019, primarily due to higher income.

Average assets

Average assets were up $36.5 billion or 20% from 2019, primarily due to an increase in derivatives valuation, higher loan balances and securities purchased under resale agreements.

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	2020	2019 [2]	2018 [2]
Revenue			
International banking	**$ 734**	$ 798	$ 657
Other	**(143)**	107	51
Total revenue [3]	**591**	905	708
Provision for (reversal of) credit losses			
Impaired	**24**	21	102
Performing	**175**	(20)	(27)
Provision for credit losses	**199**	1	75
Non-interest expenses	**1,813**	1,370	1,281
Loss before income taxes	**(1,421)**	(466)	(648)
Income taxes [3]	**(538)**	(375)	(459)
Net income (loss)	**$ (883)**	$ (91)	$ (189)
Net income (loss) attributable to:			
Non-controlling interests	**$ 2**	$ 25	$ 17
Equity shareholders	**(885)**	(116)	(206)
Full-time equivalent employees	**22,419**	23,116	21,792

(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 $183 million (2019: $179 million; 2018: $280 million).

Financial overview

Net loss was up $792 million from 2019, primarily due to higher non-interest expenses, lower revenue and a higher provision for credit losses.

Revenue

Revenue was down $314 million from 2019.

International banking revenue was down $64 million, primarily due to lower revenue in CIBC FirstCaribbean as a result of narrower margins and lower fees.

Other revenue was down $250 million, 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 the prior year, shown as an item of note, and due to lower revenue relating to our adoption of IFRS 16 in the current year that was largely offset in non-interest expenses (see Note 8 to our consolidated financial statements for further details regarding the impact of our transition to IFRS 16).

Provision for (reversal of) credit losses

Provision for credit losses was up $198 million from 2019. The current year included a higher provision for credit losses on performing loans related to the impact of the COVID-19 pandemic. Provision for credit losses on impaired loans was comparable with the prior year.

Non-interest expenses

Non-interest expenses were up $443 million from 2019, primarily due to charges related to restructuring, the consolidation of our real estate portfolio, higher goodwill impairment related to our controlling interest in CIBC FirstCaribbean relative to the prior year, and an increase in legal provisions, all shown as items of note, partially offset by a gain as a result of plan amendments related to pension and other post-employment plans, also shown as an item of note, and lower occupancy costs related to our adoption of IFRS 16 as noted above.

Income taxes

Income tax benefit was up $163 million from 2019, primarily due to higher expenses.

Financial condition

Review of condensed consolidated balance sheet

$ millions, as at October 31	2020	2019
Assets		
Cash and deposits with banks	**$ 62,518**	$ 17,359
Securities	**149,046**	121,310
Securities borrowed or purchased under resale agreements	**74,142**	59,775
Loans and acceptances	**416,388**	398,108
Derivative instruments	**32,730**	23,895
Other assets	**34,727**	31,157
	$ 769,551	$ 651,604
Liabilities and equity		
Deposits	**$ 570,740**	$ 485,712
Obligations related to securities lent or sold short or under repurchase agreements	**89,440**	69,258
Derivative instruments	**30,508**	25,113
Acceptances	**9,649**	9,188
Other liabilities	**22,167**	19,069
Subordinated indebtedness	**5,712**	4,684
Equity	**41,335**	38,580
	$ 769,551	$ 651,604

Assets

Total assets as at October 31, 2020 were up $117.9 billion or 18% from 2019, including an increase of approximately $2 billion due to the appreciation of the U.S. dollar.

Cash and deposits with banks increased by $45.2 billion or 260%, primarily due to higher short-term placements in Treasury.

Securities increased by $27.7 billion or 23%, primarily due to increases in debt securities in Canadian governments, U.S. Treasury and other agencies, and corporate debt, mainly in Treasury. 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 or purchased under resale agreements increased by $14.4 billion or 24%, primarily due to client-driven activities.

Net loans and acceptances increased by $18.3 billion or 5%, primarily due to increases in Canadian mortgage loans, and U.S. and Canadian 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 $8.8 billion or 37%, largely driven by increases in interest rate, foreign exchange and equity derivatives valuation.

Other assets increased by $3.6 billion or 11%, primarily due to an increase in broker receivables and the recognition of right-of-use assets in the current year as a result of our adoption of IFRS 16 (see Note 8 to our consolidated financial statements for additional details), partially offset by decreases in current tax receivable and collateral pledged for derivatives.

Liabilities

Total liabilities as at October 31, 2020 were up $115.2 billion or 19% from 2019, including an increase of approximately $2 billion due to the appreciation of the U.S. dollar.

Deposits increased by $85.0 billion or 18%, primarily due to domestic retail volume growth and increased wholesale funding. 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 or sold short or under repurchase agreements increased by $20.2 billion or 29%, primarily due to our participation in the Bank of Canada's enhanced term repo program (see the "Regulatory developments concerning liquidity – Developments related to the COVID-19 pandemic" section) and client-driven activities.

Derivative instruments increased by $5.4 billion or 21%, largely driven by increases in equity, interest rate and foreign exchange derivatives valuation.

Acceptances increased by $0.5 billion or 5%, driven by client activities.

Other liabilities increased by $3.1 billion or 16%, primarily due to the recognition of lease liabilities in the current year as a result of our adoption of IFRS 16, as noted above, and an increase in collateral received for derivatives.

Subordinated indebtedness increased by $1.0 billion or 22%, mainly due to an issuance in the third quarter of 2020. For further details see the "Capital management" section.

Equity

Equity as at October 31, 2020 increased $2.8 billion or 7% from 2019, primarily due to a net increase in retained earnings, which includes an increase of $0.1 billion related to the adoption of IFRS 16, as noted above, and the issuance of the limited recourse capital note. 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 frontline 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 maintain a strong and efficient capital base that provides balance sheet strength, enables our businesses to grow and execute on our strategy, and meets regulatory requirements.

Capital management and planning framework

CIBC maintains a capital management policy that helps us achieve 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 key guideline relates to our capital strength, which is foundational to our financial strength and supports growth. The guideline on dividends and return of capital is intended to balance the need for retaining capital for strength and growth, while providing an adequate return to our shareholders. The level of capital and capital ratios is continually monitored relative to our regulatory minimums and internal targets and the amount of capital required may change in relation to CIBC's business growth, risk appetite, and business and regulatory environment, including changes in accounting policies.

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 established 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.

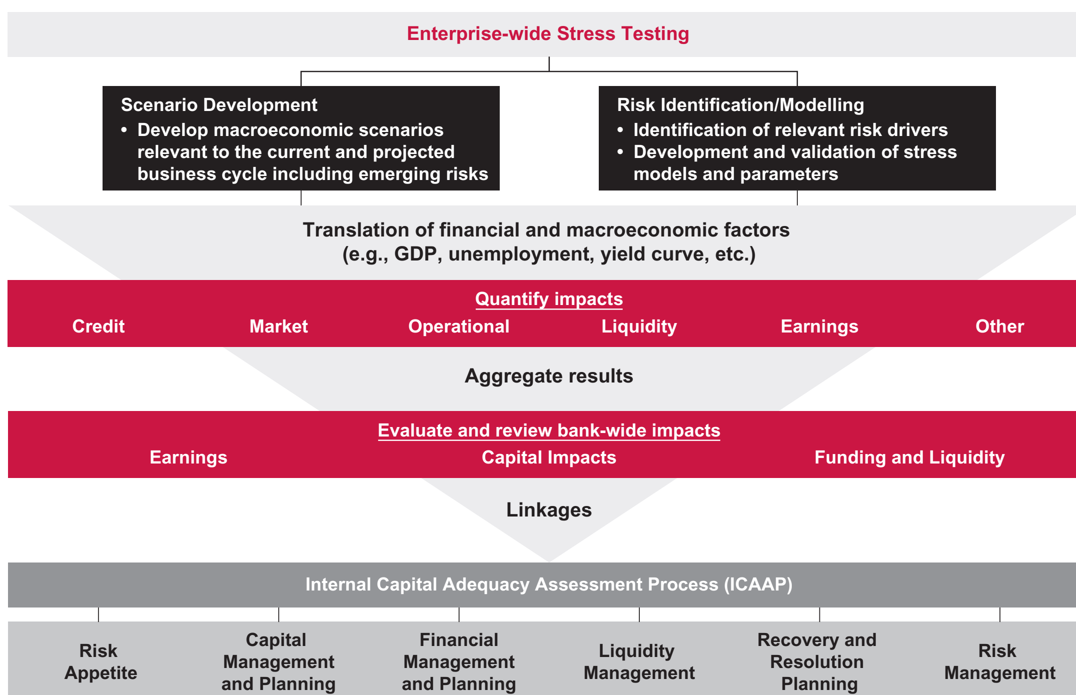
The Board, with endorsement from the Risk Management Committee, provides overall oversight of CIBC's capital management through the approval of our risk appetite, capital policy and plan. The Risk Management Committee is provided with regular updates on our capital position including performance to date,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

Enterprise-wide stress testing

We perform enterprise-wide stress testing on at least an annual basis and 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 which 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 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 Risk Management Committee 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. Reverse stress testing is also integrated into our recovery and resolution planning process to determine worst case scenarios that would result in CIBC reaching the point of non-viability from which remedial actions are then considered.

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.

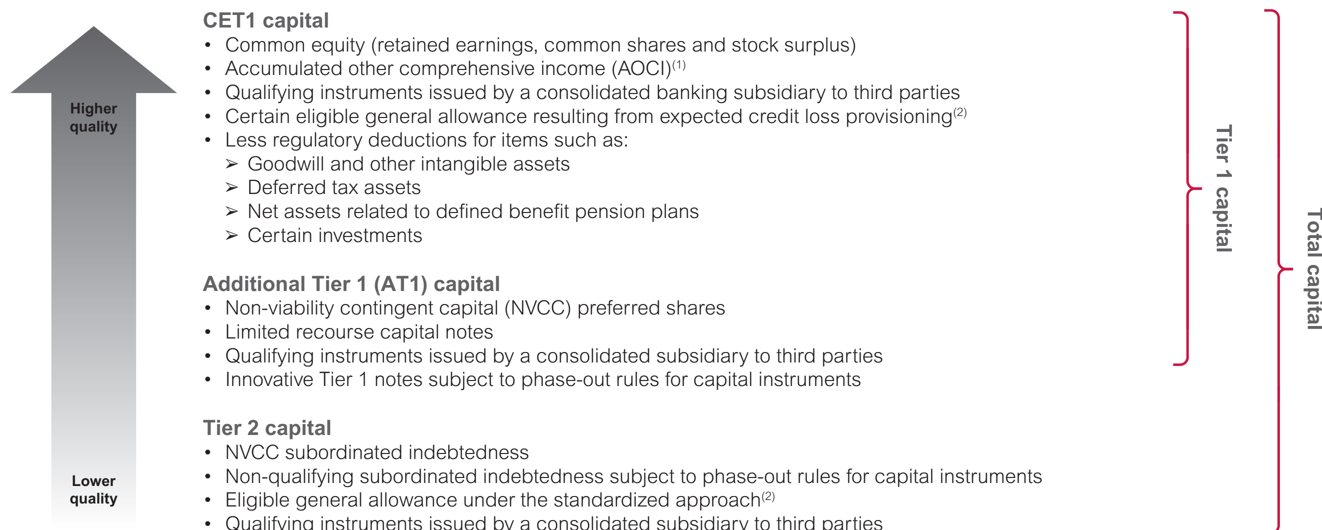
Resolution plan

In 2019, the Canada Deposit Insurance Corporation (CDIC) issued guidance for a comprehensive resolution plan. CDIC considers it a priority to ensure that banks undertake the necessary work to create resolution plans, demonstrate feasibility, and address any impediments to ensure resolvability can be achieved in an orderly fashion. CIBC continues to develop its resolution plan deliverables in line with guidance, in anticipation of submission to CDIC by 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 Basel Committee on Banking Supervision (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 accumulated other comprehensive income (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, along with Bank of Montreal, Bank of Nova Scotia, National Bank of Canada, Royal Bank of Canada, and the Toronto-Dominion Bank, have been designated by OSFI as domestic systemically important banks (D-SIBs) in Canada. D-SIBs are subject to a CET1 surcharge equal to 1.0% of RWA and 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 1.0%, but can range from 0% to 2.5% of RWA (see the "Continuous enhancement to regulatory capital requirements" section for details regarding the reduction in the DSB requirement that was effective March 13, 2020). 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, 2020	Minimum	Capital conservation buffer	D-SIB buffer	Pillar 1 targets (1)	Domestic Stability Buffer	Target including all buffer requirements
CET1 ratio	4.5 %	2.5 %	1.0 %	8.0 %	1.0 %	9.0 %
Tier 1 capital ratio	6.0 %	2.5 %	1.0 %	9.5 %	1.0 %	10.5 %
Total capital ratio	8.0 %	2.5 %	1.0 %	11.5 %	1.0 %	12.5 %

(1) The countercyclical capital buffer applicable to CIBC is insignificant as at October 31, 2020.

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 and 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-ERBA, SEC-IAA, 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.

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.

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 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 2019 Annual Report.

Regulatory developments arising from the COVID-19 pandemic

Both the BCBS and OSFI have announced a number of changes as a result of the COVID-19 pandemic and to respond to changes in market conditions. These announcements are summarized in the tables below.

BCBS	
March 27, 2020 *Deferral of Basel III standards*	The Group of Central Bank Governors and Heads of Supervision (GHOS), which is the oversight body for the BCBS, announced that the implementation timelines for upcoming Basel III standards would be deferred in order to increase the operational capacity of banks and supervisors to respond to the COVID-19 pandemic. See the "Basel III reforms" and "Revised Pillar 3 disclosure requirements" sections below for additional details.
April 3, 2020 *Measures to alleviate the impact of COVID-19*	The BCBS announced measures to alleviate the impact of COVID-19, including: • Publication of "Measures to reflect the impact of COVID-19", which includes technical clarifications to ensure appropriate treatment of loans subject to payment deferral relief and government guarantees; • Deferral of the final two implementation phases of the framework for margin requirements for non-centrally cleared derivatives by one year, from 2021 to 2022; and • Deferral of the implementation of the revised global systemically important banks (G-SIB) framework by one year, from 2021 to 2022 (see the "Global systemically important banks – public disclosure requirements" section below).
OSFI	
March 13, 2020 *Measures to support the resilience of financial institutions*	OSFI announced measures to support the resilience of financial institutions, which included: • An immediate reduction of the DSB (see the "Domestic Stability Buffer" section below); and • Halting dividend increases or share buybacks for all federally regulated financial institutions effective immediately (see the "Capital initiatives" section below).

March 27, 2020
Update issued on August 31, 2020
 	
Actions to address operational issues stemming from COVID-19
	On March 27, 2020, OSFI announced actions to address operational issues stemming from COVID-19, including:
	• For the purpose of determining capital requirements under the Capital Adequacy Requirements (CAR) Guideline for loans (including mortgages) that are granted payment deferral relief, the payment status will, for the duration of the relief period, be based on the payment status of these loans immediately prior to the deferral. On August 31, 2020, OSFI provided updates to this special capital treatment:
	    • Loans granted payment deferrals before August 31 will continue to be treated as performing loans for the duration of the deferral period, subject to a maximum of six calendar months from the effective date of the deferral;
	    • Loans granted new payment deferrals after August 30 and on or before September 30 will be treated as performing loans for the duration of the deferral, subject to a maximum of three calendar months from the approval date of the deferral; and
	    • Loans granted payment deferrals with approval dates after September 30, 2020 will not be eligible for the special capital treatment.
	• Transitional arrangements for the capital treatment of expected loss provisioning (see the "Transitional arrangements for the capital treatment of expected loss provisioning" section below);
	• A temporary increase for at least one year in the covered bond limit, which represents the percentage of total assets permitted to be pledged as collateral for covered bonds by a deposit-taking institution, from 5.5% to 10%;
	• Deferral of the implementation timeline of the Basel III reforms in Canada (see the "Basel III reforms" section below);
	• A delay in the implementation date of the revised Pillar 3 disclosure requirements finalized by the BCBS in December 2018 (see the "Revised Pillar 3 disclosure requirements" section below);
	• Confirmation that no outflow needs to be recognized in the LCR for bankers' acceptances sold to the Bank of Canada under the Bankers' Acceptance Purchase Facility (BAPF) (see the "Regulatory developments concerning liquidity" section for additional details);
	• A temporary reduction of stressed value-at-risk multipliers used in the determination of market risk capital requirements for institutions using internal models; and
	• Removal of funding valuation adjustment hedges related to derivative transactions from the calculation of market risk capital to address an asymmetry in the existing requirements.

March 30, 2020 *Capital treatment of programs to support COVID-19 efforts*	OSFI provided guidance on the capital requirements applicable to government-supported lending programs created in response to COVID-19 (see Note 2 to our consolidated financial statements for additional details on these programs). The capital requirements applicable to the various programs are summarized below: • Loans administered under the Canada Emergency Business Account (CEBA) are excluded from the calculation of capital and leverage ratios. • For capital purposes, the government-guaranteed portion of loans under the Export Development Canada (EDC) program may be considered sovereign risk, with the remainder treated as a loan to the borrower. The entire amount of the loan is included in the exposure measure used for calculating the leverage ratio. • A bank's portion of a loan made under the Business Development Bank of Canada (BDC) co-lending program for small and medium-sized enterprises should be included in the calculation of capital and leverage ratios.
April 9, 2020 *Update issued on November 5, 2020* *Additional actions to address issues stemming from COVID-19*	On April 9, 2020, OSFI announced additional measures and regulatory flexibility to support COVID-19 efforts, including: • Exposures arising from central bank reserves and sovereign-issued securities that qualify as HQLA may be excluded from the exposure measure for leverage ratio purposes. On November 5, 2020, applicability of this measure was extended by six months, until December 31, 2021. • The current capital floor factor was reduced from 75% to 70%, effective April 9, 2020. The reduction is expected to remain in place until the domestic implementation of the Basel III capital output floor (see the "Basel III reforms" section below).

Transitional arrangements for the capital treatment of expected loss provisioning

In response to the COVID-19 pandemic, OSFI has introduced transitional arrangements for ECL provisioning that are available under the Basel Framework. These transitional arrangements were effective immediately upon being announced by OSFI on March 27, 2020 and result in a portion of allowances that would otherwise be included in Tier 2 capital qualifying for inclusion in CET1 capital. The amount of ECL allowances eligible for inclusion in CET1 capital is determined based on the increase in stage 1 and stage 2 allowances relative to balances as at January 31, 2020 as a baseline. This amount is then adjusted for tax effects and is subject to a scaling factor that 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 otherwise eligible for inclusion in Tier 2 capital is included as CET1 capital under the transitional arrangements.

Basel III reforms

On March 27, 2020, the 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. The implementation dates applicable to CIBC for the outstanding Basel III reforms following these announcements are summarized below.

Revised leverage ratio framework and introduction of G-SIB buffer	November 1, 2022
Revisions to the standardized and IRB approaches to credit risk	November 1, 2022
Changes to Basel III capital output floor requirements	November 1, 2022
Revised operational risk framework	November 1, 2022
Revised CVA framework	November 1, 2023
Revised market risk framework (also referred to as the "fundamental review of the trading book" or FRTB)	November 1, 2023

Domestic Stability Buffer

In response to COVID-19 and market conditions, OSFI announced an immediate reduction in the DSB requirement from 2.0% to 1.0% for all D-SIBs effective March 13, 2020. This reduction superseded a previously announced increase in the DSB from 2.0% to 2.25%, which was to have been effective April 30, 2020, and decreased OSFI's target capital ratios, including all buffers, for CET1, Tier 1 and Total capital to 9.0%, 10.5% and 12.5%, respectively. On June 23, 2020, OSFI announced that the DSB would remain unchanged at 1.0%.

Revised Pillar 3 disclosure requirements

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.

Global systemically important banks – public disclosure requirements

On July 5, 2018, the BCBS issued "Global systemically important banks: revised assessment methodology and the higher loss absorbency requirement" as a result of the first review of the G-SIB framework. The revised assessment methodology was to be effective by the 2021 G-SIB assessment. As part of the measures announced by the BCBS in response to COVID-19, the effective date for the revised assessment methodology has been deferred by one year and will now be effective for the 2022 G-SIB assessment.

Total loss absorbing capacity requirements

Beginning in the first quarter of 2022, D-SIBs will be required to maintain a supervisory target total loss absorbing capacity requirements (TLAC) ratio (which is comprised of 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 Department of Finance's Bank recapitalization (Bail-in) conversion regulations, 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

OSFI capital ruling

On July 15, 2020, OSFI published a capital ruling on a new financial instrument, a Limited Recourse Capital Note (LRCN), relative to the eligibility criteria set out in the CAR Guideline. Consideration was given to economic substance over legal form, and the potential impact on financial stability, particularly in times of stress. The resulting capital ruling provides that the LRCNs can qualify as Additional Tier 1 regulatory capital, subject to certain limitations and disclosure requirements. Refer to the "Capital initiatives" section for further details related to the LRCNs issued in the fourth quarter of 2020.

CIBC will 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	2020	2019
Common Equity Tier 1 (CET1) capital: instruments and reserves		
Directly issued qualifying common share capital plus related stock surplus	**$ 14,025**	$ 13,716
Retained earnings	**22,119**	20,972
AOCI (and other reserves)	**1,435**	881
Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	**128**	126
CET1 capital before regulatory adjustments	**37,707**	35,695
CET1 capital: regulatory adjustments		
Prudential valuation adjustments	**24**	32
Goodwill (net of related tax liabilities)	**5,177**	5,375
Other intangibles other than mortgage-servicing rights (net of related tax liabilities)	**1,662**	1,658
Deferred tax assets excluding those arising from temporary differences (net of related tax liabilities)	**24**	24
Defined benefit pension fund net assets (net of related tax liabilities)	**206**	138
Other deductions or regulatory adjustments to CET1 as determined by OSFI (1)	**(592)**	–
Other	**330**	761
Total regulatory adjustments to CET1 capital	**6,831**	7,988
CET1 capital	**30,876**	27,707
Additional Tier 1 (AT1) capital: instruments		
Directly issued qualifying AT1 instruments plus related stock surplus (2)	**3,575**	2,825
Directly issued capital instruments subject to phase out from AT1 (3)	**302**	302
AT1 instruments issued by subsidiaries and held by third parties (amount allowed in AT1)	**22**	17
AT1 capital	**3,899**	3,144
Tier 1 capital (T1 = CET1 + AT1)	**34,775**	30,851
Tier 2 capital: instruments and provisions		
Directly issued qualifying Tier 2 instruments plus related stock surplus (4)	**5,035**	4,015
Directly issued capital instruments subject to phase out from Tier 2	**628**	630
Tier 2 instruments issued by subsidiaries and held by third parties (amount allowed in Tier 2)	**29**	23
General allowances	**502**	335
Tier 2 capital (T2)	**6,194**	5,003
Total capital (TC = T1 + T2)	**$ 40,969**	$ 35,854
Total RWA	**$ 254,871**	$ 239,863
Capital ratios		
CET1 ratio	**12.1 %**	11.6 %
Tier 1 capital ratio	**13.6 %**	12.9 %
Total capital ratio	**16.1 %**	15.0 %

(1) Beginning in the second quarter of 2020, includes the impact of the ECL transitional arrangement announced by OSFI on March 27, 2020. The transitional arrangement results in a portion of ECL allowances that would otherwise be included in Tier 2 capital qualifying for inclusion in CET1 capital. The amount is subject to certain adjustments and limitations until 2022.
(2) Comprised of non-viability contingent capital (NVCC) preferred shares and LRCN.
(3) Comprised of CIBC Tier 1 Notes – Series B due June 30, 2108.
(4) Comprised of certain debentures which qualify as NVCC.

CET1 ratio

The CET1 ratio at October 31, 2020 increased 0.5% from October 31, 2019, 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), an increase in AOCI, and common share issuance partially offset by share repurchases prior to cessation of the issuer bid upon OSFI's March 13, 2020 announcement (see the "Continuous enhancement to regulatory capital requirements" section for further details). While the impact of a higher provision for credit losses on performing loans reduced net income, the impact on CET1 capital was mitigated by the impact of the elimination of the deduction in relation to our expected loss shortfall calculation as well as the ECL transitional arrangement which was effective beginning in the second quarter of 2020 (see the "Transitional arrangements for the capital treatment of expected loss provisioning" section for further details). The COVID-19 pandemic had a less significant impact on our expected loss calculation for regulatory capital purposes, as the parameters used in this calculation reflect long-run experience which incorporates periods of downturn that are applied to the most recently available risk ratings. This contrasts with ECL recognized for accounting purposes, which uses point-in-time parameters based on updated forward-looking information that are more reflective of the current economic environment than the long-term parameters used for regulatory capital.

The increase in total RWA was primarily due to organic growth, movements in portfolios and risk levels, changes in regulatory requirements and the impact of foreign exchange translation, partially offset by methodology and parameter updates. The impact of COVID-19 on RWA growth, as well as regulatory expected losses, was partially mitigated by CIBC client relief programs and government support targeting both individuals and businesses in response to the COVID-19 pandemic (see the "Regulatory developments arising from the COVID-19 pandemic" section for further details) that tempered the increase in the delinquency rates that may have otherwise occurred, reductions in balances and utilization rates from lower client spending during the pandemic and the use of the most recently available risk ratings. In addition, the net increase in risk levels primarily relating to market risk RWA was more than offset by the impact of measures introduced by OSFI in response to the COVID-19 pandemic as discussed in the "Regulatory developments arising from the COVID-19 pandemic" section.

We anticipate that the combined impact of our expected loss calculation for regulatory capital purposes and credit risk RWA will act as a headwind to the positive impact of earnings growth on our CET1 ratio in future periods to the extent balances increase, utilization and delinquency rates increase and risk ratings and other credit scores deteriorate in line with our forward-looking information.

Tier 1 capital ratio

The Tier 1 capital ratio at October 31, 2020 increased 0.7% from October 31, 2019, 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 2020. See the "Capital initiatives" section below for further details.

Total capital ratio

The Total capital ratio at October 31, 2020 increased 1.1% from October 31, 2019, primarily due to the factors affecting the Tier 1 capital ratio noted above, as well as an issuance of subordinated indebtedness during the third quarter of 2020. 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	2020	2019
CET1 capital		
Balance at beginning of year	**$ 27,707**	$ 24,641
Shares issued in lieu of cash dividends (add back)	**144**	194
Other issue of common shares	**227**	183
Purchase of common shares for cancellation	**(68)**	(30)
Premium on purchase of common shares for cancellation	**(166)**	(79)
Net income attributable to equity shareholders	**3,790**	5,096
Preferred and common share dividends	**(2,714)**	(2,599)
Change in AOCI balances included in regulatory capital		
Net foreign currency translation adjustments	**180**	(31)
Net change in securities measured at FVOCI	**189**	196
Net change in cash flow hedges	**161**	131
Net change in post-employment defined benefit plans	**80**	(220)
Change in shortfall of allowance to expected losses	**575**	72
Change in goodwill and other intangible assets	**194**	117
Other, including change in regulatory adjustments (1)(2)	**577**	36
CET 1 capital balance at end of year	**$ 30,876**	$ 27,707
AT1 capital		
Balance at beginning of year	**$ 3,144**	$ 3,267
AT1 eligible capital issues (3)	**750**	575
Phase-out of innovative Tier 1 notes	**–**	(251)
Redeemed	**–**	(452)
Other, including change in regulatory adjustments (2)	**5**	5
AT1 capital balance at end of year	**$ 3,899**	$ 3,144
Tier 2 capital		
Balance at beginning of year	**$ 5,003**	$ 4,322
New Tier 2 eligible capital issues	**1,000**	1,500
Redeemed	**(32)**	(1,000)
Other, including change in regulatory adjustments (2)	**223**	181
Tier 2 capital balance at end of year	**$ 6,194**	$ 5,003
Total capital balance at end of year	**$ 40,969**	$ 35,854

(1) Includes the net impact on retained earnings as at November 1, 2019 from the adoption of IFRS 16. See Note 8 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. 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.
(3) Includes preferred shares and LRCNs.

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	2020		2019	
	RWA	Minimum total capital required (1)	RWA	Minimum total capital required (1)
Credit risk (2)				
Standardized approach				
Corporate	**$ 41,836**	**$ 3,347**	$ 39,131	$ 3,130
Sovereign	**2,460**	**197**	2,411	193
Banks	**326**	**26**	454	36
Real estate secured personal lending	**2,859**	**229**	2,597	208
Other retail	**939**	**75**	911	73
Trading book	**787**	**63**	468	37
Equity	**494**	**40**	606	48
Securitization	**1,031**	**82**	707	57
	50,732	**4,059**	47,285	3,782
AIRB approach (3)				
Corporate	**83,326**	**6,666**	76,182	6,095
Sovereign (4)	**2,911**	**233**	2,227	178
Banks	**2,995**	**240**	3,082	247
Real estate secured personal lending	**20,228**	**1,618**	18,557	1,485
Qualifying revolving retail	**14,484**	**1,159**	15,605	1,248
Other retail	**9,022**	**722**	8,890	711
Equity	**423**	**34**	395	32
Trading book	**5,200**	**416**	6,684	535
Securitization	**1,704**	**136**	815	65
Adjustment for scaling factor	**8,315**	**665**	7,898	632
	148,608	**11,889**	140,335	11,228
Other credit RWA (5)	**12,152**	**972**	10,134	811
Total credit risk (before adjustment for CVA phase-in)	**211,492**	**16,920**	197,754	15,821
Market risk (Internal Models and IRB Approach)				
VaR	**1,309**	**105**	1,073	86
Stressed VaR	**1,626**	**130**	2,478	198
Incremental risk charge	**2,192**	**175**	2,574	206
Securitization and other	**731**	**58**	407	33
Total market risk	**5,858**	**468**	6,532	523
Operational risk	**30,319**	**2,426**	28,587	2,287
Total RWA before adjustments for CVA phase-in	**$ 247,669**	**$ 19,814**	$ 232,873	$ 18,631
CVA capital charge				
Total RWA	**$ 7,202**	**$ 576**	$ 6,990	$ 559
Total RWA after adjustments for CVA phase-in				
Total RWA	**$ 254,871**	**$ 20,390**	$ 239,863	$ 19,190

(1) Refers to the minimum standard established by the BCBS before the application of the capital conservation buffer and any other capital buffers that may be established by regulators from time to time. It is calculated by multiplying RWA by 8%.
(2) Credit risk includes CCR, which comprises derivative and repo-style transactions. Credit risk for CIBC Bank USA and CIBC FirstCaribbean are calculated under the standardized approach.
(3) Includes RWA relating to equity investments in funds and certain commercial loans which are determined using the supervisory slotting approach.
(4) Includes residential mortgages insured by Canada Mortgage and Housing Corporation (CMHC), an agency of the Government of Canada, and government-guaranteed student loans.
(5) Comprises RWA relating to derivative and repo-style transactions cleared through qualified central counterparties (QCCPs), settlement risk, and other assets that are subject to the credit risk framework but are not included in the standardized or IRB frameworks, including other balance sheet assets that are risk-weighted at 100%, significant investments in the capital of non-financial institutions that are risk-weighted at 1,250%, and amounts below the thresholds for deduction that are risk-weighted at 250%.

The increase in RWAs was primarily due to organic growth, movement in portfolio and risk levels, changes in book quality, the implementation of IFRS 16 in the first quarter of 2020 and the impact of foreign exchange translation, partially offset by methodology and parameter updates.

The increase in credit risk RWA was primarily due to organic growth, movement in portfolio and risk levels, changes in regulatory requirements and the impact of foreign exchange translation, partially offset by methodology and parameter updates.

The decrease in market risk RWA was driven by capital model and methodology updates, partially offset by movement in risk levels, which includes changes in open positions and the market rates affecting these positions.

The increase in operational risk RWAs 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 rules 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 below for recently announced capital measures impacting the leverage ratio.

$ millions, as at October 31	**2020**	2019
Tier 1 capital	**$ 34,775**	$ 30,851
Leverage ratio exposure	**741,760**	714,343
Leverage ratio	**4.7 %**	4.3 %

The leverage ratio at October 31, 2020 increased 0.4% from October 31, 2019, primarily driven by an increase in Tier 1 capital, partially offset by the impact of an increase in leverage ratio exposure. The increase in leverage ratio exposure was driven by increases in off-balance sheet, derivative, and securities financing transaction exposures, partially offset by a reduction in on-balance sheet exposures reflecting the exclusion of certain amounts as permitted by OSFI in respect of exposures arising from central bank reserves and sovereign-issued securities that qualify as HQLA (see the "Regulatory developments arising from the COVID-19 pandemic" section for further details).

Capital initiatives

In conjunction with OSFI's March 13, 2020 announcement to decrease the DSB to 1.0%, OSFI also announced that it expects all federally regulated financial institutions to cease dividend increases and share buybacks for the time being, in order to ensure that the additional capital available is used to support Canadian lending activities. The following were the main capital initiatives undertaken in 2020:

Normal course issuer bid

Our normal course issuer bid expired on June 3, 2020. During the year, we purchased and cancelled 2,208,600 common shares under this bid at an average price of $106.03 for a total amount of $234 million.

Dividends

On February 25, 2020, the Board approved an increase in our quarterly common share dividend from $1.44 per share to $1.46 per share for the quarter ended April 30, 2020.

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.

Shareholder investment plan (the plan)

Effective with the October 28, 2016 dividend, CIBC has elected to issue shares from Treasury to fulfill the requirements of the plan. Pursuant to the plan, we issued 1,534,320 common shares for consideration of $144 million for the year ended October 31, 2020.

Preferred shares

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

Holders of the Non-cumulative Rate Reset Class A Preferred Shares Series 41 (NVCC) (Series 41 shares) had the option to convert their shares into Non-cumulative Floating Rate Class A Preferred Shares Series 42 (NVCC) (Series 42 shares) on a one-for-one basis on January 31, 2020. As the conditions for conversion were not met, no Series 42 shares were issued, and all of the Series 41 shares remain outstanding. The dividend on the Series 41 shares was reset to 3.909%, payable quarterly as and when declared by the Board, effective for the five-year period commencing January 31, 2020.

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

Holders of the Non-cumulative Rate Reset Class A Preferred Shares Series 43 (NVCC) (Series 43 shares) had the option to convert their shares into Non-cumulative Floating Rate Class A Preferred Shares Series 44 (NVCC) (Series 44 shares) on a one-for-one basis on July 31, 2020. As the conditions for conversion were not met, no Series 44 shares were issued, and all of the Series 43 shares remain outstanding. The dividend on the Series 43 shares was reset to 3.143%, payable quarterly as and when declared by the Board, effective for the five-year period commencing July 31, 2020.

See the "Outstanding share data" section below and Note 16 to the consolidated financial statements for further details.

Limited Recourse Capital Notes

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

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

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

The Notes and the Series 53 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 53 Preferred Share held in the Limited Recourse Trust will automatically and

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

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

Subordinated indebtedness

On July 21, 2020, we issued $1.0 billion principal amount of 2.01% Debentures due July 21, 2030 (NVCC) (subordinated indebtedness). The Debentures bear interest at a fixed rate of 2.01% per annum (paid semi-annually) until July 21, 2025, and at the three-month Canadian dollar bankers' acceptance rate plus 1.28% per annum thereafter (paid quarterly) until maturity on July 21, 2030.

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 27, 2020	Shares outstanding		Minimum conversion price per common share	Maximum number of common shares issuable on conversion/exercise
	Number of shares	Amount		
Common shares	**447,092,959**	**$ 13,908**		
Treasury shares – common shares	**(11,820)**	**(1)**		
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]	**–**	**–**		
Limited recourse capital notes [2][4]				
4.375% Limited recourse capital notes Series 1 (NVCC)	**n/a**	**750**	**5.00**	**150,000,000**
Subordinated indebtedness [2][3]				
3.42% Debentures due January 26, 2026 (NVCC)	**n/a**	**1,000**	**5.00**	**300,000,000**
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**
Stock options outstanding				**5,624,458**

(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 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).
(4) Upon the occurrence of a Trigger Event, the Series 53 Preferred Shares held in the Limited Recourse Trust in support of the 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.
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 83% based on the number of CIBC common shares outstanding as at October 31, 2020. 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, 2020, $19,925 million (2019: $8,986 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 $65 million in 2020 (2019: $54 million). All fees earned in respect of activities with the conduits are on a market basis.

As at October 31, 2020, the amount funded for the various asset types in the multi-seller conduits amounted to $8.4 billion (2019: $7.1 billion). The estimated weighted-average life of these assets was 2.0 years (2019: 1.6 years). Our holdings of commercial paper issued by the non-consolidated sponsored multi-seller conduits that offer commercial paper to external investors were $12 million (2019: $26 million). Our committed backstop liquidity facilities to these conduits were $10.5 billion (2019: $8.8 billion). We also provided credit facilities of $50 million (2019: $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 (2019: $130 million). As at October 31, 2020, we funded $86 million (2019: $87 million) through the issuance of bankers' acceptances and prime loans.

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	**2020**			2019		
	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	**$ 107**	**$ 8,390** [3]	**$ –**	$ 113	$ 7,137 [3]	$ –
Third-party structured vehicles – continuing	**3,560**	**2,880**	**–**	3,345	2,358	–
Structured vehicles run-off	**3**	**13**	**130**	3	13	139
Other	**340**	**140**	**–**	332	127	–

(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 (2019: $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 $107 million (2019: $112 million). Notional of $123 million (2019: $130 million) was hedged with credit derivatives protection from third parties. The fair value of these hedges net of CVA was $98 million (2019: $104 million). An additional notional of $7 million (2019: $9 million) was hedged through a limited recourse note.

(3) Excludes an additional $2.1 billion (2019: $1.6 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 $12 million (2019: $26 million) of our direct investments in the multi-seller conduits which we consider investment exposure.

Other financial transactions

In the second quarter of 2020, in response to the COVID-19 pandemic, we entered into an arrangement with the Government of Canada to facilitate the advancing of loans to CIBC clients who are qualifying borrowers under the CEBA program. As CIBC's involvement in the CEBA program is to administer the CEBA loans, and the funding and risks and rewards associated with the loans, including exposure to payment defaults and principal forgiveness, are assumed by the Government of Canada, loans advanced under the CEBA program are not recognized on our consolidated balance sheet. As part of our involvement in the CEBA program, we receive a fee that is intended as a reimbursement of costs that we incur to administer the loans. For further details regarding this program as well as other government lending programs that we participated in, refer to Note 2 to our consolidated financial statements.

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 and functional group-level 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 part of its risk-based audit plan and in accordance with its mandate as described in the Internal Audit Charter.

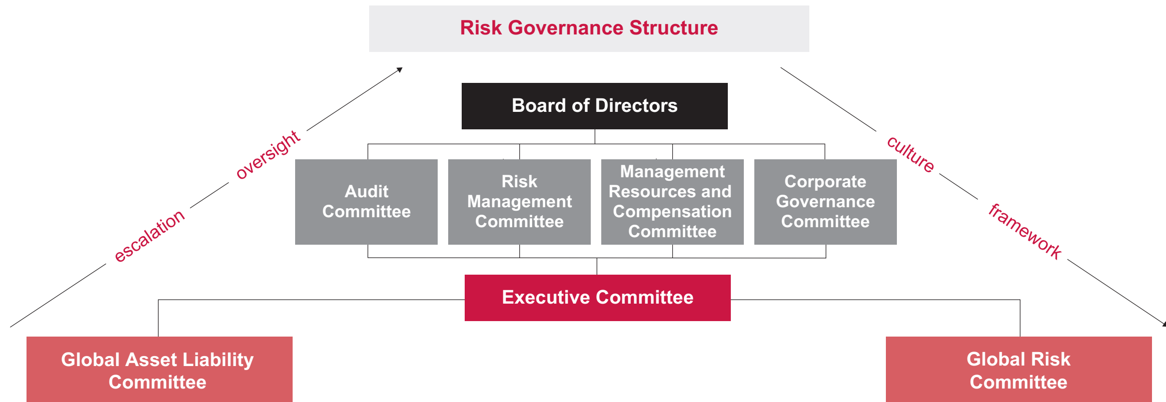
A strong risk culture and communication between the three lines of defence are important characteristics of effective risk management.

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 controlling 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.

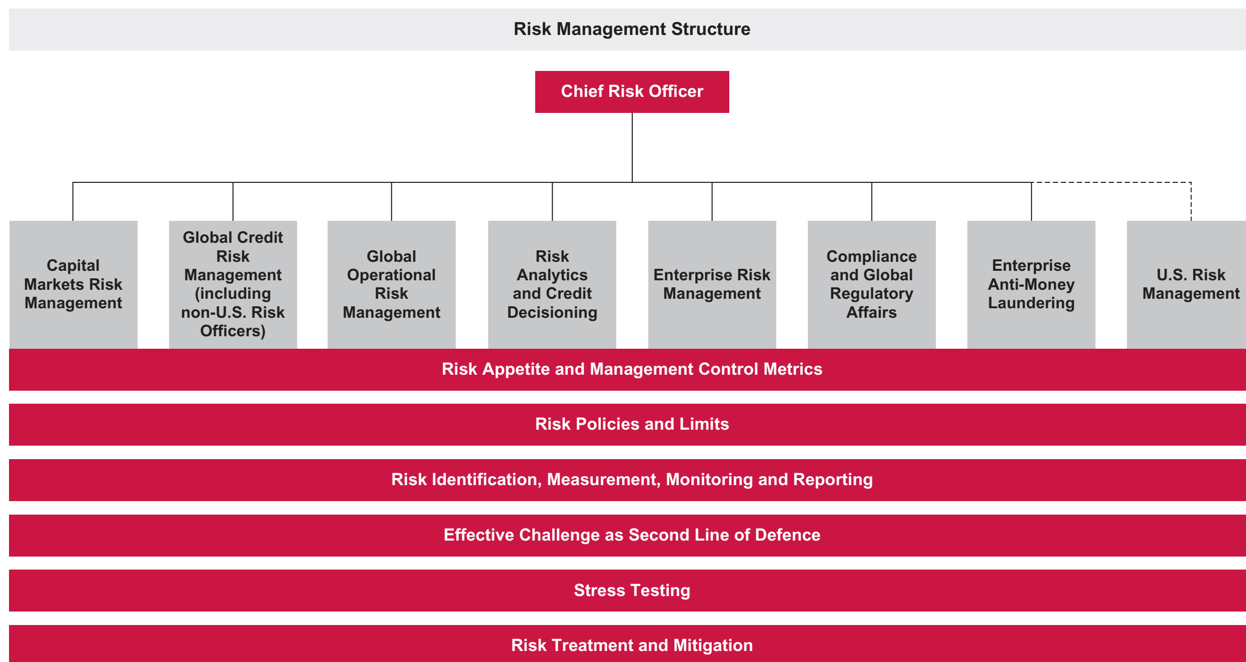
Executive Committee (ExCo): The ExCo, led by the Chief Executive Officer (CEO) and including the executives reporting directly to the CEO, is responsible for setting business strategy and for monitoring, evaluating and managing risks across CIBC. The ExCo is supported by the following management governance 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 CIBC's 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 control risks in alignment with risk strategy;
- Measuring, monitoring and reporting on risk levels;
- Identifying and assessing emerging and potential strategic risks;
- Deciding on transactions that fall outside of risk limits delegated to business lines; and
- Ensuring compliance with applicable regulatory and anti-money laundering (AML) requirements.

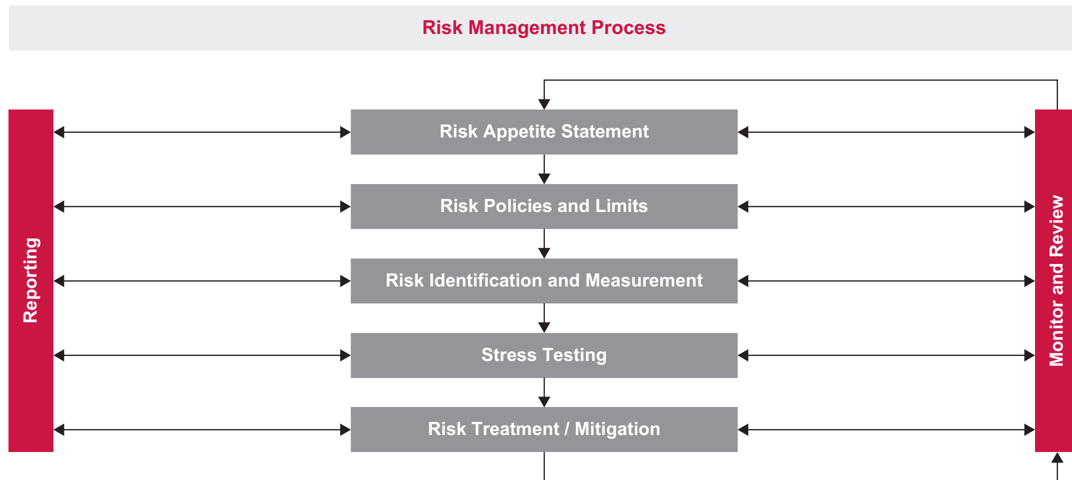
The following key groups within Risk Management, independent of the originating businesses, contribute to our management of risk:

- 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 the treasury/liquidity management function within CIBC.
- Global Credit Risk Management – This group is responsible for the adjudication and oversight of credit risks (including transaction-specific environmental and related social risk) 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, fraud, 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, loan 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 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 U.S. Risk Management Committee. The group provides independent oversight for the identification, management, measurement, monitoring and mitigation of risks in the U.S.

Risk management process

Our risk management process is illustrated below:



Risk appetite statement

CIBC's 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 Environment, Social and Governance (ESG) criteria.

CIBC's risk appetite statement contains metrics with limits that define our risk tolerance levels. In addition, we have SBU and functional group risk appetite statements that are integrated with the overall CIBC risk appetite statement that further articulate our business level risk tolerances.

CIBC's 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, documents on our internal website and internal news releases. In addition, we have policies, procedures and limits in place that govern our day-to-day business activity, with escalation procedures for limit breaches outlined accordingly.

Risk input into performance and compensation

Throughout the year, the Risk Management team manages various compensation risk reviews. These reviews are part of the second line of defence responsibilities to review and challenge new compensation plans, changes to existing compensation plans, and compensation plans that will be closed. 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 which 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. The MRCC 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 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

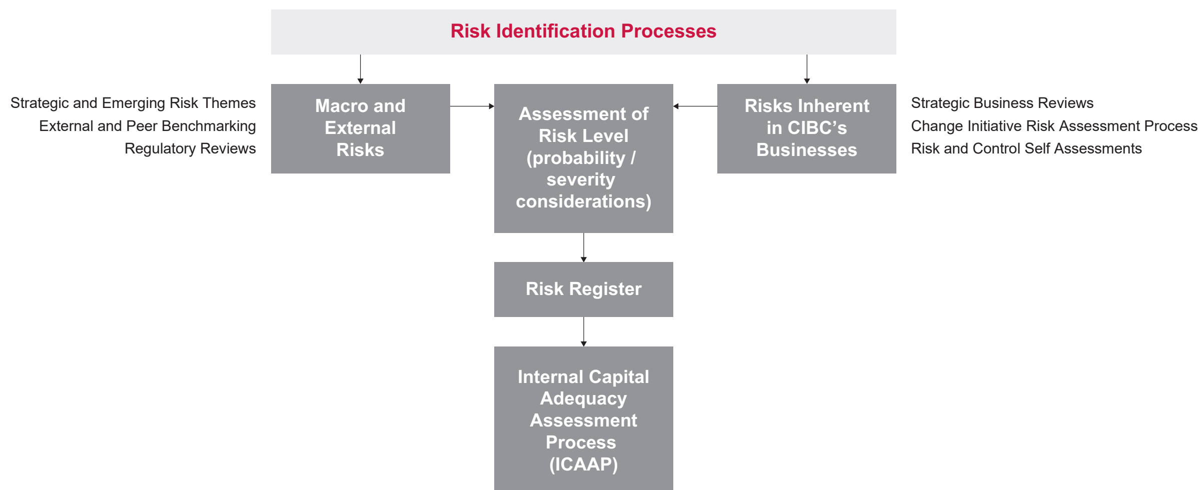
Risk	Overarching Framework / Policy	Risk Limits	Management Oversight
Credit	Credit Risk Management Policy Trading Credit Risk Management Policy	Credit Concentration Limits Delegated Credit Approval Authorities Trading Credit Risk Limits	Credit Committee Personal and Small Business Credit Risk Committee 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 Risk Committee Model and Parameter Risk Committee Corporate Governance Committee Traded Risk Committee
Reputation	Reputation Risk Management Framework and Policy	Key Risk Indicators	Reputation and Legal Risk 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 CIBC's 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. 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 CIBC 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 is prepared 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 "Financial condition" 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. CIBC pursues risk mitigation options in order to control its risk profile in the context of its risk appetite. CIBC's 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 can include stress testing our exposures relative to the risks, and 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 and the restrictions imposed by governments around the world to limit its spread have disrupted the global economy, financial markets, supply chains and business productivity in unprecedented and unpredictable ways, and have limited economic activity in Canada, the U.S. and other regions where we operate. While the economy has rebounded significantly relative to the trough of the downturn in the second quarter of 2020, the recovery has been uneven. Looking ahead, we expect a slow recovery in the first half of 2021, accelerating again thereafter and returning to pre-pandemic levels by 2022.

We are closely monitoring the continuously evolving impacts of the COVID-19 pandemic. COVID-19 has adversely affected our business and uncertainty remains as to the full impact of COVID-19 on the global economy, financial markets, and our business, results of operations, reputation and financial condition, including our regulatory capital, liquidity positions and our ability to meet regulatory and other requirements. The ultimate impacts will depend on future developments that are highly uncertain, such as the scope, severity and duration of the pandemic, including the ongoing fallout from the current second wave, subsequent resurgences of infection, actions taken by governments, monetary authorities, regulators, financial institutions and other third parties in response to subsequent waves, the extent of physical distancing measures, as well as business closures and travel restrictions mandated by governments. Recent positive developments related to vaccine development suggest regulatory approval and targeted usage could be expected by early 2021, but uncertainty remains surrounding the timing of mass production, distribution, public acceptance and the subsequent reduction in rates of infection.

A substantial amount of our business involves extending credit or otherwise providing financial resources to individuals, companies, industries or governments that have likely 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 does not increase in line with our expectations due to the impact of subsequent waves of infection, or if unemployment continues to rise and clients default on loans beyond our current expectations, we may recognize further credit losses beyond those in fiscal 2020. The effectiveness of various government support programs in place for individuals and businesses as well as the timing of a vaccine may 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 U.S. Federal Reserve in response to COVID-19 have negatively impacted our net interest income. The overall effect of lower, or potentially negative, interest rates cannot be predicted and depends on future actions that the Bank of Canada and the U.S. Federal Reserve may take to increase or reduce targeted rates in response to COVID-19 or other factors.

We have taken multiple steps to support our clients through these challenging times (see the "CIBC client relief programs in response to COVID-19" section for further details). 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 clients. The unprecedented nature, scope and speed of these actions, while essential to mitigate the economic damage of the crisis, present additional risks for CIBC. These government programs are complex, and our participation may cause additional operational, compliance, legal and reputational risks that could result in litigation, government action or other forms of loss. Furthermore, there can be no assurance as to the effectiveness of these programs, which will depend on the duration and scale of COVID-19 and will differ by region and industry, with varying degrees of benefit to our clients.

The COVID-19 pandemic has elevated operational pressure and risks for CIBC in the areas of business interruption, fraud, third-party management, transaction processing and cyber security.

We continue to operate within our business continuity plans which were enacted upon the WHO declaring COVID-19 a pandemic. We have continued to evaluate and adapt our operating model, including our return to office strategy which has been modified in light of the second wave of COVID-19. As the infection rate rises in our surrounding communities, continuous monitoring and consistent application of our Health & Safety protocols continue, in line with government and public health authorities' guidelines. The possibility of widespread illness amongst our clients and team members poses additional business and operational risk, and we continue to prioritize the health and safety of our clients and team members while meeting our clients' needs during these challenging times. Remote work arrangements continue to be in place, and we anticipate that they will continue at least throughout the next quarter.

Overall, our organization has adapted well. Relevant operational risk metrics continue to track at an acceptable level. Our technology risk management practices remain resilient and adaptable. While a more stable environment has been observed, uncertainty remains around the operational impact from the prolonged pandemic environment, as well as risk introduced through recently implemented business changes. 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 further diseases emerge that give rise to similar effects, the adverse impact on the economy could deepen and result in further volatility and declines in financial markets. Moreover, it remains uncertain how the macroeconomic environment, societal and business norms will be impacted following this pandemic. Unexpected developments in financial markets, regulatory environments, or consumer behaviour and confidence may have adverse impacts on our business, results of operations, reputation and financial condition, for a substantial period of time.

Commodity prices

While the effects of the COVID-19 pandemic continue to play out in financial markets, we have seen historic lows in crude oil prices, beyond those experienced in December 2018, with unprecedented negative prices reflected near the end of April 2020 for one-month West Texas Intermediate futures contracts. While oil prices have partially recovered since the lows of April, future price volatility remains a concern given the potential impact on global demand due to the second wave of COVID-19. Clients in our oil and gas portfolio continue to be assessed on the basis of our enhanced risk metrics that reflect our current environment, and our portfolio is monitored in a prudent manner. Precious metals and other commodities also

remain volatile as COVID-19 affects their supply and demand, with gold prices peaking in 2020. We continue to closely monitor our overall commodity exposure in these volatile markets.

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 volatility 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, including concerns related to the current and subsequent waves of infection, and the development of an effective mass-produced vaccine;
- Carry-over impact from the oil production dispute between Saudi Arabia and Russia;
- Ongoing U.S. and China relations and trade issues;
- Diplomatic tensions and the trade dispute between Canada and China;
- Relations between the U.S. and Iran;
- Anti-government protests in Hong Kong; and
- Uncertainty regarding the outcome of Brexit, given the need for Britain to negotiate a trade agreement with the European Union.

While it is impossible to predict where new geo-political disruption will occur, we do pay particular attention to markets and regions with existing or recent historical instability to assess the impact of these environments on the markets and businesses in which we operate.

Canadian consumer debt and the housing market

Historic growth of debt levels, primarily driven by higher mortgage debt, had been tempered by the Bank of Canada's interest rate increases in 2017–2018, regulatory measures that include revised mortgage underwriting guidelines (B-20 guidelines) and taxes on foreign ownership. These measures, combined with a previous low unemployment environment, have had their intended effect as debt-to-income ratios flattened in 2018–2019. To counter the economic impact due to COVID-19, the government put in place several relief programs, the Bank of Canada cut interest rates and CIBC assisted clients by offering temporary relief programs across all retail products. The housing market outlook in the short term is expected to remain fairly stable. We believe that the probability of a severe housing crash that generates significant losses for mortgage portfolios remains low. Currently, we qualify variable rate mortgage borrowers using the Bank of Canada five-year fixed benchmark rate, which is typically higher than the variable rate by approximately two percentage points and is required as part of the B-20 guidelines. 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.

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 due to several shortcomings such as their high volatility and limited regulation. 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 and have received numerous industry awards related to banking innovation and digital and mobile banking.

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. The FCA and the ICE Benchmark Administrator recently announced a consultation process that may lead to a change in the expected timing of cessation of certain currencies and tenors of LIBOR, which CIBC will closely monitor. 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 (in the eventuality that 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). CIBC has 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.

Anti-money laundering

Money laundering, terrorist financing activities and other related crimes pose a great 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. CIBC is committed to adhering to all regulatory requirements pertaining to AML and ATF 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 to improve the effectiveness of Canada's AML/ATF regime. CIBC continues to make progress on ensuring our compliance with the new regulations once they come into effect. As such, we have implemented procedures, processes and controls with respect to client due diligence, record keeping and reporting to ensure that relevant regulatory obligations are met in each jurisdiction and we have implemented mandatory annual AML/ATF training for all employees.

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 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) 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 could 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 (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.

Furthermore, the Federal Reserve and the FDIC could also restrict our ability to grow our U.S. banking operations, whether through acquisitions or organically, 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.

The U.S. regulatory environment continues to evolve and future legislative and regulatory developments may impact CIBC.

Technology, information and cyber security risk

Financial institutions like CIBC are evolving their business processes to leverage innovative technologies and the internet to improve client experience and streamline operations. At the same time, cyber threats and the associated financial, reputation and business interruption risks have also increased. These risks continue to be actively managed by us 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.

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. CIBC has well-defined cyber incident response protocols and playbooks in the event that a security incident or breach occurs. CIBC also has cyber insurance coverage to help mitigate against certain potential losses associated with cyber incidents. CIBC's 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 CIBC to identify all cyber risks or implement measures to prevent or eliminate all potential incidents from occurring. However, CIBC monitors its risk profile for changes and continues to refine approaches to security protection and service resilience to minimize the impact of any incidents that may occur.

Third party risk

CIBC's 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 CIBC through reduced costs, innovation, improved performance and increased business competitiveness, they also can 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, CIBC relies on its strong risk culture and established 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 CIBC's strategic direction and operational needs within our risk appetite.

Climate risk

The physical effects of climate change such as heat waves, water stress and flooding, along with regulations designed to mitigate climate change, will have a measurable impact on communities and the economy. 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 business activities. While CIBC has relatively low direct carbon emissions given we are a service-based company, many of our clients operate in businesses that currently face or will face new carbon emission standards in the foreseeable future.

There is an increasing demand for disclosure around climate-related risk identification and mitigation and we support 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. A key recommendation by the TCFD is the use of climate-related scenario analysis as a way to provide insight into how physical and transition risks of climate change might impact a business over time. Along with many other global banks, we are participating in the United Nations Environment Programme Finance Initiative (UNEP FI) and the TCFD, in order to accelerate our progress and ensure consistency in the approach to effective climate scenario analysis. Developing a comprehensive TCFD report is a journey that is expected to take several years. We are proactively collaborating with peer banks to ensure consistency and comparability as we improve the completeness of our TCFD reporting.

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

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 certain 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, among others, and changes in general business and economic conditions.

Although many of the factors are beyond CIBC's control, their impact is partially mitigated by conducting due diligence before completing the transaction and developing and executing appropriate plans. However, such corporate transactions involve inherent uncertainty and we cannot determine all potential events, facts and circumstances and there could be an adverse impact on CIBC's operations and financial performance following 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 allocated common equity as at October 31, 2020:

CIBC

	Canadian Personal and Business Banking	Canadian Commercial Banking and Wealth Management	U.S. Commercial Banking and Wealth Management	Capital Markets	Corporate and Other
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 • Personal and small banking	• Credit products • Global markets • Investment banking • Investment portfolios	• International banking • Investment portfolios • Joint ventures • Functional and support groups (see page 29)
Balance sheet ($ millions)					
Average assets	261,956	65,839	55,237	221,117	131,343
Average deposits	194,566	71,076	35,461	44,175	193,356
RWA ($ millions)					
Credit risk	50,332	48,423	46,612 [1]	53,161 [2]	20,166 [3]
Market risk	–	–	17	5,596	245
Operational risk	12,222	6,486	3,574	6,680	1,357
Allocated common equity [4][5] (%)					
Proportion of total CIBC	18	18	25	18	21
Comprising:					
Credit risk	75	74	49 [6]	81 [6]	73 [6]
Market risk	–	–	–	8	2
Operational risk	18	10	4	10	8
Other [6]	7	16	47	1	17

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) Includes CCR of $193 million, which comprises derivatives and repo-style transactions.
(2) Includes CCR of $16,784 million, which comprises derivatives and repo-style transactions.
(3) Includes CCR of $143 million, which comprises derivatives and repo-style transactions.
(4) Effective November 1, 2019, capital is now allocated to the SBUs based on the estimated amount of regulatory capital required to support their businesses. Previously, we utilized an economic capital model to attribute capital to our SBUs and calculate segmented return on equity. For additional information, see the "External reporting changes" section. Allocated common equity is a non-GAAP measure. For additional information, see the "Non-GAAP measures" section. Allocated common equity amounts shown in this table reflect average balances.
(5) Under the previous economic capital model, interest rate risk in the banking book was considered a component of market risk. Effective November 1, 2019, the composition of risks relating to allocated common equity is based on the Basel III definitions of credit risk, market risk, and operational risk.
(6) Represents 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. 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. Frontline businesses and control groups must 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 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 (including transaction-specific environmental and related social risk) 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, as well as economic and regulatory capital methodologies.

Retail 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, fraud, 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 credits require reporting to, or approval of, the RMC, ensuring an increasing level of oversight for credits 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 to individual borrowers and geographic regions, but also to different types of credit facilities, such as unsecured credits, rental occupancy purpose credits, condominium secured credits and mortgages with a second or third charge where we are behind another lender. 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 which 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 will 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. Troubled 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 which 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.

Limited approval authorities were delegated to customer contact centres and originating businesses, to ensure we had the ability to respond to customer requests for payment relief on a timely basis as a result of the COVID-19 pandemic. We are closely monitoring these payment relief programs, to ensure that credit performance is realized as expected, including controls on the overall number of deferrals, and maintaining daily monitoring of delinquencies and insolvencies.

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 which 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 default 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 1 to 2 years for most corporate obligors, and 1 to 4 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 homogenous 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 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			**2020**			2019
	AIRB approach [1]	**Standardized approach**	**Total**	AIRB approach [1]	Standardized approach	Total
Business and government portfolios						
Corporate						
Drawn	**$ 102,342**	**$ 36,603**	**$ 138,945**	$ 96,444	$ 32,292	$ 128,736
Undrawn commitments	**49,473**	**7,339**	**56,812**	44,732	6,244	50,976
Repo-style transactions	**139,677**	**–**	**139,677**	122,776	1	122,777
Other off-balance sheet	**14,085**	**1,016**	**15,101**	14,540	981	15,521
OTC derivatives	**10,858**	**786**	**11,644**	14,125	596	14,721
	316,435	**45,744**	**362,179**	292,617	40,114	332,731
Sovereign						
Drawn	**133,077**	**22,664**	**155,741**	73,036	13,301	86,337
Undrawn commitments	**8,354**	**–**	**8,354**	6,421	–	6,421
Repo-style transactions	**38,904**	**–**	**38,904**	21,404	–	21,404
Other off-balance sheet	**1,553**	**–**	**1,553**	1,624	–	1,624
OTC derivatives	**2,187**	**2**	**2,189**	3,094	2	3,096
	184,075	**22,666**	**206,741**	105,579	13,303	118,882
Banks						
Drawn	**12,846**	**1,241**	**14,087**	12,689	1,862	14,551
Undrawn commitments	**1,552**	**16**	**1,568**	1,771	6	1,777
Repo-style transactions	**24,228**	**–**	**24,228**	25,472	–	25,472
Other off-balance sheet	**59,761**	**–**	**59,761**	61,532	–	61,532
OTC derivatives	**5,805**	**21**	**5,826**	9,355	18	9,373
	104,192	**1,278**	**105,470**	110,819	1,886	112,705
Gross business and government portfolios	**604,702**	**69,688**	**674,390**	509,015	55,303	564,318
Less: collateral held for repo-style transactions	**187,832**	**–**	**187,832**	157,415	–	157,415
Net business and government portfolios	**416,870**	**69,688**	**486,558**	351,600	55,303	406,903
Retail portfolios						
Real estate secured personal lending						
Drawn	**231,527**	**4,799**	**236,326**	222,933	4,177	227,110
Undrawn commitments [2]	**31,390**	**–**	**31,390**	20,777	1	20,778
	262,917	**4,799**	**267,716**	243,710	4,178	247,888
Qualifying revolving retail						
Drawn	**18,701**	**–**	**18,701**	19,784	–	19,784
Undrawn commitments [2]	**53,085**	**–**	**53,085**	49,709	–	49,709
Other off-balance sheet	**271**	**–**	**271**	275	–	275
	72,057	**–**	**72,057**	69,768	–	69,768
Other retail						
Drawn	**14,869**	**1,326**	**16,195**	13,478	1,268	14,746
Undrawn commitments [2]	**2,819**	**28**	**2,847**	2,584	26	2,610
Other off-balance sheet	**35**	**–**	**35**	36	–	36
	17,723	**1,354**	**19,077**	16,098	1,294	17,392
Total retail portfolios	**352,697**	**6,153**	**358,850**	329,576	5,472	335,048
Securitization exposures	**12,276**	**3,509**	**15,785**	10,688	3,511	14,199
Gross credit exposure	**969,675**	**79,350**	**1,049,025**	849,279	64,286	913,565
Less: collateral held for repo-style transactions	**187,832**	**–**	**187,832**	157,415	–	157,415
Net credit exposure [3]	**$ 781,843**	**$ 79,350**	**$ 861,193**	$ 691,864	$ 64,286	$ 756,150

(1) Includes exposures subject to the supervisory slotting approach.
(2) Increases in EAD in the current year include the impact of certain parameter updates in our regulatory models that were made in the first quarter of 2020 as part of our ongoing monitoring and review process.
(3) 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 $105 billion in 2020, due to increases in our deposits with sovereigns and securities holdings, as well as 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							2020	2019
	0%	**20%**	**35%**	**50%**	**75%**	**100%**	**150%**	**Total**	Total
Corporate	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ 45,592**	**$ 152**	**$ 45,744**	$ 40,114
Sovereign	**17,648**	**3,442**	**–**	**138**	**–**	**906**	**532**	**22,666**	13,303
Banks	**–**	**1,189**	**–**	**1**	**–**	**78**	**10**	**1,278**	1,886
Real estate secured personal lending	**–**	**–**	**1,742**	**–**	**2,883**	**170**	**4**	**4,799**	4,178
Other retail	**–**	**–**	**–**	**–**	**1,289**	**59**	**6**	**1,354**	1,294
	$ 17,648	**$ 4,631**	**$ 1,742**	**$ 139**	**$ 4,172**	**$ 46,805**	**$ 704**	**$ 75,841**	$ 60,775

(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 2.7% 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	2020		2019	
	Exposure [1]			
Investment grade	**$ 7.46**	**74.9 %**	$ 5.40	82.4 %
Non-investment grade	**2.40**	**24.1**	1.12	17.1
Watch list	**0.07**	**0.7**	0.02	0.3
Default	**0.03**	**0.3**	0.01	0.2
Unrated	**–**	**–**	–	–
	$ 9.96	**100.0 %**	$ 6.55	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, 2020	Canada	U.S.	Europe	Other	Total
Drawn	**$ 173,199**	**$ 55,051**	**$ 8,396**	**$ 11,619**	**$ 248,265**
Undrawn commitments	**45,684**	**9,717**	**2,402**	**1,576**	**59,379**
Repo-style transactions	**7,787**	**4,022**	**1,241**	**1,927**	**14,977**
Other off-balance sheet	**59,188**	**9,422**	**6,138**	**651**	**75,399**
OTC derivatives	**9,926**	**3,770**	**3,279**	**1,875**	**18,850**
	$ 295,784	**$ 81,982**	**$ 21,456**	**$ 17,648**	**$ 416,870**
October 31, 2019	$ 237,234	$ 73,900	$ 23,150	$ 17,316	$ 351,600

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

Business and government exposure by industry groups

The following table provides an industry-wide breakdown of our business and government exposures under the AIRB approach, net of collateral held for repo-style transactions.

$ millions, as at October 31	**Drawn**	**Undrawn commitments**	**Repo-style transactions**	**Other off-balance sheet**	**OTC derivatives**	**2020 Total**	2019 Total [1]
Commercial mortgages	**$ 8,373**	**$ 47**	**$ –**	**$ –**	**$ –**	**$ 8,420**	$ 7,544
Financial institutions	**81,967**	**7,673**	**14,318**	**66,312**	**9,775**	**180,045**	140,284
Retail and wholesale	**5,167**	**3,652**	**–**	**225**	**239**	**9,283**	9,142
Business services	**7,047**	**3,264**	**18**	**595**	**215**	**11,139**	11,000
Manufacturing – capital goods	**2,791**	**2,036**	**–**	**365**	**205**	**5,397**	5,898
Manufacturing – consumer goods	**3,455**	**2,052**	**–**	**214**	**95**	**5,816**	6,024
Real estate and construction	**30,216**	**8,257**	**142**	**1,166**	**871**	**40,652**	38,358
Agriculture	**6,771**	**1,767**	**–**	**26**	**196**	**8,760**	8,575
Oil and gas	**9,649**	**8,532**	**–**	**1,039**	**2,305**	**21,525**	21,813
Mining	**1,363**	**2,931**	**–**	**723**	**114**	**5,131**	5,326
Forest products	**490**	**515**	**–**	**205**	**29**	**1,239**	1,324
Hardware and software	**1,227**	**890**	**–**	**45**	**27**	**2,189**	1,751
Telecommunications and cable	**335**	**1,126**	**–**	**408**	**326**	**2,195**	2,234
Broadcasting, publishing and printing	**457**	**154**	**–**	**2**	**52**	**665**	801
Transportation	**5,768**	**2,596**	**–**	**262**	**1,287**	**9,913**	8,877
Utilities	**9,189**	**7,066**	**–**	**2,707**	**1,177**	**20,139**	15,747
Education, health, and social services	**3,096**	**1,194**	**6**	**150**	**296**	**4,742**	4,541
Governments	**70,904**	**5,627**	**493**	**955**	**1,641**	**79,620**	62,361
	$ 248,265	**$ 59,379**	**$ 14,977**	**$ 75,399**	**$ 18,850**	**$ 416,870**	$ 351,600

(1) Certain information has been reclassified to conform to the presentation adopted in the current year. The presentation of commercial mortgages has been changed to include risk-rated commercial mortgages. Previously, commercial mortgages only included commercial mortgages under the slotting approach.

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, 2020, we had credit protection purchased totalling $185 million (2019: $183 million) related to our business and government loans.

Oil and gas exposure

The following table provides a breakdown of our exposure to the oil and gas industry under the AIRB approach. Of these exposures, 64% are investment grade as at October 31, 2020 based on our internal risk rating, which incorporates security pledged (equivalent to S&P/Moody's rating of BBB-/Baa3 or higher).

$ millions, as at October 31, 2020	Drawn	Undrawn commitments	Other off-balance sheet	OTC derivatives	Total [1]
Exploration and production	**$ 4,924**	**$ 2,857**	**$ 378**	**$ 1,136**	**$ 9,295**
Midstream	**2,241**	**3,107**	**43**	**401**	**5,792**
Integrated	**211**	**1,649**	**468**	**652**	**2,980**
Petroleum distribution	**1,391**	**393**	**106**	**110**	**2,000**
Oil and gas services	**347**	**218**	**15**	**5**	**585**
Downstream	**535**	**308**	**29**	**1**	**873**
	$ 9,649	**$ 8,532**	**$ 1,039**	**$ 2,305**	**$ 21,525**
October 31, 2019	$ 9,048	$ 8,606	$ 913	$ 3,246	$ 21,813

(1) Oil and gas exposures under the standardized approach are not significant.

In addition, we have $40.0 billion (October 31, 2019: $39.9 billion) of retail exposure in the provinces of Alberta, Saskatchewan, and Newfoundland and Labrador, which together are responsible for the vast majority of Canada's oil production.

Credit quality of portfolios

Credit quality of risk-rated portfolios

The following table provides the credit quality of our risk-rated portfolios under the AIRB approach, net of collateral held for repo-style transactions.

The obligor grade is our assessment of the creditworthiness of the obligor, without respect to the collateral held in support of the exposure. The LGD estimate would reflect our assessment of the value of the collateral at the time of default of the obligor. For slotted exposures, the slotting category reflects our assessment of both the creditworthiness of the obligor, as well as the value of the collateral.

$ millions, as at October 31				2020	2019
	EAD				
Obligor grade	Corporate	Sovereign	Banks	Total	Total
Investment grade	$ 106,633	$ 147,438	$ 82,029	$ 336,100	$ 276,817
Non-investment grade	74,600	781	1,264	76,645	72,613
Watch list	2,730	–	–	2,730	1,239
Default	1,039	–	–	1,039	579
Total risk-rated exposure	$ 185,002	$ 148,219	$ 83,293	$ 416,514	$ 351,248
LGD estimate	Corporate	Sovereign	Banks	Total	Total
Less than 10%	$ 9,704	$ 136,968	$ 60,057	$ 206,729	$ 142,666
10%–25%	56,615	7,881	5,090	69,586	68,790
26%–45%	84,108	3,010	17,251	104,369	110,596
46%–65%	33,301	289	893	34,483	27,733
66%–100%	1,274	71	2	1,347	1,463
	$ 185,002	$ 148,219	$ 83,293	$ 416,514	$ 351,248
Strong				$ 265	$ 246
Good				71	85
Satisfactory				20	21
Weak				–	–
Default				–	–
Total slotted exposure				$ 356	$ 352
Total business and government portfolios				$ 416,870	$ 351,600

The total exposures increased by $65.3 billion from October 31, 2019, due to increases in our deposits with sovereigns and securities holdings, as well as business growth in our North American lending portfolios. The investment grade category increased by $59.3 billion from October 31, 2019, while the non-investment grade category was up $4.0 billion. The increase in watch list and default exposures was largely attributable to credit migration of a number of exposures in the corporate lending portfolio, including exposures within the oil and gas portfolio.

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				2020	2019
	EAD				
Risk level	Real estate secured personal lending	Qualifying revolving retail	Other retail	Total	Total
Exceptionally low	$ 201,050	$ 49,755	$ 3,816	$ 254,621	$ 239,875
Very low	31,927	4,469	4,335	40,731	34,018
Low	25,825	10,437	6,091	42,353	39,648
Medium	3,086	6,598	2,438	12,122	13,259
High	586	763	973	2,322	2,271
Default	443	35	70	548	505
	$ 262,917	$ 72,057	$ 17,723	$ 352,697	$ 329,576

Securitization exposures

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

$ millions, as at October 31	2020	2019
	EAD	
Exposures under the AIRB approach		
S&P rating equivalent		
AAA to BBB-	$ 12,276	$ 10,688
BB+ to BB-	–	–
Below BB-	–	–
Unrated	–	–
	12,276	10,688
Exposures under the standardized approach	3,509	3,511
Total securitization exposures	$ 15,785	$ 14,199

CIBC client relief programs in response to COVID-19

CIBC has been actively engaged in lending activities to support our clients who are experiencing financial hardship caused by the COVID-19 pandemic.

For our personal banking clients impacted by the COVID-19 pandemic, the following client relief programs have been offered since the onset of the pandemic:

- Credit cards: lower interest rate of 10.99% on certain products was offered, in addition to the option to defer credit card payments for up to four months with the lower interest rate also applying over the deferral period.
- Residential mortgages: deferral of regular mortgage payments for up to six months.
- Loans and lines of credit: deferral of regular payments on certain secured personal loans for up to six months and on certain other loans and lines of credit for up to two months.
- Guaranteed investment certificates (GICs): on an exception basis, early withdrawal from eligible GICs.

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;
- Early withdrawal of funds held in non-registered GICs; and
- Access to financial support through government programs.

On a case-by-case basis, with credit risk management approval, other unique modifications that met prudent standards could also be considered.

During the fourth quarter of 2020, the number of clients seeking relief under these payment deferral programs was considerably lower relative to the prior quarter, which resulted in a reduction in the outstanding balances for those programs in which the deferral periods were three months or less. As at October 31, 2020, the gross outstanding balance of loans for which CIBC provided payment deferrals was nil for credit cards in Canada (July 31, 2020: less than $10 million; April 30, 2020: $1.8 billion); $2.7 billion for residential mortgages in Canada (July 31, 2020: $33.3 billion; April 30, 2020: $35.5 billion); $0.3 billion for personal loans in Canada (July 31, 2020: $0.8 billion; April 30, 2020: $2.3 billion); $0.3 billion for various consumer loans in the Caribbean (July 31, 2020: $1.4 billion; April 30, 2020: $1.3 billion); and $2.5 billion for business and government loans (July 31, 2020: $6.2 billion; April 30, 2020: $10.0 billion), including $0.5 billion in Canada (July 31, 2020: $2.4 billion; April 30, 2020: $8.6 billion), $0.5 billion in the U.S. (July 31, 2020: $1.6 billion; April 30, 2020: $0.9 billion) and $1.5 billion in the Caribbean (July 31, 2020: $2.2 billion; April 30, 2020: $0.5 billion). Of the loans that were under payment deferrals as of October 31, 2020, the gross outstanding balance of loans that received an extension of an initial deferral or are in the process of being provided an extension was $1.2 billion.

Government lending programs in response to COVID-19

Since the second quarter of 2020, CIBC has been engaged in a number of government-initiated lending programs:

- CEBA program;
- Loan guarantee for small and medium-sized enterprises (EDC loan guarantee program);
- Co-lending program for small and medium-sized enterprises (BDC co-lend program); and
- U.S. PPP.

The CEBA program was launched in the second quarter of 2020 by the Government of Canada. The EDC funds all loans advanced under the CEBA program, including any payment defaults and principal forgiveness. The CEBA program was expanded during the third quarter of 2020 to facilitate the application of the program to certain borrowers that would have not otherwise qualified.

The Business Credit Availability Program (BCAP), which was introduced by the Government of Canada in the second quarter of 2020, includes two subprograms: (i) the EDC loan guarantee program for small and medium-sized enterprises and (ii) the BDC co-lending arrangement. Under the EDC loan guarantee program, EDC will guarantee 80% of qualifying term loans to small and medium-sized enterprises to help them meet their operating credit and cash flow requirements. Under the BDC co-lend program, BDC, as co-lender, finances 80% of the loans originated under this program, while CIBC finances the remaining 20%.

The PPP, introduced by the U.S. Small Business Administration, is a forgivable loan program. PPP loans are guaranteed by the U.S. Small Business Administration.

As at October 31, 2020, $2.9 billion of loans to CIBC clients were provided under the CEBA program and were accounted for as off-balance sheet loans. For further details, refer to the "Off-balance sheet arrangements" section. As at October 31, 2020, funded loans outstanding on our consolidated balance sheet under the EDC loan guarantee and BDC co-lend programs were $0.2 billion. In addition, US$1.9 billion of loans were made under the PPP as at October 31, 2020.

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 table provides details on our residential mortgage and HELOC portfolios:

	Residential mortgages (1)				HELOC (2)		Total			
$ billions, as at October 31, 2020	Insured		Uninsured		Uninsured		Insured		Uninsured	
Ontario (3)	**$ 29.4**	**26 %**	**$ 82.1**	**74 %**	**$ 10.4**	**100 %**	**$ 29.4**	**24 %**	**$ 92.5**	**76 %**
British Columbia and territories (4)	**10.2**	**24**	**32.9**	**76**	**4.1**	**100**	**10.2**	**22**	**37.0**	**78**
Alberta	**13.6**	**53**	**12.1**	**47**	**2.4**	**100**	**13.6**	**48**	**14.5**	**52**
Quebec	**6.0**	**38**	**10.0**	**62**	**1.2**	**100**	**6.0**	**35**	**11.2**	**65**
Central prairie provinces (5)	**3.7**	**51**	**3.6**	**49**	**0.7**	**100**	**3.7**	**46**	**4.3**	**54**
Atlantic provinces (6)	**4.1**	**49**	**4.3**	**51**	**0.7**	**100**	**4.1**	**45**	**5.0**	**55**
Canadian portfolio (7)(8)	**67.0**	**32**	**145.0**	**68**	**19.5**	**100**	**67.0**	**29**	**164.5**	**71**
U.S. portfolio (7)	**–**	**–**	**2.0**	**100**	**0.1**	**100**	**–**	**–**	**2.1**	**100**
Other international portfolio (7)	**–**	**–**	**2.0**	**100**	**–**	**–**	**–**	**–**	**2.0**	**100**
Total portfolio	**$ 67.0**	**31 %**	**$ 149.0**	**69 %**	**$ 19.6**	**100 %**	**$ 67.0**	**28 %**	**$ 168.6**	**72 %**
October 31, 2019	$ 66.2	32 %	$ 139.1	68 %	$ 21.3	100 %	$ 66.2	29 %	$ 160.4	71 %

(1) Balances reflect principal values.
(2) We did not have any insured HELOCs as at October 31, 2020 and 2019.
(3) Includes $13.8 billion (2019: $14.1 billion) of insured residential mortgages, $53.4 billion (2019: $49.0 billion) of uninsured residential mortgages, and $6.1 billion (2019: $6.6 billion) of HELOCs in the Greater Toronto Area (GTA).
(4) Includes $4.5 billion (2019: $4.6 billion) of insured residential mortgages, $22.9 billion (2019: $22.1 billion) of uninsured residential mortgages, and $2.5 billion (2019: $2.7 billion) of HELOCs in the Greater Vancouver Area (GVA).
(5) Includes $1.8 billion (2019: $1.8 billion) of insured residential mortgages, $1.7 billion (2019: $1.7 billion) of uninsured residential mortgages, and $0.4 billion (2019: $0.4 billion) of HELOCs in Saskatchewan.
(6) Includes $1.3 billion (2019: $1.3 billion) of insured residential mortgages, $1.4 billion (2019: $1.4 billion) of uninsured residential mortgages, and $0.2 billion (2019: $0.2 billion) of HELOCs in Newfoundland and Labrador.
(7) Geographic location is based on the address of the property.
(8) 71% (2019: 72%) 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	**2020**		2019	
	Residential mortgages	**HELOC**	Residential mortgages	HELOC
Ontario (2)	**63 %**	**68 %**	63 %	67 %
British Columbia and territories (3)	**60**	**65**	61	64
Alberta	**68**	**73**	68	72
Quebec	**68**	**73**	68	73
Central prairie provinces	**68**	**74**	69	74
Atlantic provinces	**71**	**74**	72	74
Canadian portfolio (4)	**63**	**68**	64	68
U.S. portfolio (4)	**65**	**63**	69	63
Other international portfolio (4)	**72 %**	**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 62% (2019: 62%).
(3) Average LTV ratios for our uninsured GVA residential mortgages originated during the year were 58% (2019: 57%).
(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, 2020 (1)(2)	**55 %**	**52 %**
October 31, 2019 (1)(2)	55 %	54 %

(1) LTV ratios for residential mortgages are calculated based on weighted average. The house price estimates for October 31, 2020 and 2019 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, 2020 and 2019, respectively. Teranet is an independent estimate of the rate of change in Canadian home prices.
(2) Average LTV ratio on our uninsured GTA residential mortgage portfolio was 48% (2019: 50%). Average LTV ratio on our uninsured GVA residential mortgage portfolio was 46% (2019: 47%).

The tables below summarize the remaining amortization profile of our total Canadian, U.S. and other international residential mortgages. The first table provides the remaining amortization periods based on the minimum contractual payment amounts. The second table provides the remaining amortization periods based upon current customer payment amounts, which incorporate payments other than the minimum contractual amount and/or a different frequency of payments.

Contractual payment basis

	0–5 years	>5–10 years	>10–15 years	>15–20 years	>20–25 years	>25–30 years	>30–35 years	>35 years
Canadian portfolio								
October 31, 2020	**– %**	**1 %**	**2 %**	**7 %**	**54 %**	**36 %**	**– %**	**– %**
October 31, 2019	– %	1 %	2 %	6 %	49 %	42 %	– %	– %
U.S. portfolio								
October 31, 2020	**– %**	**1 %**	**1 %**	**1 %**	**8 %**	**89 %**	**– %**	**– %**
October 31, 2019	– %	2 %	2 %	1 %	9 %	86 %	– %	– %
Other international portfolio								
October 31, 2020	**11 %**	**15 %**	**23 %**	**23 %**	**18 %**	**10 %**	**– %**	**– %**
October 31, 2019	9 %	16 %	23 %	23 %	17 %	12 %	– %	– %

Current customer payment basis

	0–5 years	>5–10 years	>10–15 years	>15–20 years	>20–25 years	>25–30 years	>30–35 years	>35 years
Canadian portfolio								
October 31, 2020	**2 %**	**4 %**	**7 %**	**18 %**	**44 %**	**25 %**	**– %**	**– %**
October 31, 2019	2 %	4 %	6 %	13 %	40 %	30 %	3 %	2 %
U.S. portfolio								
October 31, 2020	**2 %**	**3 %**	**7 %**	**10 %**	**10 %**	**68 %**	**– %**	**– %**
October 31, 2019	1 %	4 %	11 %	10 %	13 %	61 %	– %	– %
Other international portfolio								
October 31, 2020	**7 %**	**13 %**	**22 %**	**23 %**	**19 %**	**14 %**	**2 %**	**– %**
October 31, 2019	7 %	13 %	23 %	24 %	18 %	14 %	1 %	– %

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, 2020, our Canadian condominium mortgages were $28.1 billion (2019: $25.2 billion), of which 31% (2019: 33%) were insured. Our drawn developer loans were $1.4 billion (2019: $1.3 billion), or 1.0% (2019: 1.0%) of our business and government portfolio, and our related undrawn exposure was $4.5 billion (2019: $4.0 billion). The condominium developer exposure is diversified across 107 projects.

We stress test our mortgage and HELOC portfolio to determine the potential impact of different economic events. Our stress tests can use variables such as unemployment rates, debt service ratios and housing price changes, to model potential outcomes for a given set of circumstances. The stress testing involves variables that could behave differently in certain situations. Our main tests use economic variables in a similar range to historical events when Canada experienced economic downturns. Our results show that in an economic downturn, our strong capital position should be sufficient to absorb mortgage and HELOC losses.

Credit quality performance

As at October 31, 2020, total loans and acceptances after allowance for credit losses were $416.4 billion (2019: $398.1 billion). Consumer loans (comprising residential mortgages, credit cards, and personal loans, including student loans) constitute 66% (2019: 66%) of the portfolio, and business and government loans (including acceptances) constitute the remainder of the portfolio.

Consumer loans were up $9.0 billion or 3% from the prior year, primarily due to an increase in residential mortgages of $12.4 billion, offset by a decrease in personal loans and credit cards. Business and government loans (including acceptances) were up $9.2 billion or 7% from the prior year, mainly attributable to real estate and construction, financial institutions, utilities, education health and social services, as well as transportation.

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	**2020**			2019		
	Business and government loans	**Consumer loans**	**Total**	Business and government loans	Consumer loans	Total
Gross impaired loans						
Balance at beginning of year	**$ 911**	**$ 955**	**$ 1,866**	$ 621	$ 859	$ 1,480
Classified as impaired during the year	**1,256**	**1,933**	**3,189**	1,204	2,004	3,208
Transferred to performing during the year	**(109)**	**(580)**	**(689)**	(134)	(394)	(528)
Net repayments	**(547)**	**(543)**	**(1,090)**	(239)	(575)	(814)
Amounts written off	**(157)**	**(778)**	**(935)**	(190)	(940)	(1,130)
Recoveries of loans and advances previously written off	**–**	**–**	**–**	–	–	–
Disposals of loans [1]	**–**	**–**	**–**	(361)	–	(361)
Purchased credit-impaired loans	**–**	**–**	**–**	–	–	–
Foreign exchange and other	**5**	**3**	**8**	10	1	11
Balance at end of year	**$ 1,359**	**$ 990**	**$ 2,349**	$ 911	$ 955	$ 1,866
Allowance for credit losses – impaired loans						
Balance at beginning of year	**$ 376**	**$ 268**	**$ 644**	$ 230	$ 252	$ 482
Amounts written off	**(157)**	**(778)**	**(935)**	(190)	(940)	(1,130)
Recoveries of amounts written off in previous years	**9**	**183**	**192**	13	181	194
Charge to income statement [2]	**451**	**614**	**1,065**	350	795	1,145
Interest accrued on impaired loans	**(21)**	**(24)**	**(45)**	(18)	(22)	(40)
Disposals of loans [1]	**–**	**–**	**–**	–	–	–
Transfers	**–**	**–**	**–**	–	–	–
Foreign exchange and other	**(8)**	**1**	**(7)**	(9)	2	(7)
Balance at end of year	**$ 650**	**$ 264**	**$ 914**	$ 376	$ 268	$ 644
Net impaired loans [3]						
Balance at beginning of year	**$ 535**	**$ 687**	**$ 1,222**	$ 391	$ 607	$ 998
Net change in gross impaired	**448**	**35**	**483**	290	96	386
Net change in allowance	**(274)**	**4**	**(270)**	(146)	(16)	(162)
Balance at end of year	**$ 709**	**$ 726**	**$ 1,435**	$ 535	$ 687	$ 1,222
Net impaired loans as a percentage of net loans and acceptances			**0.34 %**			0.31 %

(1) Includes loans with a par value of $116 million and ECL of $48 million that were derecognized as a result of a debt restructuring agreement completed with the Government of Barbados on October 31, 2018.
(2) Excludes provision for credit losses on impaired undrawn credit facilities and other off-balance sheet exposures.
(3) Net impaired loans are gross impaired loans net of stage 3 allowance for credit losses.

Gross impaired loans

As at October 31, 2020, gross impaired loans were $2,349 million, up $483 million from the prior year, primarily due to increases in the oil and gas, real estate and construction, and retail and wholesale sectors, as well as an increase in the Canadian residential mortgages portfolio.

60% of gross impaired loans related to Canada, of which the residential mortgages portfolio, retail and wholesale sector, personal lending portfolio and business services sector accounted for the majority.

25% of gross impaired loans related to the U.S., of which the oil and gas, real estate and construction, and business services sectors accounted for the majority.

The remaining gross impaired loans are primarily related to CIBC FirstCaribbean, of which the residential mortgages portfolio, real estate and construction sector and personal lending portfolio 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 $914 million, up $270 million from the prior year, primarily due to increases in the retail and wholesale, oil and gas, and business services sectors.

Loans contractually past due but not impaired

This comprises loans where repayment of principal or payment of interest is contractually in arrears. The following table provides an aging analysis of the contractually past due loans. Most risk rated business and government loans that were contractually past due at the time relief was provided pursuant to payment deferral programs have been presented in the aging category that applied at the time deferrals were granted. Other business and government loans, credit cards, personal loans and residential mortgages that were subject to a payment deferral program have generally been presented in the aging category that applied as at March 31, 2020, which approximated the time when the majority of the deferrals were granted, except that Canadian residential mortgages and certain secured personal loans that were less than 29 days past due at that time have been treated as current. 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	Less than 31 days	31 to 90 days	Over 90 days	2020 Total	2019 Total [(1)]
Residential mortgages	$ 3,358	$ 1,152	$ –	$ 4,510	$ 3,840
Personal	608	222	–	830	1,027
Credit card	485	189	132	806	838
Business and government	1,854	281	–	2,135	1,081
	$ 6,305	$ 1,844	$ 132	$ 8,281	$ 6,786

(1) Certain prior year amounts related to loans contractually past due but not impaired in CIBC FirstCaribbean were restated.

During the year, gross interest income that would have been recorded if impaired loans were treated as current was $113 million (2019: $99 million), of which $69 million (2019: $46 million) was in Canada and $44 million (2019: $53 million) was outside Canada. During the year, interest recognized on impaired loans was $45 million (2019: $40 million), and interest recognized on loans before being classified as impaired was $67 million (2019: $58 million), of which $43 million (2019: $43 million) was in Canada and $24 million (2019: $15 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 47% (2019: 45%) 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, 2020	Corporate	Sovereign	Banks	Total funded (A)	Corporate	Banks	Total unfunded (B)	Corporate	Sovereign	Banks	Net exposure (C)	Total direct exposure (A)+(B)+(C)
Austria	$ –	$ 593	$ 315	$ 908	$ –	$ –	$ –	$ –	$ –	$ 2	$ 2	$ 910
Finland	56	–	447	503	122	10	132	–	–	16	16	651
France	45	44	147	236	266	56	322	–	2	7	9	567
Germany	407	1,257	602	2,266	190	97	287	49	6	31	86	2,639
Greece	1	–	–	1	–	–	–	–	–	–	–	1
Ireland	200	–	136	336	102	40	142	13	–	112	125	603
Luxembourg	124	–	1,631	1,755	100	90	190	12	–	158	170	2,115
Netherlands	384	446	146	976	256	238	494	42	–	29	71	1,541
Norway	237	413	53	703	610	–	610	–	1	–	1	1,314
Spain	1	–	6	7	–	24	24	–	–	1	1	32
Sweden	344	807	191	1,342	181	–	181	24	–	5	29	1,552
Switzerland	206	–	15	221	137	–	137	5	–	102	107	465
United Kingdom	2,206	31	1,293	3,530	3,086	312	3,398	642	10	363	1,015	7,943
Other European countries	64	7	175	246	13	101	114	1	73	9	83	443
Total Europe	**$ 4,275**	**$ 3,598**	**$ 5,157**	**$ 13,030**	**$ 5,063**	**$ 968**	**$ 6,031**	**$ 788**	**$ 92**	**$ 835**	**$ 1,715**	**$ 20,776**
October 31, 2019	$ 3,033	$ 3,781	$ 5,320	$ 12,134	$ 5,235	$ 580	$ 5,815	$ 789	$ 116	$ 462	$ 1,367	$ 19,316

(1) The amounts shown are net of CVA and collateral. Collateral on derivative MTM receivables was $1.8 billion (October 31, 2019: $1.0 billion), collateral on repo-style transactions was $30.3 billion (October 31, 2019: $20.5 billion), and both are comprised of cash and investment grade debt securities.

We have $639 million (2019: $589 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.

Selected exposures in certain activities

In response to the recommendations of the Financial Stability Board, this section provides information on a selected activity within our continuing and exited businesses that may be of particular interest to investors based on their risk characteristics and the current market environment.

U.S. real estate lending

In our U.S. Commercial Banking and Wealth Management SBU, we operate a full-service real estate platform. Once construction is complete, and the property is income producing, we may occasionally offer fixed-rate financing within a permanent financing program (typically with average terms of up to 10 years). This portfolio of permanent financing exposures, which is a small subset of our total U.S. real estate lending portfolio, serves as a warehouse for inclusion in future commercial mortgage-backed securities (CMBS) programs. We retain no exposure to those CMBS programs. As at October 31, 2020, the portfolio of permanent financing exposures was $276 million (2019: $114 million).

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 structured entity, 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 (includes 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 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 book consists of positions in financial instruments and commodities held to meet the near-term needs of our clients.

The non-trading book consists of positions in various currencies that are related to asset/liability management (ALM) and investment activities.

Governance and management

Market risk is managed through the three lines of defence model. The first line of defence comprises frontline businesses and governance groups that are responsible for managing the market risk associated with their activities.

The second line of defence is Risk Management, which has a dedicated market risk manager for each trading business, supplemented by regional risk managers located in all of our major trading centres, facilitating comprehensive risk coverage, including the measurement, monitoring and control of market risk.

Internal audit is the third line of defence providing reasonable assurance to senior management and the Audit Committee of the Board on the effectiveness of CIBC's governance practices, risk management processes, and internal control as part of its risk-based audit plan and in accordance with its mandate as described in the Internal Audit Charter.

Senior management reports material risk matters to the GRC and RMC at least quarterly, including material transactions, limit compliance, and portfolio trends.

Policies

We have comprehensive policies for the management of market risk. These policies are related to the identification and measurement of various types of market risk, their inclusion in the trading book, and to 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 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 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 and 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	**2020**				2019				
		Subject to market risk (1)				Subject to market risk			
	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	**$ 43,531**	**$ –**	**$ 2,445**	**$ 41,086**	$ 3,840	$ –	$ 1,711	$ 2,129	Foreign exchange
Interest-bearing deposits with banks	**18,987**	**75**	**18,912**	**–**	13,519	641	12,878	–	Interest rate
Securities	**149,046**	**45,825**	**103,221**	**–**	121,310	42,403	78,907	–	Equity, interest rate
Cash collateral on securities borrowed	**8,547**	**–**	**8,547**	**–**	3,664	–	3,664	–	Interest rate
Securities purchased under resale agreements	**65,595**	**–**	**65,595**	**–**	56,111	–	56,111	–	Interest rate
Loans									
Residential mortgages	**221,165**	**–**	**221,165**	**–**	208,652	–	208,652	–	Interest rate
Personal	**42,222**	**–**	**42,222**	**–**	43,651	–	43,651	–	Interest rate
Credit card	**11,389**	**–**	**11,389**	**–**	12,755	–	12,755	–	Interest rate
Business and government	**135,546**	**22,643** (2)	**112,903**	**–**	125,798	20,226 (2)	105,572	–	Interest rate
Allowance for credit losses	**(3,540)**	**–**	**(3,540)**	**–**	(1,915)	–	(1,915)	–	Interest rate
Derivative instruments	**32,730**	**31,244**	**1,486**	**–**	23,895	22,610	1,285	–	Interest rate, foreign exchange
Customers' liability under acceptances	**9,606**	**–**	**9,606**	**–**	9,167	–	9,167	–	Interest rate
Other assets	**34,727**	**3,364**	**20,613**	**10,750**	31,157	1,957	17,985	11,215	Interest rate, equity, foreign exchange
	$ 769,551	**$ 103,151**	**$ 614,564**	**$ 51,836**	$ 651,604	$ 87,837	$ 550,423	$ 13,344	
Deposits	**$ 570,740**	**$ 484** (3)	**$ 510,788**	**$ 59,468**	$ 485,712	$ 44 (3)	$ 437,634	$ 48,034	Interest rate
Obligations related to securities sold short	**15,963**	**13,795**	**2,168**	**–**	15,635	14,721	914	–	Interest rate
Cash collateral on securities lent	**1,824**	**–**	**1,824**	**–**	1,822	–	1,822	–	Interest rate
Obligations related to securities sold under repurchase agreements	**71,653**	**–**	**71,653**	**–**	51,801	–	51,801	–	Interest rate
Derivative instruments	**30,508**	**29,436**	**1,072**	**–**	25,113	23,679	1,434	–	Interest rate, foreign exchange
Acceptances	**9,649**	**–**	**9,649**	**–**	9,188	–	9,188	–	Interest rate
Other liabilities	**22,167**	**2,386**	**10,926**	**8,855**	19,069	2,096	8,111	8,862	Interest rate
Subordinated indebtedness	**5,712**	**–**	**5,712**	**–**	4,684	–	4,684	–	Interest rate
	$ 728,216	**$ 46,101**	**$ 613,792**	**$ 68,323**	$ 613,024	$ 40,540	$ 515,588	$ 56,896	

(1) 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 (see the "Continuous enhancement to regulatory capital requirements – Regulatory developments arising from the COVID-19 pandemic" section for further details).
(2) Excludes $291 million (2019: $115 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.

VaR by risk type – trading portfolio

$ millions, as at or for the year ended October 31				2020				2019
	High	**Low**	**As at**	**Average**	High	Low	As at	Average
Interest rate risk	**$ 10.6**	**$ 3.5**	**$ 7.3**	**$ 6.1**	$ 10.1	$ 2.8	$ 8.5	$ 5.2
Credit spread risk	**12.2**	**1.3**	**7.0**	**5.4**	2.0	0.9	1.5	1.3
Equity risk	**13.5**	**1.5**	**3.7**	**3.8**	10.4	1.7	3.4	3.1
Foreign exchange risk	**7.0**	**0.4**	**2.0**	**1.8**	4.3	0.6	2.9	2.1
Commodity risk	**7.9**	**1.1**	**2.4**	**3.1**	5.0	1.1	3.9	2.4
Debt specific risk	**3.9**	**1.5**	**3.0**	**2.5**	2.4	1.3	1.9	1.7
Diversification effect (1)	**n/m**	**n/m**	**(12.1)**	**(14.2)**	n/m	n/m	(15.3)	(10.1)
Total VaR (one-day measure)	**$ 22.0**	**$ 3.8**	**$ 13.3**	**$ 8.5**	$ 10.8	$ 3.6	$ 6.8	$ 5.7

(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.
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, 2020 was up $2.8 million from the prior year, driven primarily by increases in credit spread, interest rate, debt specific, commodity and equity risks due to the larger market shocks arising from the COVID-19 pandemic, with peak exposures occurring during March and April 2020.

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. Our current stressed VaR period is from September 2, 2008 to August 31, 2009.

Stressed VaR by risk type – trading portfolio

$ millions, as at or for the year ended October 31				2020				2019
	High	**Low**	**As at**	**Average**	High	Low	As at	Average
Interest rate risk	**$ 41.0**	**$ 8.4**	**$ 33.7**	**$ 20.2**	$ 37.0	$ 8.9	$ 26.4	$ 19.4
Credit spread risk	**22.6**	**6.1**	**7.1**	**11.5**	18.1	7.9	11.1	12.1
Equity risk	**26.3**	**–**	**6.9**	**4.2**	20.2	1.4	2.2	3.9
Foreign exchange risk	**22.0**	**1.0**	**9.1**	**7.8**	29.5	0.6	6.5	10.4
Commodity risk	**10.9**	**1.0**	**3.0**	**4.5**	11.9	1.3	11.9	4.8
Debt specific risk	**6.5**	**1.6**	**6.1**	**4.6**	7.3	4.1	4.9	5.5
Diversification effect (1)	**n/m**	**n/m**	**(35.7)**	**(33.9)**	n/m	n/m	(42.0)	(40.9)
Stressed total VaR (one-day measure)	**$ 34.1**	**$ 7.4**	**$ 30.2**	**$ 18.9**	$ 47.1	$ 3.5	$ 21.0	$ 15.2

(1) Stressed 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.
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 stressed total VaR for the year ended October 31, 2020 was up $3.7 million from the prior year. The increase was driven by increases in interest rate and equity risks and reduced diversification benefit, partially offset by decreases in foreign exchange risk.

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.

IRC – trading portfolio

$ millions, as at or for the year ended October 31				2020				2019
	High	**Low**	**As at**	**Average**	High	Low	As at	Average
Default risk	**$ 205.6**	**$ 80.4**	**$ 102.6**	**$ 126.7**	$ 268.8	$ 124.0	$ 132.1	$ 180.2
Migration risk	**104.9**	**49.0**	**72.7**	**71.2**	111.2	45.5	67.7	72.2
IRC (one-year measure) (1)	**$ 279.5**	**$ 141.8**	**$ 175.3**	**$ 197.9**	$ 371.4	$ 186.5	$ 199.8	$ 252.4

(1) 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.

Average IRC for the year ended October 31, 2020 was down $54.5 million from the prior year due to a reduction in trading book bond inventory and an increase in diversification effect 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 six negative back-testing breaches of the total VaR measure at the consolidated CIBC level, driven by the extreme volatility observed in the second quarter of 2020 due to the COVID-19 pandemic and its impact on financial markets.

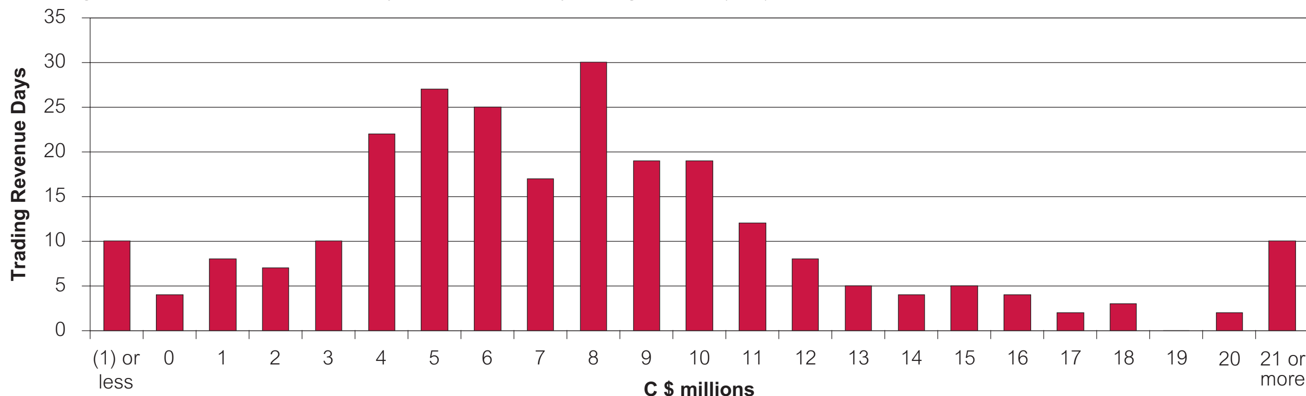
Trading revenue

Trading revenue (TEB) comprises both trading net interest income and non-interest income and excludes underwriting fees and commissions. Trading revenue (TEB) in the charts below excludes certain exited portfolios.

During the year, trading revenue (TEB) was positive for 94.5% of the days. The largest gain of $47.7 million occurred on March 9, 2020, spread across multiple lines of business. The largest loss of $88.2 million occurred on March 24, 2020. It was mostly attributable to our precious metals trading business. Average daily trading revenue (TEB) was $6.4 million during the year, and the average daily TEB was $0.7 million. The large increase in VaR in March and April 2020 was a result of market volatility due to the COVID-19 pandemic.

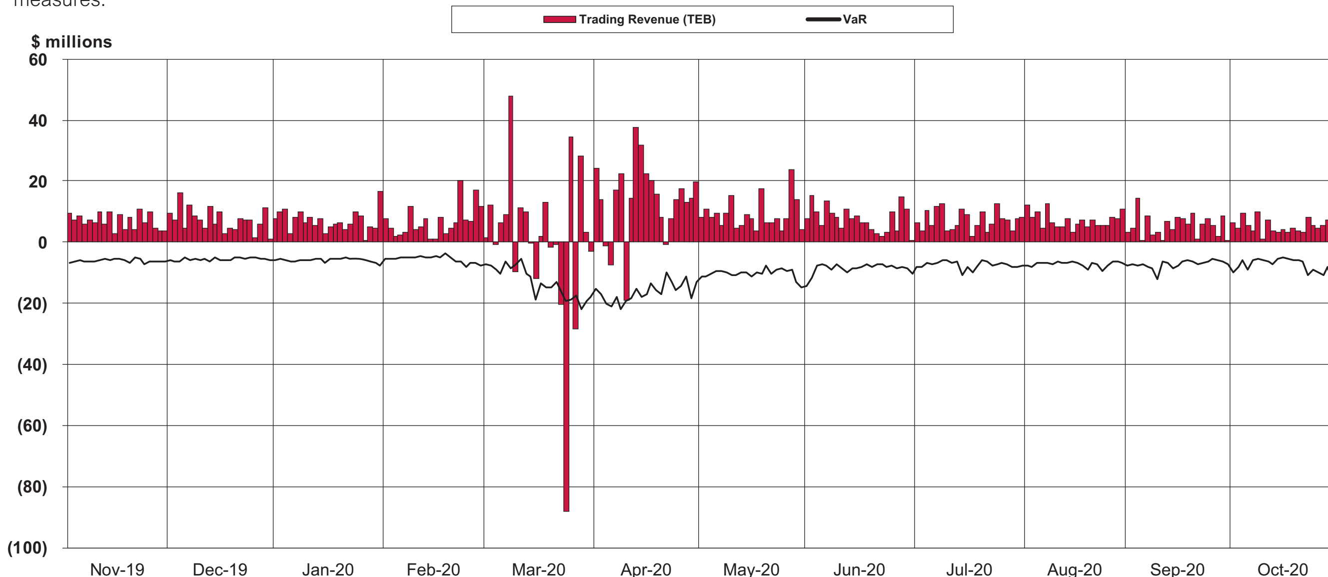
Frequency distribution of daily 2020 trading revenue (TEB) (1)

The histogram below presents the frequency distribution of daily trading revenue (TEB) for 2020.



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 (see the "Continuous enhancement to regulatory capital requirements – Regulatory developments arising from the COVID-19 pandemic" section for further details).

Stress testing and scenario analysis

Stress testing and scenario analysis is designed to add insight to possible outcomes of abnormal market conditions, and to highlight possible risk concentrations.

We measure the effect on portfolio values 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 January 2020, the oil shock stress scenario was updated to reflect the escalation in the ongoing tensions between the U.S. and Iran. In February 2020, the Brexit "remains" scenario was discontinued. This scenario had been introduced in October 2019 to anticipate the possibility of the U.K. remaining in the European Union following a potential second Brexit referendum. However, the ratification of the U.K. withdrawal agreement by the European Parliament on January 29, 2020 had made this scenario obsolete. In August 2020, a pandemic first wave scenario was incorporated into our suite of stress scenarios. This scenario was modelled off the most substantial stress impacts from the first wave of the COVID-19 pandemic that resulted in severe disruption to financial markets between February 24 and March 23, 2020.

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
- Brexit "leaves" – hard Brexit
- Canadian market crisis
- U.S. protectionism
- Eurozone bank crisis
- Pandemic first wave
- Quantitative easing tapering and asset price correction
- Oil crisis
- Chinese hard landing

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-exchange traded commodity derivatives

In the normal course of business, we trade non-exchange traded commodity derivative contracts. We control and manage our non-exchange traded commodity derivatives risk through the VaR and stress testing methodologies described above. We use modelling techniques or other valuation methodologies to determine the fair value of these contracts.

The following table provides the fair value, based upon maturity of non-exchange traded commodity contracts:

$ millions, as at October 31, 2020	Positive	Negative	Net
Maturity less than 1 year	$ 979	$ 1,413	$ (434)
Maturity 1–3 years	1,343	680	663
Maturity 4–5 years	472	44	428
Maturity in excess of 5 years	96	35	61
	$ 2,890	$ 2,172	$ 718

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 margins and deliver stable and predictable net interest income over time, while managing the risk to the economic value of our assets arising from changes in interest rates.

SIRR results from differences in the maturities or repricing dates of assets and liabilities, both on- and off-balance sheet, as well as from embedded optionality in retail products, and other product features that could affect the expected timing of cash flows, such as options to pre-pay loans or redeem term deposits prior to contractual maturity. A number of assumptions affecting cash flows, product re-pricing and the administration of rates underlie the models used to measure SIRR. The key assumptions pertain to the expected funding profile of mortgage rate commitments, fixed rate loan prepayment behaviour, term deposit redemption behaviour, the treatment of non-maturity deposits and equity. All assumptions are derived empirically based on historical client behaviour, balance sheet composition and product pricing with the consideration of possible forward-looking changes. All models and assumptions used to measure SIRR are subject to independent oversight by Risk Management. A variety of cash instruments and derivatives, primarily interest rate swaps, are used to manage these risks.

The Board has oversight of the management of SIRR, approves the risk appetite and the associated SIRR risk limits. GALCO and its subcommittee, the Asset Liability Management Committee, regularly review structural market risk positions and provide senior management oversight.

In addition to Board-approved limits on earnings and economic value exposure, more granular management limits are in place to guide day-to-day management of this risk. The ALM group within Treasury is responsible for the ongoing management of structural market risk across the enterprise, with independent oversight and compliance with SIRR policy provided by Risk Management.

ALM activities are designed to manage the effects of potential interest rate movements while balancing the cost of any hedging activities on the current net revenue. To monitor and control SIRR, two primary metrics, net interest income risk and economic value of equity (EVE) risk, are assessed, in addition to stress testing, gap analysis and other market risk metrics. The net interest income sensitivity is a measure of the impact of potential changes in interest rates on the projected 12-month pre-tax net interest income of the bank's portfolio of assets, liabilities and off-balance sheet positions in response to prescribed parallel interest rate movements with interest rates floored at zero. The EVE sensitivity is a measure of the impact of potential changes in interest rates on the market value of the bank's assets, liabilities and off-balance sheet positions in response to prescribed parallel interest rate movements with interest rates floored at zero.

The following table shows the potential before-tax impact of an immediate and sustained 100 basis points increase and 25 basis points decrease in interest rates on projected 12-month net interest income and EVE 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. at the end of the quarter, an immediate downward shock of 25 basis points was applied while maintaining a floor on market and client interest rates at zero. Prior period amounts have been revised to reflect the impact of a 25 basis point decrease in all interest rates.

Structural interest rate sensitivity – measures

$ millions (pre-tax), as at October 31	2020		2019	
	CAD [1]	USD	CAD [1]	USD
100 basis point increase in interest rates				
Increase (decrease) in net interest income	$ 317	$ 92	$ 192	$ 24
Increase (decrease) in EVE	(556)	(348)	(511)	(307)
25 basis point decrease in interest rates				
Increase (decrease) in net interest income	(119)	(42)	(47)	(7)
Increase (decrease) in EVE	57	49	104	50

(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, 2020 by approximately $150 million (2019: $153 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.

We hedge certain foreign currency contractual expenses using derivatives which are accounted for as cash flow hedges. The net change in fair value of these hedging derivatives included in AOCI amounted to nil (2019: $3 million) on an after-tax basis.

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 our merchant banking activities. 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
2020	**Equity securities designated at FVOCI**	**$ 576**	**$ 585**
	Equity-accounted investments in associates [(1)]	**71**	**93**
		$ 647	**$ 678**
2019	Equity securities designated at FVOCI	$ 533	$ 602
	Equity-accounted investments in associates [(1)]	57	85
		$ 590	$ 687

(1) Excludes our equity-accounted joint ventures. See Note 26 to the consolidated financial statements for further details.

Pension risk

A number of defined benefit pension plans are operated globally. As at October 31, 2020, our consolidated defined benefit pension plans were in a net asset position of $185 million, compared with $116 million as at October 31, 2019. 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.

CIBC's 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. CIBC incorporates stress testing into its 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 CIBC's 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, reporting and monitoring of CIBC's liquidity risk position – this is the first line of defence.

The Liquidity and Non-Trading Market Risk group within Capital Markets Risk Management 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 such as the Liquidity Horizon, are regularly reviewed and consider CIBC's business activities. The Liquidity Risk Management Committee, a subcommittee of GALCO, 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 approves CIBC's liquidity risk management policy, and recommends liquidity risk tolerance to the Board through the risk appetite statement.

Policies

Our liquidity risk management policy requires a sufficient amount of available unencumbered liquid assets and diversified funding sources to meet anticipated liquidity needs in both normal and stressed conditions. CIBC 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.

CIBC's 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, and 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 daily 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 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]
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**
2019	Cash and deposits with banks	$ 17,359	$ –	$ 17,359	$ 784	$ 16,575
	Securities issued or guaranteed by sovereigns, central banks, and multilateral development banks	85,881	86,205	172,086	100,203	71,883
	Other debt securities	4,928	3,139	8,067	1,838	6,229
	Equities	26,441	15,766	42,207	23,623	18,584
	Canadian government guaranteed National Housing Act mortgage-backed securities	41,378	876	42,254	11,627	30,627
	Other liquid assets [2]	11,196	463	11,659	6,864	4,795
		$ 187,183	$ 106,449	$ 293,632	$ 144,939	$ 148,693

(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	**2020**	2019
CIBC (parent)	**$ 170,936**	$ 108,878
Domestic subsidiaries	**12,355**	8,588
Foreign subsidiaries	**39,381**	31,227
	$ 222,672	$ 148,693

Asset haircuts and monetization depth assumptions under a liquidity stress scenario are applied to determine asset liquidity value. Haircuts take into consideration those margins applicable at central banks – such as the Bank of Canada and the U.S. Federal Reserve Bank – historical observations, and securities characteristics including asset type, issuer, credit ratings, currency and remaining term to maturity, as well as available regulatory guidance.

Our unencumbered liquid assets increased $74.0 billion since October 31, 2019, primarily due to investments in liquid assets from funding proceeds, including deposit growth.

Furthermore, CIBC maintains 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 CIBC's day-to-day operations, securities and other assets are pledged to secure obligations, participate in clearing and settlement systems and 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]	
2020	**Cash and deposits with banks**	**$ –**	**$ 133**	**$ 62,385**	**$ –**	**$ 62,518**
	Securities	**127,974**	**678**	**132,493**	**–**	**261,145**
	Loans, net of allowance [3]	**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**
2019	Cash and deposits with banks	$ –	$ 784	$ 16,575	$ –	$ 17,359
	Securities	121,349	283	102,867	–	224,499
	Loans, net of allowance [3]	2,000	40,204	35,073	310,688	387,965
	Other assets	6,186	–	1,815	56,218	64,219
		$ 129,535	$ 41,271	$ 156,330	$ 366,906	$ 694,042

(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) 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 to achieve a minimum LCR value of 100%. CIBC is in compliance with this requirement.

In accordance with the calibration methodology contained in OSFI's Liquidity Adequacy Requirements (LAR) Guideline, CIBC reports the LCR to OSFI on a monthly basis. The ratio is calculated as follows:

$$\frac{\text{Total HQLA}}{\text{Total net cash outflows over the next 30 calendar days}} \geq 100\%$$

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 relative ability to operationally monetize assets on a timely basis during a period of stress. CIBC's 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 CIBC's internal assessment of its ability to monetize its 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 CIBC's 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 LCR-prescribed 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 disclosed using a standard OSFI-prescribed disclosure template.

$ millions, average of the three months ended October 31, 2020		**Total unweighted value** (1)	**Total weighted value** (2)
HQLA			
1	HQLA	**n/a**	**$ 187,227**
Cash outflows			
2	Retail deposits and deposits from small business customers, of which:	**$ 192,848**	**15,531**
3	Stable deposits	**69,388**	**2,082**
4	Less stable deposits	**123,460**	**13,449**
5	Unsecured wholesale funding, of which:	**192,148**	**95,577**
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	**58,055**	**13,953**
7	Non-operational deposits (all counterparties)	**108,089**	**55,620**
8	Unsecured debt	**26,004**	**26,004**
9	Secured wholesale funding	**n/a**	**4,437**
10	Additional requirements, of which:	**120,902**	**28,183**
11	Outflows related to derivative exposures and other collateral requirements	**20,664**	**9,371**
12	Outflows related to loss of funding on debt products	**3,165**	**3,165**
13	Credit and liquidity facilities	**97,073**	**15,647**
14	Other contractual funding obligations	**3,427**	**3,427**
15	Other contingent funding obligations	**302,688**	**5,990**
16	Total cash outflows	**n/a**	**153,145**
Cash inflows			
17	Secured lending (e.g. reverse repos)	**72,304**	**9,622**
18	Inflows from fully performing exposures	**22,399**	**9,404**
19	Other cash inflows	**4,675**	**4,675**
20	Total cash inflows	**$ 99,378**	**$ 23,701**
			Total adjusted value
21	Total HQLA	**n/a**	**$ 187,227**
22	Total net cash outflows	**n/a**	**$ 129,444**
23	LCR	**n/a**	**145 %**
$ millions, average of the three months ended July 31, 2020			Total adjusted value
24	Total HQLA	n/a	$ 177,967
25	Total net cash outflows	n/a	$ 118,553
26	LCR	n/a	150 %

(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, 2020 decreased to 145% from 150% in the prior quarter, mainly due to higher net cash outflows, partially offset by an increase in HQLA.

CIBC considers the impact of its business decisions on the LCR and other liquidity risk metrics that it regularly monitors as part of a robust liquidity risk management function. Variables that can impact the ratio 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. Furthermore, CIBC reports the LCR to OSFI in multiple currencies, and thus measures the extent of potential currency mismatch under the ratio. CIBC predominantly operates in major currencies with deep and fungible foreign exchange markets.

Reporting of the LCR is calibrated centrally by CIBC Treasury, in conjunction with CIBC's SBUs and other functional groups.

Funding

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

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

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

CIBC continuously evaluates 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 CIBC's wholesale funding sources at their carrying values:

$ millions, as at October 31, 2020	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]	**$ 6,378**	**$ 362**	**$ 719**	**$ 56**	**$ 7,515**	**$ –**	**$ –**	**$ 7,515**
Certificates of deposit and commercial paper	**7,375**	**10,391**	**6,283**	**25,712**	**49,761**	**141**	**–**	**49,902**
Bearer deposit notes and bankers' acceptances	**636**	**1,311**	**1,168**	**73**	**3,188**	**–**	**–**	**3,188**
Asset-backed commercial paper	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Senior unsecured medium-term notes [2]	**2,750**	**1,523**	**3,884**	**3,501**	**11,658**	**6,358**	**27,380**	**45,396**
Senior unsecured structured notes	**–**	**–**	**–**	**186**	**186**	**–**	**–**	**186**
Covered bonds/asset-backed securities								
Mortgage securitization	**–**	**1,158**	**242**	**2,268**	**3,668**	**2,549**	**12,677**	**18,894**
Covered bonds	**–**	**655**	**374**	**2,576**	**3,605**	**8,325**	**7,667**	**19,597**
Cards securitization	**–**	**–**	**–**	**852**	**852**	**–**	**808**	**1,660**
Subordinated liabilities	**–**	**–**	**–**	**–**	**–**	**–**	**5,712**	**5,712**
Other	**–**	**–**	**–**	**–**	**–**	**275**	**9**	**284**
	$ 17,139	**$ 15,400**	**$ 12,670**	**$ 35,224**	**$ 80,433**	**$ 17,648**	**$ 54,253**	**$ 152,334**
Of which:								
Secured	**$ –**	**$ 1,813**	**$ 616**	**$ 5,696**	**$ 8,125**	**$ 10,874**	**$ 21,152**	**$ 40,151**
Unsecured	**17,139**	**13,587**	**12,054**	**29,528**	**72,308**	**6,774**	**33,101**	**112,183**
	$ 17,139	**$ 15,400**	**$ 12,670**	**$ 35,224**	**$ 80,433**	**$ 17,648**	**$ 54,253**	**$ 152,334**
October 31, 2019	$ 12,037	$ 14,736	$ 25,065	$ 27,679	$ 79,517	$ 17,163	$ 51,113	$ 147,793

(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.

CIBC's wholesale funding is diversified by currency as demonstrated in the table that follows:

$ billions, as at October 31	**2020**		2019	
CAD	**$ 50.8**	**33 %**	$ 49.2	33 %
USD	**75.4**	**50**	73.0	50
Other	**26.1**	**17**	25.6	17
	$ 152.3	**100 %**	$ 147.8	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

CIBC's 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 April 3, 2020, Fitch revised the rating outlook for seven Canadian banks, including CIBC, from stable to negative due to the disruption to economic activity and financial markets from the COVID-19 pandemic.

Our credit ratings are summarized in the following table:

As at October 31, 2020	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**	**Negative**	**Stable**	**Stable**

(1) DBRS Long-Term Issuer Rating; Moody's Long-Term Deposit and Counterparty Risk Assessment Rating; S&P's Issuer Credit Rating; Fitch Long-Term Deposit Rating and Derivative Counterparty 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	**2020**	2019
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

In April 2019, OSFI issued final NSFR guidelines following industry and public consultation, clarifying details of the NSFR implementation and its application to the Canadian financial sector. 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 ensuring banks maintain a sustainable funding structure appropriate to the composition of their assets and off-balance sheet activities. D-SIBs were required to comply with the final NSFR guidelines beginning January 2020. In April 2019, OSFI also issued "Net Stable Funding Ratio Disclosure Requirements", which requires public disclosures to be produced beginning in the first quarter of 2021. Consistent with the requirements, we submit the NSFR on a quarterly basis to OSFI and to the BCBS twice annually.

In December 2019, OSFI issued revisions to "Guideline B-6 – Liquidity Principles" for implementation on January 1, 2020. The guideline sets out the principles that provide the framework within which OSFI assesses the content and effectiveness of institutions' management of liquidity risk. The changes aim to ensure that the guideline remains current and relevant and to provide additional clarity on OSFI's expectations regarding institutions' liquidity risk management practices. CIBC maintains a liquidity management framework that is periodically assessed to ensure it aligns with the bank's risk appetite as well as the prudential standards outlined in the guideline.

Developments related to the COVID-19 pandemic

As a result of economic instability caused by the COVID-19 pandemic, global central banks and government agencies instituted a series of measures to support the continuous functioning of financial markets through the provision of liquidity. The Bank of Canada introduced the BAPF, the expansion of asset buyback programs, and increases in the size, frequency and collateral eligibility of term repo operations. In light of improving financial market conditions, the Bank of Canada recently pared back some of these temporary measures and discontinued the BAPF. The Bank of Canada continues to monitor market conditions and may revisit programs if warranted.

As part of the Government of Canada's COVID-19 Economic Response Plan, the Insured Mortgage Purchase Program (IMPP) was revised to purchase up to $150 billion of insured mortgage pools through the CMHC.

In addition, the Bank of Canada introduced the Standing Term Liquidity Facility (STLF), a permanent program that complements existing tools to provide liquidity and enhance the resilience of the Canadian financial system.

Participation in these programs, as and when appropriate, complements CIBC's liquidity and funding strategy, which includes the objective of maintaining the strength and soundness of our consolidated balance sheet. CIBC remains well positioned to meet cash flow expectations and the needs of our clients throughout the COVID-19 pandemic.

See the "Regulatory developments arising from the COVID-19 pandemic" section for additional details on announcements made by OSFI and the BCBS in response to changes in market conditions arising from the COVID-19 pandemic.

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 CIBC's liquidity risk exposure, however this information serves to inform CIBC's management of liquidity risk, and provide input when modelling a behavioural balance sheet.

$ millions, as at October 31, 2020	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	**$ 43,531**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ 43,531**
Interest-bearing deposits with banks [1]	**18,987**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**18,987**
Securities	**4,971**	**3,087**	**7,007**	**5,028**	**3,624**	**18,920**	**46,554**	**31,288**	**28,567**	**149,046**
Cash collateral on securities borrowed	**8,547**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**8,547**
Securities purchased under resale agreements	**35,089**	**13,080**	**12,751**	**2,666**	**2,009**	**–**	**–**	**–**	**–**	**65,595**
Loans										
Residential mortgages	**1,606**	**3,336**	**8,242**	**12,057**	**11,511**	**47,032**	**128,430**	**8,302**	**649**	**221,165**
Personal	**955**	**646**	**1,171**	**1,223**	**1,148**	**450**	**3,183**	**3,219**	**30,227**	**42,222**
Credit card	**239**	**478**	**718**	**718**	**718**	**2,870**	**5,648**	**–**	**–**	**11,389**
Business and government	**15,539**	**5,463**	**6,908**	**7,116**	**6,806**	**25,055**	**43,212**	**16,687**	**8,760**	**135,546**
Allowance for credit losses	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**(3,540)**	**(3,540)**
Derivative instruments	**2,052**	**4,700**	**2,436**	**1,807**	**1,267**	**3,651**	**6,292**	**10,525**	**–**	**32,730**
Customers' liability under acceptances	**8,818**	**707**	**68**	**10**	**3**	**–**	**–**	**–**	**–**	**9,606**
Other assets	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**34,727**	**34,727**
	$ 140,334	**$ 31,497**	**$ 39,301**	**$ 30,625**	**$ 27,086**	**$ 97,978**	**$233,319**	**$ 70,021**	**$ 99,390**	**$ 769,551**
October 31, 2019	$ 86,873	$ 37,026	$ 27,740	$ 26,478	$ 23,115	$ 78,483	$201,231	$ 59,883	$ 110,775	$ 651,604
Liabilities										
Deposits [2]	**$ 28,774**	**$ 28,222**	**$ 34,292**	**$ 41,705**	**$ 24,248**	**$ 28,399**	**$ 52,712**	**$ 11,488**	**$ 320,900**	**$ 570,740**
Obligations related to securities sold short	**15,963**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**15,963**
Cash collateral on securities lent	**1,824**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**1,824**
Obligations related to securities sold under repurchase agreements	**41,136**	**6,904**	**21,607**	**81**	**425**	**1,500**	**–**	**–**	**–**	**71,653**
Derivative instruments	**1,969**	**4,645**	**2,792**	**2,049**	**1,800**	**3,079**	**5,542**	**8,632**	**–**	**30,508**
Acceptances	**8,861**	**707**	**68**	**10**	**3**	**–**	**–**	**–**	**–**	**9,649**
Other liabilities	**25**	**50**	**75**	**74**	**79**	**295**	**684**	**584**	**20,301**	**22,167**
Subordinated indebtedness	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**5,712**	**–**	**5,712**
Equity	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**41,335**	**41,335**
	$ 98,552	**$ 40,528**	**$ 58,834**	**$ 43,919**	**$ 26,555**	**$ 33,273**	**$ 58,938**	**$ 26,416**	**$ 382,536**	**$ 769,551**
October 31, 2019	$ 88,803	$ 43,539	$ 44,607	$ 33,034	$ 26,078	$ 31,643	$ 54,407	$ 22,781	$ 306,712	$ 651,604

(1) Cash includes interest-bearing demand deposits with the Bank of Canada.
(2) Comprises $202.2 billion (2019: $178.1 billion) of personal deposits; $351.6 billion (2019: $296.4 billion) of business and government deposits and secured borrowings; and $17.0 billion (2019: $11.2 billion) of bank deposits.

The changes in the contractual maturity profile were primarily due to the natural migration of maturities and also reflect the impact of our regular business activities.

Credit-related commitments

The following table provides the contractual maturity of notional amounts of credit-related commitments. Since a significant portion of commitments are expected to expire without being drawn upon, the total of the contractual amounts is not representative of future liquidity requirements.

$ millions, as at October 31, 2020	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	**$ 989**	**$ 8,554**	**$ 4,819**	**$ 4,601**	**$ 4,127**	**$ 19,575**	**$ 50,595**	**$ 1,672**	**$ 173,157**	**$ 268,089**
Securities lending [2]	**33,483**	**2,779**	**2,924**	**–**	**–**	**–**	**–**	**–**	**–**	**39,186**
Standby and performance letters of credit	**2,769**	**2,567**	**2,070**	**3,567**	**2,140**	**785**	**625**	**42**	**–**	**14,565**
Backstop liquidity facilities	**3**	**10,480**	**1,361**	**627**	**145**	**278**	**13**	**–**	**–**	**12,907**
Documentary and commercial letters of credit	**81**	**71**	**14**	**3**	**15**	**–**	**12**	**–**	**–**	**196**
Other	**2,149**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**2,149**
	$ 39,474	**$ 24,451**	**$ 11,188**	**$ 8,798**	**$ 6,427**	**$ 20,638**	**$ 51,245**	**$ 1,714**	**$ 173,157**	**$ 337,092**
October 31, 2019	$ 42,113	$ 21,669	$ 9,059	$ 8,063	$ 5,825	$ 14,784	$ 50,210	$ 2,979	$ 158,076	$ 312,778

(1) Includes $131.3 billion (2019: $122.0 billion) of personal, home equity and credit card lines, which are unconditionally cancellable at our discretion.
(2) Excludes securities lending of $1.8 billion (2019: $1.8 billion) for cash because it is reported on the consolidated balance sheet.

Other contractual obligations

The following table provides the contractual maturities of other contractual obligations affecting our funding needs:

$ millions, as at October 31, 2020 (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)	**$ 99**	**$ 205**	**$ 174**	**$ 179**	**$ 138**	**$ 440**	**$ 621**	**$ 182**	**$ 2,038**
Future lease commitments	**–**	**1**	**8**	**10**	**12**	**48**	**166**	**1,249**	**1,494**
Investment commitments	**1**	**4**	**–**	**1**	**4**	**–**	**8**	**194**	**212**
Pension contributions (3)	**17**	**33**	**49**	**49**	**50**	**–**	**–**	**–**	**198**
Underwriting commitments	**94**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**94**
	$ 211	**$ 243**	**$ 231**	**$ 239**	**$ 204**	**$ 488**	**$ 795**	**$ 1,625**	**$ 4,036**
October 31, 2019	$ 222	$ 335	$ 399	$ 365	$ 344	$ 981	$ 1,882	$ 3,582	$ 8,110

(1) Effective November 1, 2019, this table excludes operating lease obligations that are accounted for under IFRS 16, which resulted in on-balance recognition for most operating lease commitments. 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, continue to be recognized in this table. Following our adoption of IFRS 16, this table also excludes operating and tax expenses relating to lease commitments. For further details about our transition to IFRS 16, see Note 8 to our consolidated financial statements.
(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 therefore are 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. 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 economic capital against this risk. Our economic capital models include a strategic risk component for those businesses utilizing capital to fund an acquisition or a significant organic growth strategy.

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.

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. Our comprehensive Operational Risk Management Policy, supported by policies, tools, systems and governance structure, is used to mitigate operational risks. 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.

(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 control 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 control as 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.

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 SBUs and functional groups. The ORCC is a management forum providing oversight of CIBC's operational risk and internal control environment. Its Chair 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 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 business process maps, 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 CIBC's 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 affords extra protection from loss while our global business continuity management program ensures that under conditions of interruption or crisis, CIBC's critical business functions could continue to operate and normal operations are restored in a highly effective and efficient manner.

Risk monitoring and reporting

Both forward-looking key risk indicators (KRIs) as well as backward-looking key performance indicators provide insight into CIBC's 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 on our control environment, operational risk exposures, and mitigation strategies.

Technology, information and cyber security risk

We are also exposed to cyber threats and the associated financial, reputation and business interruption risks. For additional information on these risks and our mitigation strategies, see the "Top and emerging risks" section.

Reputation and legal risks

Our reputation and financial soundness are of fundamental importance to us and to our clients, shareholders and team members.

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.

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 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 CIBC's business, operations or financial condition.

Overall governance of conduct risk is provided by the Board and its committees, including the CGC, as well as senior management committees. Every team member is accountable for the identification and management of conduct risk.

Our Conduct and Culture Risk Framework describes how CIBC manages conduct risk through proactive identification, measurement and management of potential conduct risk. The overarching principles and requirements for maintaining appropriate conduct and addressing inappropriate conduct are covered in the 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.

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 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.

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 2019, 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.

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. There is also an enterprise-wide Environmental Management Committee, comprising senior executives from our SBUs and functional groups, that meets quarterly and provides input into our environmental strategy and provides oversight of CIBC's environmental initiatives.

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 environmental and related social risk management 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 also 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. In addition, we are a member of the UNEP FI, which has a mission to promote sustainable finance and is guiding our approach to assessing climate change risks, as well as identifying opportunities associated with transitioning to a low-carbon economy.

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.

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.

Accounting and control matters

Critical accounting policies and estimates

As discussed in the "Significant events" section, the COVID-19 pandemic and the restrictions imposed by government bodies around the world to limit its spread, including the closure of non-essential businesses and other physical distancing measures, have disrupted the global economy, resulted in volatility in financial markets, and negatively impacted the expectation for the financial performance of businesses around the world. Although the second half of 2020 has seen a resumption in activity in certain sectors as a result of the easing of physical distancing measures, the economy continues to operate below pre-pandemic levels. In addition, there is a risk that the recent retightening of physical distancing measures enacted by governments and businesses in the fourth quarter in response to the resurgence in infection rates could impact economic activity beyond levels that were previously anticipated. 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 impairment of financial assets, determining the fair value of financial instruments, estimating the allowance for credit losses, goodwill impairment, and asset impairment.

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 8.

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.

Previously, IAS 17 required lessors to classify leases as operating or finance, considering whether the underlying lease transfers substantially all risks and rewards incidental to ownership. Lease expenses related to operating leases were recognized through income on a systematic basis, based on the nature of the expense. Finance leases were recognized on-balance sheet through a finance asset and a finance liability, and the related lease expenses were recognized through income on a systematic basis.

Adoption of IFRS 16 reduced our CET1 ratio by 2 basis points at transition (see the "Capital management – Regulatory capital and ratios" section).

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

In September 2019, the International Accounting Standards Board (IASB) issued "Interest Rate Benchmark Reform: Amendments to IFRS 9, IAS 39 and IFRS 7", which provides relief for specific hedge accounting requirements to address uncertainties in the period before the 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" 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). The amendments are effective for annual periods beginning on or after January 1, 2020.

CIBC elected to early adopt the 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 amendments allows hedge accounting to continue during the period of uncertainty before the replacement of existing interest rate benchmarks with an alternative rate. Significant judgment is involved in identifying the hedge accounting relationships that are directly affected by interest rate benchmark reform as different jurisdictions are transitioning at different stages and may adopt different transition approaches.

The U.K.'s Financial Conduct Authority (FCA) originally announced in July 2017 that it would not compel banks to submit London Interbank Offered Rate (LIBOR) rates after December 2021. This may cause LIBOR and other current benchmarks to disappear entirely or perform differently than in the past, create disincentives for market participants to continue to administer and contribute to certain benchmarks, or have other consequences which cannot be predicted. The FCA and the ICE Benchmark Administrator recently announced a consultation process that may lead to a change in the expected timing of cessation of certain currencies and tenors of LIBOR, which CIBC will closely monitor. As at November 1, 2019, the notional amount of our derivatives in designated hedge accounting relationships that were indexed to U.S. LIBOR and British pound sterling (GBP) LIBOR, with a maturity date beyond December 31, 2021, was $48 billion. We expect the derivatives indexed to the Euro Interbank Offered Rate (EURIBOR) and the Canadian Dollar Offered Rate (CDOR) that are in our designated hedge accounting relationships to continue beyond 2021 in conjunction with alternative rates that might be applied in the impacted markets. We also continue to monitor benchmark rates in other jurisdictions as they continue to evaluate benchmark reform.

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", which addresses issues that affect financial reporting once an existing rate is replaced with an alternative rate and provides specific disclosure requirements. The amendments are effective for annual periods beginning on or after January 1, 2021. As we elected to continue to apply the hedge accounting requirements of IAS 39 upon the adoption of IFRS 9, the amendments will apply to IAS 39, IFRS 7, IFRS 4 and IFRS 16 for us, mandatorily effective on November 1, 2021. Earlier application is permitted. We continue to evaluate the impact of the amendments on our consolidated financial statements.

We previously 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.

IFRS 15 "Revenue from Contracts with Customers"

CIBC adopted IFRS 15 "Revenue from Contracts with Customers" (IFRS 15) as at November 1, 2018 in place of prior guidance, including IAS 18 "Revenue" and IFRIC 13 "Customer Loyalty Programmes". We applied IFRS 15 on a modified retrospective basis. As permitted, we did not restate our prior period comparative consolidated financial statements. Amounts reported related to the year ended October 31, 2018 are reported under the prior guidance, including IAS 18 and IFRIC 13, and are therefore not comparable to the information presented for 2019 or 2020. The application of IFRS 15 did not significantly impact our critical accounting policies.

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, 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.

Accounting for FVOCI securities under IFRS 9

FVOCI securities include debt securities that meet the SPPI criteria and the "Hold to collect and for sale" business model and equity securities that are designated at FVOCI upon initial recognition. Impairment of equity securities designated at FVOCI is not required under IFRS 9 because unrealized gains or losses are recognized in OCI and are directly reclassified to retained earnings upon disposition of the equity securities with no recycling to profit or loss.

FVOCI debt securities under IFRS 9 are measured at fair value, with the difference between the fair value and the amortized cost included in AOCI. However, FVOCI debt securities are subject to the ECL impairment model under IFRS 9. For more details, refer to the "Impairment of financial assets" section below and 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	2020		2019	
	Level 3	**Total** (1)	Level 3	Total (1)
Assets				
Securities mandatorily measured and designated at FVTPL and loans mandatorily measured at FVTPL	**$ 802**	**0.9 %**	$ 1,034	1.4 %
Debt securities measured at FVOCI and equity securities designated at FVOCI	**240**	**0.4**	291	0.6
Derivative instruments	**358**	**1.1**	412	1.7
	$ 1,400	**0.8 %**	$ 1,737	1.1 %
Liabilities				
Deposits and other liabilities (2)	**$ (4)**	**– %**	$ 601	5.4 %
Derivative instruments	**298**	**1.0**	268	1.1
	$ 294	**0.4 %**	$ 869	1.7 %

(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.

The COVID-19 pandemic has increased market volatility and has negatively impacted the trading levels of certain financial instruments. As a result and as part of our process to determine the fair value of financial instruments, since the onset of the pandemic, we have applied a heightened level of judgment to a broader population of financial instruments than would otherwise generally be required with the objective of determining the fair value that is most representative of those financial instruments. While there has been an improvement in conditions and price discovery in the third and fourth quarters of 2020 relative to the onset of the COVID-19 pandemic in the second quarter of 2020, including the narrowing of credit and funding spreads, the related valuation adjustments have not decreased to pre-COVID-19 levels.

As at October 31, 2020, the total valuation adjustments related to financial instruments carried at fair value on the consolidated balance sheet was $358 million (2019: $260 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. The objective of IFRS 9 is to record lifetime losses on all financial instruments which 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 which 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. 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. Appropriate adjustments are made to the Basel parameters to meet IFRS 9 requirements, including the conversion of through-the-cycle and downturn parameters used in the Basel regulatory calculations to point-in-time parameters used under IFRS 9 that consider forward-looking information. In addition, credit losses under IFRS 9 are for 12 months for stage 1 financial instruments and lifetime for stage 2 and stage 3 financial instruments, as compared with 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 have elected to not adopt the IFRS 9 hedge accounting requirements and instead have 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.

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.

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, 2020, we had goodwill of $5,253 million (2019: $5,449 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 which 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 2020, we performed our annual impairment test. This assessment required the application of heightened judgment in light of the uncertainty regarding the ultimate economic impact of the COVID-19 pandemic, particularly in evaluating the impact on medium and long-term forecasted earnings. Implicit in our economic outlook is the assumption that the manner in which governments respond to the current second and subsequent waves of the virus, and the dissemination of an effective mass produced vaccine, will allow the U.S. and Canadian economies to continue to recover during 2021, with the economy returning to pre-COVID levels of economic activity in 2022 and pre-COVID levels of unemployment in 2023.

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 is 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.

Reductions in the estimated recoverable amount of the CIBC FirstCaribbean CGU could arise from various factors, including changes in market conditions.

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, 2020, we had other intangible assets with an indefinite life of $142 million (2019: $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. 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. The recoverable amount is defined as the higher of the estimated fair value less cost to sell and value in use.

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 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, 2020, 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, 2020. 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, 2020 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. 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.

Accounting developments

Conceptual Framework for Financial Reporting

In March 2018, the IASB issued a revised version of its "Conceptual Framework for Financial Reporting" (Conceptual Framework). The Conceptual Framework sets out the fundamental concepts that underlie the preparation and presentation of financial statements and serves to guide the IASB in developing IFRS standards. The Conceptual Framework also assists entities in developing accounting policies when no IFRS standard applies to a particular transaction, and more broadly, the Conceptual Framework helps entities to understand and interpret the standards. The Conceptual Framework is effective for annual periods beginning on or after January 1, 2020, which for us will be on November 1, 2020.

The impact of the Conceptual Framework is not expected to be significant to our consolidated financial statements.

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 is a two-year deferral from the original effective date, and 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 evaluate the impact of IFRS 17 on our consolidated financial statements and to prepare for its implementation. We have established an Executive Steering Committee and a project team to support the implementation of IFRS 17. This team continues to determine the required changes to our accounting and actuarial policies resulting from the adoption of IFRS 17, including the amendments issued in June 2020, and to evaluate the required technology solution to support the new requirements.

Interest Rate Benchmark Reform: Phase 2 Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16

Refer to discussions under the "Other regulatory developments" section for details.

Other regulatory developments

Reforms to interest rate benchmarks

Various interest rate and other indices that are deemed to be "benchmarks" (including the LIBOR) are the subject of international regulatory guidance and proposals for reform. 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. This may cause LIBOR and other current benchmarks to disappear entirely or perform differently than in the past, create disincentives for market participants to continue to administer and contribute to certain benchmarks, or have other consequences which cannot be predicted. The FCA and the ICE Benchmark Administrator recently announced a consultation process that may lead to a change in the expected timing of cessation of certain currencies and tenors of LIBOR, which CIBC will closely monitor. The transition from current reference rates may adversely affect the value of, return on, or trading market for contracts linked to existing benchmarks.

A significant number of CIBC's derivatives, and lending and deposit contracts reference various interest rate benchmarks, including contracts with maturity dates that extend beyond December 2021. CIBC also holds securities that reference interbank offered rates.

In response to the proposed reforms to interest rate benchmarks, CIBC has established an Enterprise IBOR Transition Program (the "Program"), which is supported by a formal governance structure and dedicated working groups that include stakeholders from frontline businesses as well as functional groups such as Treasury, Technology and Operations, Risk Management, Legal, and Finance, to assess the impact across all of our products and to manage the process through transition. A comprehensive initial impact assessment of contracts that reference various interbank offered rates has been completed to develop an enterprise-wide project plan to support the Program. Key features of this plan include:

- Development of detailed business-level remediation plans for affected contracts, processes and systems;
- An enterprise-wide communication strategy, which includes both external and internal stakeholders; and
- Formalization of an enterprise-wide exposure management process.

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.

We continue to assess the impact of IBOR reform and prepare for the transition of existing IBOR based contracts to those that reference the new risk-free rates, which includes the development of supporting business processes. We also continue to engage with industry associations to incorporate recent developments into our project plan. The Program provides regular updates to senior management, including the ExCo.

Current and future accounting policy changes relating to interest rate benchmark reform

The IASB has addressed the 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, and the second phase focuses on issues that affect financial reporting once the existing rate is replaced with an alternative rate. In September 2019, the IASB finalized phase one through the issuance of "Interest Rate Benchmark Reform: Amendments to IFRS 9, IAS 39 and IFRS 7". CIBC elected to early-adopt the phase one amendments effective November 1, 2019. As a result, we provided certain disclosures related to hedging derivatives that reference LIBOR.

In August 2020, IASB finalized phase two through the issuance of "Interest Rate Benchmark Reform: Phase 2 Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16", which addresses issues that affect financial reporting once an existing rate is replaced with an alternative rate and provides specific disclosure requirements. The phase two amendments are effective for annual periods beginning on or after January 1, 2021. As we elected to continue to apply the hedge accounting requirements of IAS 39 upon the adoption of IFRS 9, the phase two amendments will apply to IAS 39, IFRS 7, IFRS 4 and IFRS 16 for us, mandatorily effective on November 1, 2021. Earlier application is permitted. We continue to evaluate the impact of the phase two amendments on our consolidated financial statements.

CIBC continues to actively engage with the industry through various working groups to ensure alignment with market developments in relevant jurisdictions, and will continue to monitor developments in this area including accounting developments intended to address interest rate benchmark reform.

Client Focused Reforms

In October 2019, the Canadian Securities Administrators published "Reforms to Enhance the Client-Registrant Relationship", an amendment to *National Instrument 31–103* and its companion policy (referred to as the "Client Focused Reforms"), which is intended to raise the standard of conduct required for registered dealers and advisors to ensure that registrants put client interests' first. The Client Focused Reforms are supported by the introduction of a know-your-product provision and enhancements to the know-your-client, suitability, conflicts of interest, and relationship disclosure information requirements.

The Client Focused Reforms came into effect on December 31, 2019 and will be phased in over a two-year period, with the conflicts of interest provisions to be implemented by June 2021 and all remaining provisions by December 2021. These requirements will impact our Canadian Commercial Banking and Wealth Management and Canadian Personal and Business Banking SBUs and we expect to implement changes to our policies and procedures to comply with these requirements.

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 will 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 25, 18, 19 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' Auditor" sets out the parameters for the engagement of the shareholders' auditor by CIBC that are consistent with applicable law, including the U.S. Sarbanes-Oxley Act of 2002 and SEC rules. The policy requires the Audit Committee's pre-approval of all work performed by the shareholders' auditor and prohibits CIBC from engaging the shareholders' auditor for "prohibited" services. The Audit Committee is accountable for the oversight of the work of the shareholders' auditor and for an annual assessment of the engagement team's qualifications, performance and independence, including lead audit partner rotation. The Audit Committee is also responsible for conducting a periodic comprehensive review of the external auditor at least every five years. The Audit Committee's oversight activities over the shareholders' auditor are disclosed in our Management Proxy Circular.

Controls and procedures

Disclosure controls and procedures

CIBC's disclosure controls and procedures are designed to provide reasonable assurance that relevant information is accumulated and communicated to CIBC's management, including the President and CEO and the Chief Financial Officer (CFO), to allow timely decisions regarding required disclosure.

CIBC's management, with the participation of the President and CEO and the CFO, has evaluated the effectiveness of CIBC's disclosure controls and procedures as at October 31, 2020 (as defined in the rules of the SEC and the Canadian Securities Administrators). 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, 2020, management assessed the effectiveness of CIBC's internal control over financial reporting and concluded that such internal control was effective.

Ernst & Young LLP, the external auditor, has audited the consolidated financial statements of CIBC for the year ended October 31, 2020, 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, 2020 that have materially affected, or are reasonably likely to materially affect, its internal control.

Supplementary annual financial information

Average balance sheet, net interest income and margin

	Average balance			Interest			Average rate		
$ millions, for the year ended October 31	**2020**	2019	2018	**2020**	2019	2018	**2020**	2019	2018
Domestic assets [1]									
Cash and deposits with banks	**$ 30,232**	$ 7,156	$ 5,541	**$ 150**	$ 164	$ 95	**0.50 %**	2.29 %	1.71 %
Securities	**76,063**	66,954	58,854	**1,776**	1,852	1,434	**2.33**	2.77	2.44
Securities borrowed or purchased under resale agreements	**26,498**	23,950	25,320	**290**	496	404	**1.09**	2.07	1.60
Loans – Residential mortgages	**208,811**	203,575	204,536	**5,581**	6,347	5,740	**2.67**	3.12	2.81
Loans – Personal and credit card	**51,948**	53,490	52,314	**3,433**	4,012	3,731	**6.61**	7.50	7.13
Loans – Business and government	**68,072**	63,131	54,298	**2,043**	2,434	1,824	**3.00**	3.86	3.36
Total loans	**328,831**	320,196	311,148	**11,057**	12,793	11,295	**3.36**	4.00	3.63
Other interest-bearing assets	**5,194**	3,837	2,041	**62**	128	12	**1.19**	3.34	0.59
Derivative instruments	**14,334**	10,248	11,660	**–**	–	–	**–**	–	–
Customers' liability under acceptances	**9,560**	10,170	10,038	**–**	–	–	**–**	–	–
Other non-interest-bearing assets	**19,641**	17,386	15,007	**–**	–	–	**–**	–	–
Total domestic assets	**510,353**	459,897	439,609	**13,335**	15,433	13,240	**2.61**	3.36	3.01
Foreign assets [1]									
Cash and deposits with banks	**20,050**	13,305	14,283	**99**	232	187	**0.49**	1.74	1.31
Securities	**62,014**	49,059	43,300	**792**	927	835	**1.28**	1.89	1.93
Securities borrowed or purchased under resale agreements	**42,199**	35,491	29,719	**552**	978	649	**1.31**	2.76	2.18
Loans – Residential mortgages	**4,429**	3,815	3,401	**176**	201	176	**3.97**	5.27	5.17
Loans – Personal and credit card	**1,309**	1,435	1,266	**97**	105	98	**7.41**	7.32	7.74
Loans – Business and government	**66,015**	55,443	47,117	**2,416**	2,819	2,319	**3.66**	5.08	4.92
Total loans	**71,753**	60,693	51,784	**2,689**	3,125	2,593	**3.75**	5.15	5.01
Other interest-bearing assets	**701**	555	265	**55**	2	1	**7.85**	0.36	0.38
Derivative instruments	**20,629**	13,419	12,387	**–**	–	–	**–**	–	–
Customers' liability under acceptances	**1**	–	–	**–**	–	–	**–**	–	–
Other non-interest-bearing assets	**7,792**	7,297	7,094	**–**	–	–	**–**	–	–
Total foreign assets	**225,139**	179,819	158,832	**4,187**	5,264	4,265	**1.86**	2.93	2.69
Total assets	**$ 735,492**	$ 639,716	$ 598,441	**$ 17,522**	$ 20,697	$ 17,505	**2.38 %**	3.24 %	2.93 %
Domestic liabilities [1]									
Deposits – Personal	**$ 172,913**	$ 157,537	$ 148,143	**$ 1,405**	$ 1,861	$ 1,299	**0.81 %**	1.18 %	0.88 %
Deposits – Business and government	**178,476**	153,092	134,382	**2,019**	3,033	1,378	**1.13**	1.98	1.03
Deposits – Bank	**2,105**	1,915	2,188	**13**	29	26	**0.62**	1.51	1.19
Deposits – Secured borrowings	**39,076**	39,111	43,085	**668**	1,037	952	**1.71**	2.65	2.21
Total deposits	**392,570**	351,655	327,798	**4,105**	5,960	3,655	**1.05**	1.69	1.12
Derivative instruments	**14,398**	10,790	11,207	**–**	–	–	**–**	–	–
Acceptances	**9,563**	10,171	10,039	**–**	–	–	**–**	–	–
Obligations related to securities sold short	**16,794**	15,412	14,708	**251**	285	269	**1.49**	1.85	1.83
Obligations related to securities lent or sold under repurchase agreements	**27,374**	15,995	13,699	**220**	477	329	**0.80**	2.98	2.40
Other liabilities	**6,464**	14,621	13,754	**49**	9	(7)	**0.76**	0.06	(0.05)
Subordinated indebtedness	**4,891**	4,549	3,645	**152**	193	170	**3.11**	4.24	4.66
Total domestic liabilities	**472,054**	423,193	394,850	**4,777**	6,924	4,416	**1.01**	1.64	1.12
Foreign liabilities [1]									
Deposits – Personal	**16,974**	15,543	13,511	**142**	193	114	**0.84**	1.24	0.84
Deposits – Business and government	**113,877**	97,429	101,583	**964**	2,068	2,319	**0.85**	2.12	2.28
Deposits – Bank	**13,891**	12,277	12,543	**100**	197	152	**0.72**	1.60	1.21
Deposits – Secured borrowings	**1,322**	226	–	**15**	4	–	**1.13**	1.77	–
Total deposits	**146,064**	125,475	127,637	**1,221**	2,462	2,585	**0.84**	1.96	2.03
Derivative instruments	**20,718**	14,130	11,905	**–**	–	–	**–**	–	–
Acceptances	**1**	–	–	**–**	–	–	**–**	–	–
Obligations related to securities sold short	**1,047**	1,089	592	**3**	6	3	**0.29**	0.55	0.51
Obligations related to securities lent or sold under repurchase agreements	**41,881**	35,413	27,364	**436**	721	407	**1.04**	2.04	1.49
Other liabilities	**13,706**	3,014	2,420	**34**	28	25	**0.25**	0.93	1.03
Subordinated indebtedness	**152**	150	151	**7**	5	4	**4.61**	3.33	2.65
Total foreign liabilities	**223,569**	179,271	170,069	**1,701**	3,222	3,024	**0.76**	1.80	1.78
Total liabilities	**695,623**	602,464	564,919	**6,478**	10,146	7,440	**0.93**	1.68	1.32
Shareholders' equity	**39,682**	37,072	33,336	**–**	–	–	**–**	–	–
Non-controlling interests	**187**	180	186	**–**	–	–	**–**	–	–
Total liabilities and equity	**$ 735,492**	$ 639,716	$ 598,441	**$ 6,478**	$ 10,146	$ 7,440	**0.88 %**	1.59 %	1.24 %
Net interest income and margin				**$ 11,044**	$ 10,551	$ 10,065	**1.50 %**	1.65 %	1.68 %
Additional disclosures: Non-interest-bearing deposit liabilities									
Domestic	**$ 59,862**	$ 48,478	$ 47,879						
Foreign	**18,430**	14,582	14,311						

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

Volume/rate analysis of changes in net interest income

$ millions		2020/2019			2019/2018		
		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		**$ 529**	**$ (543)**	**$ (14)**	$ 28	$ 41	$ 69
Securities		**252**	**(328)**	**(76)**	197	221	418
Securities borrowed or purchased under resale agreements		**53**	**(259)**	**(206)**	(22)	114	92
Loans	Residential mortgages	**163**	**(929)**	**(766)**	(27)	634	607
	Personal and credit card	**(116)**	**(463)**	**(579)**	84	197	281
	Business and government	**190**	**(581)**	**(391)**	297	313	610
Total loans		**237**	**(1,973)**	**(1,736)**	354	1,144	1,498
Other interest-bearing assets		**45**	**(111)**	**(66)**	11	105	116
Change in domestic interest income		**1,116**	**(3,214)**	**(2,098)**	568	1,625	2,193
Foreign assets [1]							
Cash and deposits with banks		**118**	**(251)**	**(133)**	(13)	58	45
Securities		**245**	**(380)**	**(135)**	111	(19)	92
Securities borrowed or purchased under resale agreements		**185**	**(611)**	**(426)**	126	203	329
Loans	Residential mortgages	**32**	**(57)**	**(25)**	21	4	25
	Personal and credit card	**(9)**	**1**	**(8)**	13	(6)	7
	Business and government	**538**	**(941)**	**(403)**	410	90	500
Total loans		**561**	**(997)**	**(436)**	444	88	532
Other interest-bearing assets		**1**	**52**	**53**	1	–	1
Change in foreign interest income		**1,110**	**(2,187)**	**(1,077)**	669	330	999
Total change in interest income		**$ 2,226**	**$ (5,401)**	**$ (3,175)**	$ 1,237	$ 1,955	$ 3,192
Domestic liabilities [1]							
Deposits	Personal	**$ 182**	**$ (638)**	**$ (456)**	$ 82	$ 480	$ 562
	Business and government	**503**	**(1,517)**	**(1,014)**	192	1,463	1,655
	Bank	**3**	**(19)**	**(16)**	(3)	6	3
	Secured borrowings	**(1)**	**(368)**	**(369)**	(88)	173	85
Total deposits		**687**	**(2,542)**	**(1,855)**	183	2,122	2,305
Obligations related to securities sold short		**26**	**(60)**	**(34)**	13	3	16
Obligations related to securities lent or sold under repurchase agreements		**339**	**(596)**	**(257)**	55	93	148
Other liabilities		**(5)**	**45**	**40**	–	16	16
Subordinated indebtedness		**15**	**(56)**	**(41)**	42	(19)	23
Change in domestic interest expense		**1,062**	**(3,209)**	**(2,147)**	293	2,215	2,508
Foreign liabilities [1]							
Deposits	Personal	**18**	**(69)**	**(51)**	17	62	79
	Business and government	**349**	**(1,453)**	**(1,104)**	(95)	(156)	(251)
	Bank	**26**	**(123)**	**(97)**	(3)	48	45
	Secured borrowings	**19**	**(8)**	**11**	–	4	4
Total deposits		**412**	**(1,653)**	**(1,241)**	(81)	(42)	(123)
Obligations related to securities sold short		**–**	**(3)**	**(3)**	3	–	3
Obligations related to securities lent or sold under repurchase agreements		**132**	**(417)**	**(285)**	120	194	314
Other liabilities		**99**	**(93)**	**6**	6	(3)	3
Subordinated indebtedness		**–**	**2**	**2**	–	1	1
Change in foreign interest expense		**643**	**(2,164)**	**(1,521)**	48	150	198
Total change in interest expense		**$ 1,705**	**$ (5,373)**	**$ (3,668)**	$ 341	$ 2,365	$ 2,706
Change in total net interest income		**$ 521**	**$ (28)**	**$ 493**	$ 896	$ (410)	$ 486

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

Analysis of net loans and acceptances

$ millions, as at October 31	Canada [1]					U.S. [1]				
	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016
Residential mortgages	$ 216,215	$ 204,383	$ 203,930	$ 203,787	$ 184,610	$ 2,000	$ 1,527	$ 1,152	$ 902	$ –
Student	18	24	33	50	73	–	–	–	–	–
Personal	40,299	41,882	41,473	39,483	36,896	409	435	356	326	56
Credit card	10,550	12,143	12,060	11,805	11,755	27	35	36	35	36
Total net consumer loans	267,082	258,432	257,496	255,125	233,334	2,436	1,997	1,544	1,263	92
Non-residential mortgages	5,844	6,064	6,426	6,481	6,734	292	115	39	95	103
Financial institutions	9,434	7,565	6,885	5,403	4,831	7,560	8,111	5,529	3,248	2,100
Retail and wholesale	4,882	5,720	5,219	4,496	4,044	1,958	2,066	1,914	1,812	290
Business services	6,914	7,037	7,018	6,237	5,312	5,340	4,570	3,840	3,567	1,215
Manufacturing – capital goods	2,115	2,465	2,318	1,912	1,663	2,547	2,399	2,143	1,559	128
Manufacturing – consumer goods	3,326	3,972	3,294	3,019	2,663	1,057	958	695	702	28
Real estate and construction [2]	20,782	18,465	16,297	13,293	11,684	18,750	16,871	14,559	13,761	8,554
Agriculture	6,829	6,965	6,011	5,558	5,364	103	124	79	107	44
Oil and gas	5,328	5,222	5,064	4,762	4,532	3,066	3,190	2,375	2,198	1,951
Mining	610	1,024	824	668	722	142	154	60	87	242
Forest products	474	628	446	464	465	141	162	215	209	4
Hardware and software	518	651	575	539	267	1,694	1,215	1,082	883	165
Telecommunications and cable	108	191	275	281	444	1,015	314	887	756	30
Publishing, printing, and broadcasting	406	557	527	291	333	99	92	102	117	–
Transportation	2,218	2,193	1,880	1,818	1,630	1,283	1,263	893	602	288
Utilities	2,642	2,281	2,291	1,927	1,663	2,761	1,759	1,226	1,445	1,237
Education, health and social services	3,333	3,221	2,870	2,937	2,826	4,203	2,941	3,040	3,099	–
Governments	1,173	857	954	869	728	216	127	92	7	–
Others	–	–	–	–	–	–	–	–	12	17
Stage 1 and 2 allowance for credit losses (2017 and prior: Collective allowance allocated to business and government loans) [2][3]	(341)	(144)	(98)	(195)	(215)	(536)	(138)	(108)	(83)	(58)
Total net business and government loans, including acceptances	76,595	74,934	69,076	60,760	55,690	51,691	46,293	38,662	34,183	16,338
Total net loans and acceptances	$ 343,677	$ 333,366	$ 326,572	$ 315,885	$ 289,024	$ 54,127	$ 48,290	$ 40,206	$ 35,446	$ 16,430

(1) Classification by country is primarily based on domicile of debtor or customer.
(2) Stage 3 allowance for credit losses (2017 and prior: individual allowance under IAS 39) is allocated to business and government loans, including acceptances, by category above.
(3) Stage 1 and 2 allowance (2017 and prior: collective allowance under IAS 39) are primarily allocated based on the geographic location where they are recorded.

Analysis of net loans and acceptances (continued)

$ millions, as at October 31	Other [1]					Total				
	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016
Residential mortgages	$ 2,587	$ 2,531	$ 2,453	$ 2,379	$ 2,467	$ 220,802	$ 208,441	$ 207,535	$ 207,068	$ 187,077
Student	–	–	–	–	–	18	24	33	50	73
Personal	664	757	715	583	519	41,372	43,074	42,544	40,392	37,471
Credit card	145	157	159	152	155	10,722	12,335	12,255	11,992	11,946
Total net consumer loans	3,396	3,445	3,327	3,114	3,141	272,914	263,874	262,367	259,502	236,567
Non-residential mortgages	252	258	266	218	232	6,388	6,437	6,731	6,794	7,069
Financial institutions	2,227	2,103	2,043	841	1,723	19,221	17,779	14,457	9,492	8,654
Retail and wholesale	427	467	438	435	561	7,267	8,253	7,571	6,743	4,895
Business services	1,791	1,822	1,675	1,736	1,266	14,045	13,429	12,533	11,540	7,793
Manufacturing – capital goods	49	128	125	432	234	4,711	4,992	4,586	3,903	2,025
Manufacturing – consumer goods	97	61	92	111	114	4,480	4,991	4,081	3,832	2,805
Real estate and construction [2]	1,312	1,529	1,624	1,325	1,391	40,844	36,865	32,480	28,379	21,629
Agriculture	147	104	25	22	24	7,079	7,193	6,115	5,687	5,432
Oil and gas	623	253	440	555	268	9,017	8,665	7,879	7,515	6,751
Mining	507	642	710	784	928	1,259	1,820	1,594	1,539	1,892
Forest products	–	–	–	–	–	615	790	661	673	469
Hardware and software	74	–	–	20	–	2,286	1,866	1,657	1,442	432
Telecommunications and cable	140	185	208	301	359	1,263	690	1,370	1,338	833
Publishing, printing, and broadcasting	58	81	85	89	87	563	730	714	497	420
Transportation	3,033	2,012	1,642	1,847	1,326	6,534	5,468	4,415	4,267	3,244
Utilities	2,758	1,744	647	779	532	8,161	5,784	4,164	4,151	3,432
Education, health and social services	27	34	28	29	32	7,563	6,196	5,938	6,065	2,858
Governments	1,817	1,657	1,598	1,662	1,874	3,206	2,641	2,644	2,538	2,602
Others	–	–	–	–	300	–	–	–	12	317
Stage 1 and 2 allowance for credit losses (2017 and prior: Collective allowance allocated to business and government loans) [2][3]	(151)	(73)	(90)	(73)	(65)	(1,028)	(355)	(296)	(351)	(338)
Total net business and government loans, including acceptances	15,188	13,007	11,556	11,113	11,186	143,474	134,234	119,294	106,056	83,214
Total net loans and acceptances	$ 18,584	$ 16,452	$ 14,883	$ 14,227	$ 14,327	$ 416,388	$ 398,108	$ 381,661	$ 365,558	$ 319,781

(1) Classification by country is primarily based on domicile of debtor or customer.
(2) Stage 3 allowance for credit losses (2017 and prior: individual allowance under IAS 39) is allocated to business and government loans, including acceptances, by category above.
(3) Stage 1 and 2 allowance (2017 and prior: 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	**2020**	2019	2018 [1]	2017	2016
Balance at beginning of year under IAS 39	**n/a**	n/a	$ 1,737	$ 1,813	$ 1,762
Impact of adopting IFRS 9 at November 1, 2017	**n/a**	n/a	63	n/a	n/a
Balance at beginning of year under IFRS 9	**$ 2,044**	$ 1,741	1,800	n/a	n/a
Provision for credit losses	**2,489**	1,286	870	829	1,051
Write-offs					
Domestic [2]					
Residential mortgages	**15**	22	19	21	13
Student	**–**	–	–	–	–
Personal and credit card	**755**	897	866	869	842
Other business and government	**43**	30	37	51	116
Foreign [2]					
Residential mortgages	**1**	7	35	17	21
Personal and credit card	**7**	14	14	19	18
Other business and government	**114**	160	79	80	143
Total write-offs	**935**	1,130	1,050	1,057	1,153
Recoveries					
Domestic [2]					
Personal and credit card	**170**	173	174	168	163
Other business and government	**4**	6	6	15	8
Foreign [2]					
Residential mortgages	**6**	2	–	–	–
Personal and credit card	**7**	6	4	5	6
Other business and government	**5**	7	6	5	6
Total recoveries	**192**	194	190	193	183
Net write-offs	**743**	936	860	864	970
Interest income on impaired loans	**(45)**	(40)	(23)	(26)	(29)
Foreign exchange and other	**(23)**	(7)	(46)	(15)	(1)
Balance at end of year	**$ 3,722**	$ 2,044	$ 1,741	$ 1,737	$ 1,813
Comprises:					
Loans	**$ 3,540**	$ 1,915	$ 1,639	$ 1,618	$ 1,691
Undrawn credit facilities and other off-balance sheet exposures	**182**	129	102	119	122
Ratio of net write-offs during the year to average loans outstanding during the year	**0.19 %**	0.25 %	0.24 %	0.26 %	0.33 %

(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	**2020**	2019	2018 [2]	2017 [3]	2016 [3]	**2020**	2019	2018 [2]	2017 [3]	2016 [3]
Domestic [4]										
Residential mortgages	**$ 69**	$ 61	$ 54	$ 22	$ 20	**10.8 %**	10.5 %	10.9 %	7.5 %	8.0 %
Personal loans	**80**	98	79	110	105	**60.2**	62.4	57.7	94.8	85.4
Business and government	**406**	217	56	43	63	**62.6**	45.8	41.5	41.7	30.9
Total domestic	**555**	376	189	175	188	**39.1**	31.0	24.6	34.2	32.5
Foreign [4]										
Residential mortgages	**82**	79	89	123	148	**47.7**	46.5	49.4	55.7	56.3
Personal loans	**33**	30	30	31	40	**68.8**	63.8	66.7	56.4	57.1
Business and government	**244**	159	174	148	196	**34.4**	36.4	35.8	28.3	26.2
Total foreign	**359**	268	293	302	384	**38.6**	41.0	41.2	37.8	35.6
Total allowance	**$ 914**	$ 644	$ 482	$ 477	$ 572	**38.9 %**	34.5 %	32.6 %	36.4 %	34.5 %

(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) 2020	2019	2018 (3)	2017	2016	Allowance as a % of net loans and acceptances 2020	2019	2018 (3)	2017	2016
Domestic										
Residential mortgages	**$ 89**	$ 38	$ 29	$ 34	$ 30	**– %**	– %	– %	– %	– %
Personal loans	**697**	415	362	345	345	**1.7**	1.0	0.9	0.9	0.9
Credit cards	**659**	413	415	383	383	**6.2**	3.4	3.4	3.2	3.3
Business and government	**341**	144	98	187	205	**0.4**	0.2	0.1	0.3	0.4
Total domestic	**1,786**	1,010	904	949	963	**0.5**	0.3	0.3	0.3	0.3
Foreign										
Residential mortgages	**123**	33	42	24	23	**2.7**	0.8	1.2	0.7	0.9
Personal loans	**22**	10	10	9	7	**2.1**	0.8	0.9	1.0	1.2
Credit cards	**8**	7	3	3	3	**4.7**	3.6	1.5	1.6	1.6
Business and government	**687**	211	198	156	123	**1.0**	0.4	0.4	0.3	0.4
Total foreign	**840**	261	253	192	156	**1.2**	0.4	0.5	0.4	0.5
Total stage 1 and 2 allowance (2017 and prior: total allowance)	**$ 2,626**	$ 1,271	$ 1,157	$ 1,141	$ 1,119	**0.6 %**	0.3 %	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 and prior: 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	2020	2019	2018	2017	2016
Canada					
Atlantic provinces	**$ 14,685**	$ 14,578	$ 14,036	$ 14,194	$ 14,006
Quebec	**30,916**	30,113	28,598	27,027	25,471
Ontario	**176,915**	169,073	165,592	157,987	139,254
Prairie provinces	**14,710**	14,680	13,947	13,746	13,341
Alberta, Northwest Territories and Nunavut	**46,133**	45,103	44,896	44,354	43,308
British Columbia and Yukon	**62,104**	60,829	60,407	59,479	54,567
Stage 1 and 2 allowance (2017 and prior: collective allowance) allocated to Canada (2)	**(1,786)** (3)	(1,010) (3)	(904) (3)	(902) (4)	(923) (4)
Total Canada	**343,677**	333,366	326,572	315,885	289,024
U.S.	**54,127**	48,290	40,206	35,446	16,430
Other countries	**18,584**	16,452	14,883	14,227	14,327
Total net loans and acceptances	**$ 416,388**	$ 398,108	$ 381,661	$ 365,558	$ 319,781

(1) Classification by country is primarily based on domicile of debtor or customer.
(2) Stage 1 and 2 allowance (2017 and prior: 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 and prior: 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)				
	2020	2019	2018 (2)	2017	2016	**2020**	2019	2018 (2)	2017	2016
Gross impaired loans										
Residential mortgages	**$ 637**	$ 581	$ 497	$ 292	$ 251	**$ 17**	$ 16	$ 13	$ 9	$ –
Student	**3**	1	2	2	3	**–**	–	–	–	–
Personal	**130**	156	135	114	120	**5**	5	2	2	–
Total gross impaired consumer loans	**770**	738	634	408	374	**22**	21	15	11	–
Non-residential mortgages	**15**	3	3	7	4	**–**	–	–	–	–
Financial institutions	**8**	2	5	–	1	**34**	37	65	8	–
Retail, wholesale and business services	**383**	283	62	38	23	**98**	89	44	52	5
Manufacturing – consumer and capital goods	**5**	6	7	6	19	**65**	35	14	1	–
Real estate and construction	**39**	38	39	33	23	**169**	46	90	137	62
Agriculture	**27**	53	8	9	4	**–**	–	–	–	–
Resource-based industries	**124**	46	1	2	121	**169**	69	54	114	248
Telecommunications, media and technology	**1**	2	2	3	4	**6**	2	2	2	–
Transportation	**4**	4	3	2	1	**–**	–	1	–	–
Utilities	**38**	32	–	–	–	**–**	–	–	–	–
Other	**5**	5	5	3	4	**21**	23	56	45	–
Total gross impaired – business and government loans	**649**	474	135	103	204	**562**	301	326	359	315
Total gross impaired loans	**1,419**	1,212	769	511	578	**584**	322	341	370	315
Other past due loans (3)	**127**	96	100	337	362	**–**	–	–	–	–
Total gross impaired and other past due loans	**$ 1,546**	$ 1,308	$ 869	$ 848	$ 940	**$ 584**	$ 322	$ 341	$ 370	$ 315
Allowance for credit losses										
Residential mortgages	**$ 69**	$ 61	$ 54	$ 22	$ 20	**$ 3**	$ 3	$ 2	$ –	$ –
Student	**1**	–	–	–	–	**–**	–	–	–	–
Personal	**79**	98	79	110	105	**2**	1	–	–	–
Total allowance – consumer loans	**149**	159	133	132	125	**5**	4	2	–	–
Non-residential mortgages	**–**	–	–	2	2	**–**	–	–	–	–
Financial institutions	**4**	1	–	–	–	**8**	1	14	–	–
Retail, wholesale and business services	**289**	151	26	18	16	**24**	28	27	16	4
Manufacturing – consumer and capital goods	**3**	4	4	5	7	**29**	–	1	–	–
Real estate and construction	**11**	16	15	9	10	**58**	28	41	41	20
Agriculture	**22**	24	4	–	1	**–**	–	–	–	–
Resource-based industries	**56**	11	1	2	21	**53**	34	5	8	8
Telecommunications, media and technology	**–**	–	1	2	3	**2**	–	–	–	–
Transportation	**2**	2	2	2	1	**–**	–	–	–	–
Utilities	**17**	5	–	–	–	**–**	–	–	–	–
Other	**2**	3	3	3	2	**1**	10	–	–	–
Total allowance – business and government loans	**406**	217	56	43	63	**175**	101	88	65	32
Total allowance	**$ 555**	$ 376	$ 189	$ 175	$ 188	**$ 180**	$ 105	$ 90	$ 65	$ 32
Net impaired loans										
Residential mortgages	**$ 568**	$ 520	$ 443	$ 270	$ 231	**$ 14**	$ 13	$ 11	$ 9	$ –
Student	**2**	1	2	2	3	**–**	–	–	–	–
Personal	**51**	58	56	4	15	**3**	4	2	2	–
Total net impaired consumer loans	**621**	579	501	276	249	**17**	17	13	11	–
Non-residential mortgages	**15**	3	3	5	2	**–**	–	–	–	–
Financial institutions	**4**	1	5	–	1	**26**	36	51	8	–
Retail, wholesale and business services	**94**	132	36	20	7	**74**	61	17	36	1
Manufacturing – consumer and capital goods	**2**	2	3	1	12	**36**	35	13	1	–
Real estate and construction	**28**	22	24	24	13	**111**	18	49	96	42
Agriculture	**5**	29	4	9	3	**–**	–	–	–	–
Resource-based industries	**68**	35	–	–	100	**116**	35	49	106	240
Telecommunications, media and technology	**1**	2	1	1	1	**4**	2	2	2	–
Transportation	**2**	2	1	–	–	**–**	–	1	–	–
Utilities	**21**	27	–	–	–	**–**	–	–	–	–
Other	**3**	2	2	–	2	**20**	13	56	45	–
Total net impaired – business and government loans	**243**	257	79	60	141	**387**	200	238	294	283
Total net impaired loans	**$ 864**	$ 836	$ 580	$ 336	$ 390	**$ 404**	$ 217	$ 251	$ 305	$ 283

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(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]					Total				
	2020	2019	2018 [2]	2017	2016	**2020**	2019	2018 [2]	2017	2016
Gross impaired loans										
Residential mortgages	**$ 155**	$ 154	$ 167	$ 212	$ 263	**$ 809**	$ 751	$ 677	$ 513	$ 514
Student	**–**	–	–	–	–	**3**	1	2	2	3
Personal	**43**	42	43	53	70	**178**	203	180	169	190
Total gross impaired consumer loans	**198**	196	210	265	333	**990**	955	859	684	707
Non-residential mortgages	**11**	17	15	17	17	**26**	20	18	24	21
Financial institutions	**1**	–	1	2	3	**43**	39	71	10	4
Retail, wholesale and business services	**49**	43	52	57	94	**530**	415	158	147	122
Manufacturing – consumer and capital goods	**3**	4	4	5	210	**73**	45	25	12	229
Real estate and construction	**55**	59	72	78	104	**263**	143	201	248	189
Agriculture	**–**	–	1	1	1	**27**	53	9	10	5
Resource-based industries	**27**	–	–	–	–	**320**	115	55	116	369
Telecommunications, media and technology	**–**	–	–	–	–	**7**	4	4	5	4
Transportation	**2**	2	3	4	2	**6**	6	7	6	3
Utilities	**–**	–	–	–	–	**38**	32	–	–	–
Other	**–**	11	12	–	1	**26**	39	73	48	5
Total gross impaired – business and government loans	**148**	136	160	164	432	**1,359**	911	621	626	951
Total gross impaired loans	**346**	332	370	429	765	**2,349**	1,866	1,480	1,310	1,658
Other past due loans [3]	**5**	3	3	3	3	**132**	99	103	340	365
Total gross impaired and other past due loans	**$ 351**	$ 335	$ 373	$ 432	$ 768	**$ 2,481**	$ 1,965	$ 1,583	$ 1,650	$ 2,023
Allowance for credit losses										
Residential mortgages	**$ 79**	$ 76	$ 87	$ 123	$ 148	**$ 151**	$ 140	$ 143	$ 145	$ 168
Student	**–**	–	–	–	–	**1**	–	–	–	–
Personal	**31**	29	30	31	40	**112**	128	109	141	145
Total allowance – consumer loans	**110**	105	117	154	188	**264**	268	252	286	313
Non-residential mortgages	**2**	5	7	9	12	**2**	5	7	11	14
Financial institutions	**1**	–	1	–	2	**13**	2	15	–	2
Retail, wholesale and business services	**21**	18	28	29	48	**334**	197	81	63	68
Manufacturing – consumer and capital goods	**2**	2	3	3	45	**34**	6	8	8	52
Real estate and construction	**29**	30	39	39	54	**98**	74	95	89	84
Agriculture	**–**	–	1	1	1	**22**	24	5	1	2
Resource-based industries	**13**	–	–	–	–	**122**	45	6	10	29
Telecommunications, media and technology	**–**	–	–	–	–	**2**	–	1	2	3
Transportation	**1**	1	2	2	2	**3**	3	4	4	3
Utilities	**–**	–	–	–	–	**17**	5	–	–	–
Other	**–**	2	5	–	–	**3**	15	8	3	2
Total allowance – business and government loans	**69**	58	86	83	164	**650**	376	230	191	259
Total allowance	**$ 179**	$ 163	$ 203	$ 237	$ 352	**$ 914**	$ 644	$ 482	$ 477	$ 572
Net impaired loans										
Residential mortgages	**$ 76**	$ 78	$ 80	$ 89	$ 115	**$ 658**	$ 611	$ 534	$ 368	$ 346
Student	**–**	–	–	–	–	**2**	1	2	2	3
Personal	**12**	13	13	22	30	**66**	75	71	28	45
Total net impaired consumer loans	**88**	91	93	111	145	**726**	687	607	398	394
Non-residential mortgages	**9**	12	8	8	5	**24**	15	11	13	7
Financial institutions	**–**	–	–	2	1	**30**	37	56	10	2
Retail, wholesale and business services	**28**	25	24	28	46	**196**	218	77	84	54
Manufacturing – consumer and capital goods	**1**	2	1	2	165	**39**	39	17	4	177
Real estate and construction	**26**	29	33	39	50	**165**	69	106	159	105
Agriculture	**–**	–	–	–	–	**5**	29	4	9	3
Resource-based industries	**14**	–	–	–	–	**198**	70	49	106	340
Telecommunications, media and technology	**–**	–	–	–	–	**5**	4	3	3	1
Transportation	**1**	1	1	2	–	**3**	3	3	2	–
Utilities	**–**	–	–	–	–	**21**	27	–	–	–
Other	**–**	9	7	–	1	**23**	24	65	45	3
Total net impaired – business and government loans	**79**	78	74	81	268	**709**	535	391	435	692
Total net impaired loans	**$ 167**	$ 169	$ 167	$ 192	$ 413	**$ 1,435**	$ 1,222	$ 998	$ 833	$ 1,086

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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 2020	Average balance 2019	Average balance 2018	Interest 2020	Interest 2019	Interest 2018	Rate 2020	Rate 2019	Rate 2018
Deposits in domestic bank offices (1)									
Payable on demand									
Personal	**$ 11,945**	$ 9,939	$ 10,216	**$ 14**	$ 17	$ 15	**0.12 %**	0.17 %	0.15 %
Business and government	**50,683**	43,539	42,784	**305**	585	432	**0.60**	1.34	1.01
Bank	**5,761**	4,517	4,632	**1**	3	1	**0.02**	0.07	0.02
Payable after notice									
Personal	**109,856**	99,859	98,054	**460**	855	644	**0.42**	0.86	0.66
Business and government	**56,758**	44,691	38,621	**659**	927	606	**1.16**	2.07	1.57
Bank	**276**	256	415	**2**	4	6	**0.72**	1.56	1.45
Payable on a fixed date									
Personal	**55,164**	51,522	43,561	**969**	1,040	676	**1.76**	2.02	1.55
Business and government	**102,953**	85,978	76,674	**1,358**	2,063	1,442	**1.32**	2.40	1.88
Bank	**2,078**	1,161	1,625	**20**	23	27	**0.96**	1.98	1.66
Secured borrowings	**39,076**	39,111	43,085	**668**	1,037	952	**1.71**	2.65	2.21
Total domestic	**434,550**	380,573	359,667	**4,456**	6,554	4,801	**1.03**	1.72	1.33
Deposits in foreign bank offices									
Payable on demand									
Personal	**1,971**	1,687	1,693	**2**	2	1	**0.10**	0.12	0.06
Business and government	**20,454**	15,687	14,149	**32**	70	33	**0.16**	0.45	0.23
Bank	**31**	13	10	**1**	–	–	**3.23**	–	–
Payable after notice									
Personal	**8,119**	6,909	5,239	**66**	82	39	**0.81**	1.19	0.74
Business and government	**12,825**	9,544	7,740	**83**	185	96	**0.65**	1.94	1.24
Payable on a fixed date									
Personal	**2,832**	3,164	2,891	**36**	58	38	**1.27**	1.83	1.31
Business and government	**48,680**	51,082	55,997	**546**	1,271	1,088	**1.12**	2.49	1.94
Bank	**7,850**	8,245	8,049	**89**	196	144	**1.13**	2.38	1.79
Secured borrowings	**1,322**	226	–	**15**	4	–	**1.13**	1.77	–
Total foreign	**104,084**	96,557	95,768	**870**	1,868	1,439	**0.84**	1.93	1.50
Total deposits	**$ 538,634**	$ 477,130	$ 455,435	**$ 5,326**	$ 8,422	$ 6,240	**0.99 %**	1.77 %	1.37 %

(1) Deposits by foreign depositors in our domestic bank offices amounted to $42.2 billion (2019: $29.3 billion; 2018: $32.3 billion).

Short-term borrowings

$ millions, as at or for the year ended October 31	2020	2019	2018
Amounts outstanding at end of year			
Obligations related to securities sold short	**$ 15,963**	$ 15,635	$ 13,782
Obligations related to securities lent or sold under repurchase agreements	**73,477**	53,623	33,571
Total short-term borrowings	**$ 89,440**	$ 69,258	$ 47,353
Obligations related to securities sold short			
Average balance	**$ 17,841**	$ 16,501	$ 15,300
Maximum month-end balance	**22,467**	18,448	17,162
Average interest rate	**1.42 %**	1.76 %	1.78 %
Obligations related to securities lent or sold under repurchase agreements			
Average balance	**$ 69,255**	$ 51,408	$ 41,063
Maximum month-end balance	**81,349**	57,346	45,343
Average interest rate	**0.95 %**	2.33 %	1.79 %

Fees paid to the shareholders' auditor

$ millions, for the year ended October 31	2020	2019	2018
Audit fees (1)	**$ 24.0**	$ 22.3	$ 26.0
Audit-related fees (2)	**2.2**	1.7	2.5
Tax fees (3)	**1.4**	1.9	2.4
All other fees (4)	**–**	0.1	0.1
Total	**$ 27.6**	$ 26.0	$ 31.0

(1) For the audit of CIBC's annual financial statements and the audit of certain of its 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 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.