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, 2017, compared with prior years. The MD&A should be read in conjunction with the audited consolidated financial statements. Unless otherwise indicated, all financial information in this MD&A has been prepared in accordance with International Financial Reporting Standards (IFRS or GAAP) and all amounts are expressed in Canadian dollars. Certain disclosures in the MD&A have been shaded as they form an integral part of the consolidated financial statements. The MD&A is current as of November 29, 2017. Additional information relating to CIBC, including the Annual Information Form, is available on SEDAR at www.sedar.com and on the 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 178 to 183 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", "Financial performance overview – Taxes", "Financial performance overview – Significant events", "Financial performance overview – Outlook for calendar year 2018", "Strategic business units overview – Canadian Personal and Small 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 resources", "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 – Financial instruments", "Accounting and control matters – Accounting developments", "Accounting and control matters – 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 2018 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 "Financial performance overview – Outlook for calendar year 2018" section of this report, and are subject to inherent risks and uncertainties that may be general or specific. 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: credit, market, liquidity, strategic, insurance, operational, reputation and legal, regulatory and environmental risk; 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 Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations issued and to be issued thereunder, 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 the war on terror; natural disasters, public health emergencies, 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 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; currency value and interest rate fluctuations, including as a result of market and oil price volatility; 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 synergies and benefits of the acquisition of PrivateBancorp, Inc. 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 2017. Prior period amounts were reclassified accordingly. The changes impacted the results of our strategic business units (SBUs), but there was no impact on prior period consolidated net income resulting from these reclassifications.

Fourth Quarter

Changes to our organizational structure

On June 20, 2017, we announced changes to CIBC's leadership team and organizational structure to further accelerate our transformation. As a result of these changes, our new reporting structure is as follows:

Canadian Personal and Small Business Banking – provides personal and small business clients across Canada with financial advice, products and services through a team of advisors in our banking centres, as well as through our direct, mobile and remote channels. Included in Canadian Personal and Small Business Banking are the following lines of business:

- Personal and small business banking; and
- Other.

Canadian Commercial Banking and Wealth Management – provides high-touch, relationship-oriented commercial and private banking, as well as wealth management services to meet the needs of middle-market companies, entrepreneurs, high-net-worth individuals and families, along with institutional clients across Canada. Included in Canadian Commercial Banking and Wealth Management are the following lines of business:

- Commercial banking; and
- Wealth management.

U.S. Commercial Banking and Wealth Management – provides high-touch, relationship-oriented commercial, personal and small business banking, as well as wealth management services to meet the needs of middle-market companies, executives, entrepreneurs, high-net-worth individuals and families in the markets we serve in the U.S. Included in U.S. Commercial Banking and Wealth Management are the following lines of business:

- Commercial banking;
- Wealth management; and
- Other.

Capital Markets – provides integrated global markets products and services, investment banking advisory and execution, corporate banking and top-ranked research to corporate, government and institutional clients around the world. Included in Capital Markets are the following lines of business:

- Global markets;
- Corporate and investment banking; and
- Other.

Corporate and Other – includes the following functional groups – Administration, Client Connectivity and Innovation, Finance, Human Resources and Communications, Internal Audit, Risk Management, and Technology and Operations, 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 functional and support costs of CIBC Bank USA are recognized directly in the expenses of U.S. Commercial Banking and Wealth Management. Corporate and Other also includes the results of FirstCaribbean International Bank Limited (CIBC FirstCaribbean) and other strategic investments, as well as other income statement and balance sheet items not directly attributable to the business lines.

In addition to the above:

- The results of Geneva Advisors, LLC (Geneva Advisors) is included in the wealth management line of business within U.S. Commercial Banking and Wealth Management, after the close of the acquisition on August 31, 2017;
- The results of CIBC Investor's Edge, previously reported in Canadian Wealth Management, are now included in Canadian Personal and Small Business Banking; and
- The historical results of our minority investment in American Century Investments (ACI) sold in 2016 were reclassified from Canadian Wealth Management to Corporate and Other.

Changes to our transfer pricing methodology

The transfer pricing methodology used by Treasury to charge and credit the SBUs for the cost and benefit of funding assets and liabilities, respectively, was enhanced to better align to our liquidity risk models.

Third Quarter

U.S. Commercial Banking and Wealth Management

On June 23, 2017, we completed the acquisition of PrivateBancorp, Inc. (PrivateBancorp) and its subsidiary, The PrivateBank and Trust Company (The PrivateBank, subsequently rebranded as CIBC Bank USA). As a result of the acquisition, a new U.S. Commercial Banking and Wealth Management SBU was created.

In addition to the results of CIBC Bank USA, U.S. Commercial Banking and Wealth Management includes:

- The results of CIBC Atlantic Trust Private Wealth Management (CIBC Atlantic Trust) in the wealth management line of business, previously reported in the private wealth management line of business within the Wealth Management SBU; and
- The results of U.S. real estate finance in the commercial banking line of business, previously reported in the corporate and investment banking line of business within Capital Markets.

SBU name changes

Given the addition of the U.S. Commercial Banking and Wealth Management SBU, we changed the name of our Retail and Business Banking SBU to Canadian Retail and Business Banking, and the name of our Wealth Management SBU to Canadian Wealth Management. Further changes to our SBU structure were made in the fourth quarter, as noted above.

Overview

CIBC is a leading Canadian-based global financial institution with a market capitalization of $50 billion and a Basel III Common Equity Tier 1 (CET1) ratio of 10.6%. Through our four strategic business units – Canadian Personal and Small 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 11 million individual, small business, commercial, corporate and institutional clients in Canada, the U.S. and around the world. We have approximately 45,000 employees dedicated to providing our clients with banking that fits their lives, delivering consistent and sustainable earnings growth for our shareholders, and giving back to our communities.

CIBC's strategy

At CIBC, we are building a relationship-focused bank. We have been accelerating our transformation by concentrating on three strategic bank-wide priorities:

- **Focusing on our clients** – we continue to shift our culture and drive towards our vision of being the leader in client relationships.
- **Innovating for the future** – we are investing in technologies that meet our clients' ever-evolving needs and improve their banking experience.
- **Simplifying our bank** – we are simplifying our bank to free up resources for reinvestment and make CIBC more efficient.

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 five key areas of shareholder value – earnings growth, efficiency ratio, return on common shareholders' equity (ROE), total shareholder return (TSR) and balance sheet strength. To gauge our progress towards our goal of becoming the leader in client relationships, we report our Net Promoter Score (NPS) progress against our peers. We have set targets for each of these measures over the medium term, which we define as three to five years.

Earnings growth[1]

To assess our earnings growth, we monitor our earnings per share (EPS). Our target beginning in 2017 is average annual EPS growth of at least 5%. In 2017, we achieved our target, delivering reported and adjusted[1] diluted EPS growth of 5% and 9%, respectively.

Going forward, we are maintaining our target to deliver average annual EPS growth of at least 5%.

Efficiency ratio[1]

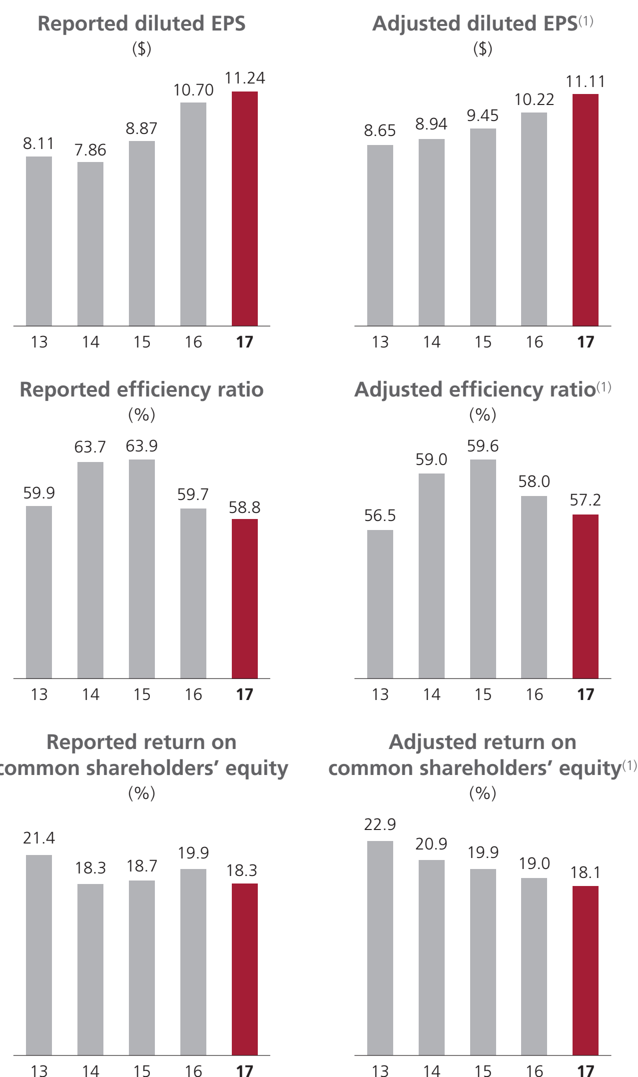
To assess how well we use our assets to generate net income, we measure and monitor our efficiency ratio, defined as the ratio of non-interest expenses to total revenue. In 2017, CIBC's reported and adjusted[1] efficiency ratios improved to 58.8% and 57.2%, respectively, from 59.7% and 58.0% in 2016.

CIBC has set a medium-term target of achieving a run rate efficiency ratio of 55% by 2019.

Return on common shareholders' equity[1]

ROE is another key measure of shareholder value. In 2017, CIBC's reported and adjusted[1] ROE were strong, at 18.3% and 18.1%, respectively, above our target of at least 15%.

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



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

Total shareholder return

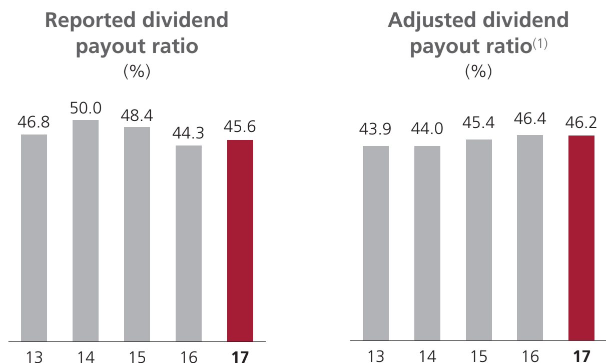
TSR is the ultimate measure of shareholder value, and the output of delivering against the financial targets within our control.

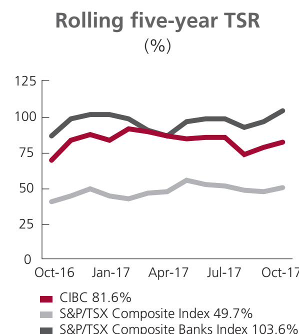
We have two shareholder return targets:

1. For many years, we have consistently delivered adjusted 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 2017, our reported and adjusted[(1)] dividend payout ratios were 45.6% and 46.2%, respectively.

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

2. We also have an objective to deliver a TSR that exceeds the industry average, which we have defined as the Standard & Poor's Ratings Services (S&P)/Toronto Stock Exchange (TSX) Composite Banks Index, over a rolling five-year period. For the five years ended October 31, 2017, CIBC delivered a TSR of 81.6%, which was below the Banks Index return over the same period of 103.6%.



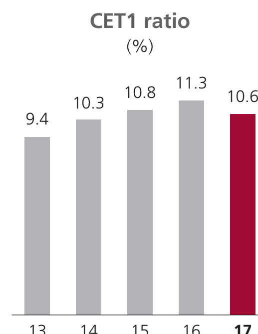


Balance sheet strength

Maintaining a strong balance sheet is foundational to our long-term success. Our goal is to maintain strong capital ratios that comfortably exceed regulatory targets.

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. At the end of 2017, our Basel III CET1 ratio on an all-in basis was 10.6%, well above the current all-in regulatory target set by the Office of the Superintendent of Financial Institutions (OSFI).

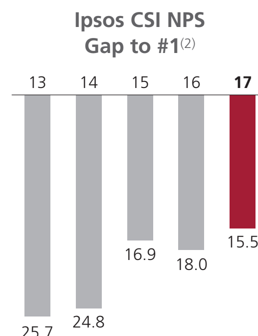
In addition to our capital objectives, we remain focused on asset quality and a strong funding profile as key underpinnings of a strong and stable balance sheet.



Net promoter score

The NPS is a measure of client experience and is calculated by subtracting the percentage of detractors from the percentage of promoters who respond to surveys conducted by a third party. It is a key measure of client loyalty.

While there is still work to be done to achieve our goal of #1 in client experience, CIBC's gap to the leader has narrowed from 26 points in 2013 to 16 points in 2017.



(1) For additional information, see the "Non-GAAP measures" section.
(2) Gap to #1 is a measure of CIBC's ranking relative to Canada's Big 5 banks.

Economic and market environment

CIBC operated in an environment of healthy economic growth in Canada and an improving backdrop abroad in 2017. Canada enjoyed low unemployment rates that supported an acceleration in spending and consumer credit. The housing sector and growth in mortgage credit showed some signs of cooling as the year progressed, capturing regulatory and interest rate policy decisions. Corporate credit quality improved on a rebound in oil prices and a generally healthy environment, while business loan demand grew at a somewhat slower pace. Bond market issuance activity by corporations and the federal government picked up, while equity issuance activity was lighter due to less merger and acquisition-driven activity. The U.S. economy showed steady growth and robust employment gains with somewhat slower national growth in bank lending and strong equity market gains.

Financial performance overview

Financial highlights

As at or for the year ended October 31		2017 (1)	2016	2015	2014	2013
Financial results ($ millions)						
Net interest income		**$ 8,977**	$ 8,366	$ 7,915	$ 7,459	$ 7,453
Non-interest income		**7,303**	6,669	5,941	5,904	5,252
Total revenue		**16,280**	15,035	13,856	13,363	12,705
Provision for credit losses		**829**	1,051	771	937	1,121
Non-interest expenses		**9,571**	8,971	8,861	8,512	7,608
Income before income taxes		**5,880**	5,013	4,224	3,914	3,976
Income taxes		**1,162**	718	634	699	626
Net income		**$ 4,718**	$ 4,295	$ 3,590	$ 3,215	$ 3,350
Net income (loss) attributable to non-controlling interests		**19**	20	14	(3)	(2)
Preferred shareholders		**52**	38	45	87	99
Common shareholders		**4,647**	4,237	3,531	3,131	3,253
Net income attributable to equity shareholders		**$ 4,699**	$ 4,275	$ 3,576	$ 3,218	$ 3,352
Financial measures						
Reported efficiency ratio		**58.8 %**	59.7 %	63.9 %	63.7 %	59.9 %
Adjusted efficiency ratio (2)		**57.2 %**	58.0 %	59.6 %	59.0 %	56.5 %
Loan loss ratio (3)		**0.25 %**	0.31 %	0.27 %	0.38 %	0.44 %
Reported return on common shareholders' equity		**18.3 %**	19.9 %	18.7 %	18.3 %	21.4 %
Adjusted return on common shareholders' equity (2)		**18.1 %**	19.0 %	19.9 %	20.9 %	22.9 %
Net interest margin		**1.66 %**	1.64 %	1.74 %	1.81 %	1.85 %
Net interest margin on average interest-earning assets		**1.85 %**	1.88 %	2.00 %	2.05 %	2.12 %
Return on average assets		**0.87 %**	0.84 %	0.79 %	0.78 %	0.83 %
Return on average interest-earning assets		**0.97 %**	0.96 %	0.91 %	0.89 %	0.95 %
Total shareholder return		**18.30 %**	5.19 %	1.96 %	20.87 %	18.41 %
Reported effective tax rate		**19.8 %**	14.3 %	15.0 %	17.9 %	15.8 %
Adjusted effective tax rate (2)		**20.3 %**	16.6 %	15.5 %	15.4 %	16.5 %
Common share information						
Per share ($)	– basic earnings	**$ 11.26**	$ 10.72	$ 8.89	$ 7.87	$ 8.11
	– reported diluted earnings	**11.24**	10.70	8.87	7.86	8.11
	– adjusted diluted earnings (2)	**11.11**	10.22	9.45	8.94	8.65
	– dividends	**5.08**	4.75	4.30	3.94	3.80
	– book value	**66.55**	56.59	51.25	44.30	40.36
Share price ($)	– high	**119.86**	104.46	107.16	107.01	88.70
	– low	**97.76**	83.33	86.00	85.49	74.10
	– closing	**113.56**	100.50	100.28	102.89	88.70
Shares outstanding (thousands)	– weighted-average basic (4)(5)	**412,636**	395,389	397,213	397,620	400,880
	– weighted-average diluted (4)	**413,563**	395,919	397,832	398,420	401,261
	– end of period (4)(5)	**439,313**	397,070	397,291	397,021	399,250
Market capitalization ($ millions)		**$ 49,888**	$ 39,906	$ 39,840	$ 40,850	$ 35,413
Value measures						
Dividend yield (based on closing share price)		**4.5 %**	4.7 %	4.3 %	3.8 %	4.3 %
Reported dividend payout ratio		**45.6 %**	44.3 %	48.4 %	50.0 %	46.8 %
Adjusted dividend payout ratio (2)		**46.2 %**	46.4 %	45.4 %	44.0 %	43.9 %
Market value to book value ratio		**1.71**	1.78	1.96	2.32	2.20
On- and off-balance sheet information ($ millions)						
Cash, deposits with banks and securities		**$ 107,571**	$ 101,588	$ 93,619	$ 73,089	$ 78,363
Loans and acceptances, net of allowance		**365,558**	319,781	290,981	268,240	256,380
Total assets		**565,264**	501,357	463,309	414,903	398,006
Deposits		**439,706**	395,647	366,657	325,393	315,164
Common shareholders' equity		**29,238**	22,472	20,360	17,588	16,113
Average assets		**542,365**	509,140	455,324	411,481	403,546
Average interest-earning assets		**485,837**	445,134	395,616	362,997	351,687
Average common shareholders' equity		**25,393**	21,275	18,857	17,067	15,167
Assets under administration (AUA) (6)(7)		**2,192,947**	2,041,887	1,846,142	1,703,360	1,499,885
Assets under management (AUM) (7)		**221,571**	183,715	170,465	151,913	105,123
Balance sheet quality (All-in basis) and liquidity measures						
Risk-weighted assets (RWA) ($ millions)						
CET1 capital RWA		**$ 203,321**	$ 168,996	$ 156,107	$ 141,250	$ 136,747
Tier 1 capital RWA		**203,321**	169,322	156,401	141,446	136,747
Total capital RWA		**203,321**	169,601	156,652	141,739	136,747
Capital ratios						
CET1 ratio		**10.6 %**	11.3 %	10.8 %	10.3 %	9.4 %
Tier 1 capital ratio		**12.1 %**	12.8 %	12.5 %	12.2 %	11.6 %
Total capital ratio		**13.8 %**	14.8 %	15.0 %	15.5 %	14.6 %
Basel III leverage ratio						
Leverage ratio exposure ($ millions)		**$ 610,353**	$ 545,480	$ 502,552	n/a	n/a
Leverage ratio		**4.0 %**	4.0 %	3.9 %	n/a	n/a
Liquidity coverage ratio (LCR) (8)		**120 %**	124 %	119 %	n/a	n/a
Other information						
Full-time equivalent employees		**44,928**	43,213	44,201	44,424	43,039

(1) Includes the results of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
(2) For additional information, see the "Non-GAAP measures" section.
(3) The ratio is calculated as the provision for credit losses on impaired loans to average loans and acceptances, net of allowance for credit losses.
(4) Excludes 2,010,890 common shares which are issued and outstanding but which have not been acquired by a third party as at October 31, 2017 (2016: nil). These shares were issued as a component of our acquisition of The PrivateBank. These shares are currently held on behalf of CIBC, and may be cancelled at CIBC's discretion.
(5) Excludes 190,285 unvested restricted shares as at October 31, 2017 (2016: nil).
(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 $1,723.9 billion as at October 31, 2017 (2016: $1,640.2 billion).
(7) AUM amounts are included in the amounts reported under AUA.
(8) Average for the three months ended October 31 for each respective year.
n/a Not applicable.

2017 Financial results

Reported net income for the year was $4,718 million, compared with $4,295 million in 2016. The current year included the results of CIBC Bank USA after the close of the acquisition on June 23, 2017, which contributed $96 million to net income.

Adjusted net income[1] for the year was $4,665 million, compared with $4,104 million in 2016.

Reported diluted EPS for the year was $11.24, compared with $10.70 in 2016.

Adjusted diluted EPS[1] for the year was $11.11, compared with $10.22 in 2016.

Reported and adjusted diluted EPS for the year included the results of CIBC Bank USA after the close of the acquisition on June 23, 2017. EPS was also impacted by the issuance of CIBC common shares, as detailed in Note 3 to our consolidated financial statements.

2017

Net income was affected by the following items of note:

- $299 million ($245 million after-tax) gain on the sale and lease back of certain retail properties (Canadian Personal and Small Business Banking);
- $104 million ($73 million after-tax) in transaction and integration-related costs as well as purchase accounting adjustments[2] associated with the acquisition of The PrivateBank and Geneva Advisors ($70 million after-tax in Corporate and Other, and $3 million after-tax in U.S. Commercial Banking and Wealth Management);
- $45 million ($33 million after-tax) increase in legal provisions in the third quarter (Corporate and Other);
- $41 million ($28 million after-tax) amortization of intangible assets ($4 million after-tax in Canadian Personal and Small Business Banking, $1 million after-tax in Canadian Commercial Banking and Wealth Management, $16 million after-tax in U.S. Commercial Banking and Wealth Management, and $7 million after-tax in Corporate and Other);
- $98 million ($71 million after-tax) in fees and charges related to the launch of Simplii Financial and the related wind-down of President's Choice Financial (Canadian Personal and Small Business Banking); and
- $18 million ($13 million after-tax) reduction in the portion of the collective allowance recognized in Corporate and Other[3] in the fourth quarter.

The above items of note increased revenue by $305 million, provision for credit losses by $17 million and non-interest expenses by $259 million, and decreased income taxes by $24 million. In aggregate, these items of note increased net income by $53 million.

2016

Net income was affected by the following items of note:

- $428 million ($383 million after-tax) gain, net of related transaction costs, on the sale of our minority investment in American Century Investments (ACI) (Corporate and Other)[4];
- $134 million ($98 million after-tax) in restructuring charges primarily relating to employee severance (Corporate and Other);
- $109 million ($80 million after-tax) increase in the portion of the collective allowance recognized in Corporate and Other[3];
- $77 million ($56 million after-tax) increase in legal provisions (Corporate and Other);
- $53 million ($47 million after-tax) gain, net of related transaction and severance costs, on the sale of a processing centre (Corporate and Other);
- $40 million ($30 million after-tax) of loan losses in our exited European leveraged finance portfolio (Capital Markets);
- $30 million ($22 million after-tax) amortization of intangible assets ($5 million after-tax in Canadian Personal and Small Business Banking, $2 million after-tax in Canadian Commercial Banking and Wealth Management, $6 million after-tax in U.S. Commercial Banking and Wealth Management, and $9 million after-tax in Corporate and Other)[4];
- $30 million income tax recovery due to the settlement of transfer pricing-related matters (Canadian Personal and Small Business Banking);
- $15 million income tax recovery arising from a change in our expected utilization of certain tax loss carryforwards, primarily due to the sale of our minority investment in ACI (Corporate and Other); and
- $3 million ($2 million after-tax) gain from the structured credit run-off business (Capital Markets).

The above items of note increased revenue by $505 million, provision for credit losses by $149 million and non-interest expenses by $262 million, and decreased income taxes by $97 million. In aggregate, these items of note increased net income by $191 million.

(1) For additional information, see the "Non-GAAP measures" section.
(2) Transaction costs include legal and other advisory fees, as well as financing costs associated with: (i) pre-funding the cash component of the merger consideration; (ii) interest incurred on the obligation payable to dissenting shareholders; and (iii) changes in the fair value of contingent consideration on the Geneva Advisors acquisition. Integration costs are comprised of direct and incremental costs incurred as part of planning for integrating 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, included as items of note beginning in the fourth quarter of 2017, include the accretion of the acquisition date fair value discount on the acquired loans of The PrivateBank, as well as the collective allowance established for new loan originations and renewals of acquired loans.
(3) Relates to collective allowance, 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 cards portfolio; and (iv) the collective allowance related to CIBC Bank USA, which are all reported in the respective SBUs.
(4) Certain information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.

Net interest income and margin

$ millions, for the year ended October 31	**2017** [1]	2016	2015
Average interest-earning assets	**$ 485,837**	$ 445,134	$ 395,616
Net interest income	**8,977**	8,366	7,915
Net interest margin on average interest-earning assets	**1.85 %**	1.88 %	2.00 %

(1) Includes the results of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.

Net interest income was up $611 million or 7% from 2016, primarily due to volume growth across Canadian personal and commercial products, and the results of CIBC Bank USA, which included $45 million of accretion of the acquisition date fair value discount on the acquired loans, of which $31 million was included as an item of note in the fourth quarter of 2017. These factors were partially offset by lower trading income and narrower Canadian personal and commercial spreads.

Net interest margin on average interest-earning assets was down three basis points due to higher average interest-earning assets, primarily driven by growth across CIBC's businesses, partially offset by lower short-term placements in treasury. The impact of higher average interest-earning assets was partially offset by higher net interest income.

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	2017	2016	2015
Underwriting and advisory fees	**$ 452**	$ 446	$ 427
Deposit and payment fees	**843**	832	830
Credit fees	**744**	638	533
Card fees	**463**	470	449
Investment management and custodial fees [1][2]	**1,034**	882	814
Mutual fund fees [2]	**1,573**	1,462	1,457
Insurance fees, net of claims	**427**	396	361
Commissions on securities transactions	**349**	342	385
Trading income (loss)	**226**	(88)	(139)
Available-for-sale (AFS) securities gains, net	**143**	73	138
Designated at fair value (FVO) gains (losses), net	**1**	17	(3)
Foreign exchange other than trading	**252**	367	92
Income from equity-accounted associates and joint ventures [1]	**101**	96	177
Other	**695**	736	420
	$ 7,303	$ 6,669	$ 5,941

(1) Custodial fees directly recognized by CIBC are included in Investment management and custodial fees, and 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).

Non-interest income was up $634 million or 10% from 2016.

Credit fees were up $106 million or 17%, primarily due to higher commercial lending volumes.

Investment management and custodial fees were up $152 million or 17%, mainly due to AUM and AUA growth in our wealth management businesses.

Mutual fund fees were up $111 million or 8%, primarily due to higher AUM in our Canadian wealth management business, driven by net sales of long-term mutual funds and market appreciation.

Trading income was $226 million, compared with a trading loss of $88 million in 2016. See the "Trading activities (TEB)" section which follows for further details.

AFS securities gains, net, were up $70 million or 96%, primarily due to higher investment portfolio gains in Capital Markets, partially offset by a gain in 2016 from the structured credit run-off business, shown as an item of note.

Foreign exchange other than trading was down $115 million or 31%, as the prior year included a portion of the gain on the sale of our minority investment in ACI, shown as an item of note, partially offset by higher revenue from hedging activity.

Other was down $41 million or 6%, as the prior year included a portion of the gain related to ACI noted above, and a gain on the sale of a processing centre, both shown as items of note. The current year included a gain on the sale and lease back of certain retail properties, shown as an item of note.

Trading activities (TEB)

$ millions, for the year ended October 31	2017	2016 [1]	2015 [1]
Trading income (loss) consists of:			
Net interest income [2]	**$ 1,143**	$ 1,482	$ 1,314
Non-interest income	**226**	(88)	(139)
	$ 1,369	$ 1,394	$ 1,175
Trading income by product line:			
Interest rates	**$ 276**	$ 293	$ 164
Foreign exchange	**524**	511	471
Equities	**401**	453	414
Commodities	**111**	106	78
Other	**57**	31	48
	$ 1,369	$ 1,394	$ 1,175

(1) Certain information has been reclassified to conform to the presentation adopted in the current year.
(2) Includes taxable equivalent basis (TEB) adjustment of $298 million (2016: $474 million; 2015: $482 million) reported within Capital Markets. See "Strategic business units overview" section for further details.

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 held-for-trading 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.

Trading income was down $25 million or 2% from 2016, primarily due to lower equity trading income, which included lower tax-exempt income in the second half of 2017, as the new rules eliminating the tax deductibility of certain dividends became fully effective (see "Taxes" section for further details), and lower interest rate trading income. The decrease was partially offset by higher trading income from U.S. real estate finance, foreign exchange, and the structured credit run-off business.

Provision for credit losses

$ millions, for the year ended October 31	**2017** [1]	2016 [2]	2015 [2]
Canadian Personal and Small Business Banking	**$ 766**	$ 736	$ 664
Canadian Commercial Banking and Wealth Management	**16**	29	5
U.S. Commercial Banking and Wealth Management	**84**	(2)	11
Capital Markets	**(4)**	155	44
Corporate and Other	**(33)**	133	47
	$ 829	$ 1,051	$ 771

(1) Includes the results of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
(2) Certain information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.

Provision for credit losses was down $222 million or 21% from 2016.

In Canadian Personal and Small Business Banking, the provision was up primarily due to higher write-offs in the card and personal lending portfolios, and higher losses in the mortgage portfolio, partially offset by lower losses in the small business lending portfolio.

In Canadian Commercial Banking and Wealth Management, the provision was down primarily due to lower losses in the commercial banking portfolio.

In U.S. Commercial Banking and Wealth Management, the current year included a provision for credit losses compared with a reversal of credit losses in 2016, primarily due to the establishment of a $48 million collective allowance for new loan originations and renewals of acquired loans relating to CIBC Bank USA, of which $35 million was shown as an item of note in the fourth quarter of 2017. In addition, the current year included losses in our pre-existing U.S. real estate finance portfolio.

In Capital Markets, the current year included a reversal of credit losses compared with a provision for credit losses in 2016, primarily due to better performance in the oil and gas sector. The prior year also included losses in our exited European leveraged finance portfolio, shown as an item of note.

In Corporate and Other, the current year included a reversal of credit losses compared with a provision for credit losses in 2016. The current year included a reduction in the collective allowance, shown as an item of note, which was net of a higher provision in the Caribbean region mainly due to the recent hurricanes. The prior year included increases in the collective allowance, shown as items of note.

Non-interest expenses

$ millions, for the year ended October 31	**2017** [1]	2016	2015
Employee compensation and benefits			
Salaries	**$ 2,738**	$ 2,741	$ 2,826
Performance-based compensation	**1,745**	1,580	1,568
Benefits	**715**	661	705
	5,198	4,982	5,099
Occupancy costs	**822**	804	782
Computer, software and office equipment	**1,630**	1,398	1,292
Communications	**317**	319	326
Advertising and business development	**282**	269	281
Professional fees	**229**	201	230
Business and capital taxes	**96**	68	68
Other	**997**	930	783
	$ 9,571	$ 8,971	$ 8,861

(1) Includes the results of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.

Non-interest expenses increased by $600 million or 7% from 2016.

Employee compensation and benefits increased by $216 million or 4%, primarily due to the inclusion of the results of CIBC Bank USA and higher performance-based compensation. The increase was partially offset by restructuring charges in 2016, primarily relating to employee severance, shown as an item of note.

Computer, software and office equipment increased by $232 million or 17%, primarily due to higher spending on strategic initiatives.

Other increased by $67 million or 7%, primarily due to fees and charges related to the launch of Simplii Financial and the related wind-down of President's Choice Financial, and transaction and integration-related costs associated with the acquisition of The PrivateBank, both shown as items of note. The increase was partially offset by lower legal provisions, shown as items of note in both years.

Taxes

$ millions, for the year ended October 31	**2017** [1]	2016	2015
Income taxes	**$ 1,162**	$ 718	$ 634
Indirect taxes [2]			
Goods and Services Tax (GST), Harmonized Sales Tax (HST) and sales taxes	**390**	361	342
Payroll taxes	**242**	239	239
Capital taxes	**61**	38	39
Property and business taxes	**72**	71	68
Total indirect taxes	**765**	709	688
Total taxes	**$ 1,927**	$ 1,427	$ 1,322
Reported effective tax rate	**19.8 %**	14.3 %	15.0 %
Total taxes as a percentage of net income before deduction of total taxes	**29.0 %**	24.9 %	26.9 %

(1) Includes the results of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
(2) 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 up $500 million from 2016.

Income tax expense was $1,162 million, compared with $718 million in 2016, largely due to substantially lower tax-exempt income and higher income in the current year. In addition, 2016 included income tax recoveries from the settlement of transfer pricing-related matters, and a change in our expected utilization of certain tax loss carryforwards, shown as items of note.

Indirect taxes were up $56 million, mainly due to higher sales taxes, and higher capital taxes due to the acquisition of The PrivateBank.

In prior years, the Canada Revenue Agency (CRA) issued reassessments disallowing the deduction of approximately $3 billion of the 2005 Enron settlement payments and related legal expenses. The matter is currently in litigation. The Tax Court of Canada trial on the deductibility of the Enron payments is expected to commence in 2018.

Should we successfully defend our tax filing position in its entirety, we would recognize an additional accounting tax benefit of $231 million and taxable refund interest of approximately $198 million. Should we fail to defend our position in its entirety, we would incur an additional tax expense of approximately $820 million and non-deductible interest of approximately $157 million.

The 2015 Canadian federal budget, released on April 21, 2015, contained new rules for "synthetic equity arrangements" which eliminated the tax deductibility of Canadian inter-corporate dividends for Canadian corporations in certain circumstances. The rules became law effective as of November 1, 2015, with a set of transition rules that applied between November 1, 2015 and April 30, 2017. The new rules have resulted in a higher effective tax rate, as the tax deductibility of certain Canadian corporate dividends is diminished.

In June 2016, the CRA reassessed CIBC approximately $118 million of additional income tax by denying the tax deductibility of certain 2011 Canadian corporate dividends on the basis that they were part of a "dividend rental arrangement". In May 2017, the CRA reassessed CIBC additional income tax of approximately $180 million related to the tax deductibility of dividends during the 2012 taxation year. The circumstances of the dividends subject to the reassessments are similar to those prospectively addressed by the rules in the 2015 Canadian federal budget. 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.

The statutory income tax rate applicable to CIBC as a legal entity was 26.5% in 2017. The rate is expected to remain the same in future years.

For a reconciliation of our income taxes in the consolidated statement of income with the combined Canadian federal and provincial income tax rate, see Note 20 to 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	**2017** [1] **vs. 2016**	2016 vs. 2015	2015 vs. 2014
Estimated increase (decrease) in:			
Total revenue	**$ (36)**	$ 117	$ 281
Provision for credit losses	**(1)**	8	7
Non-interest expenses	**(20)**	61	145
Income taxes	**(1)**	–	5
Net income	**(14)**	48	124
Impact on EPS:			
Basic	**$ (0.03)**	$ 0.12	$ 0.31
Diluted	**(0.03)**	0.12	0.31
Average USD appreciation (depreciation) relative to CAD	**(1.3) %**	5.6 %	14.7 %

(1) Includes the results of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details

Significant events

Acquisition of PrivateBancorp, Inc.

On June 23, 2017, we completed the acquisition of PrivateBancorp, Inc. (PrivateBancorp) and its subsidiary, The PrivateBank and Trust Company (The PrivateBank, subsequently rebranded as CIBC Bank USA) for total consideration of US$5.0 billion (C$6.6 billion). This acquisition expands our U.S. presence which diversifies earnings and strengthens our platform for long-term growth. The acquisition also creates a platform for CIBC to deliver high-quality middle market commercial and private banking capabilities, which advances our client-focused strategy. The results of the acquired business have been consolidated from the date of close and are included in the U.S. Commercial Banking and Wealth Management SBU. For additional information, see Note 3 to our consolidated financial statements.

Acquisition of Geneva Advisors

On August 31, 2017, we completed the acquisition of Geneva Advisors, LLC (Geneva Advisors), an independent private wealth management firm with AUM of US$8.4 billion (C$10.4 billion), for total estimated consideration of US$179 million (C$224 million). This acquisition will expand CIBC's private wealth management client base and investment management capabilities in the U.S. The results of the acquired business have been consolidated from the date of close and are included in the U.S. Commercial Banking and Wealth Management SBU. For additional information, see Note 3 to our consolidated financial statements.

Launch of Simplii Financial and wind-down of President's Choice Financial consumer banking offer

On August 16, 2017, we announced both the launch of Simplii Financial and the wind-down of our President's Choice Financial branded consumer banking offer with Loblaw Companies Limited (Loblaw). Under the terms of the wind-down agreement negotiated with Loblaw, CIBC is required to pay certain fees to Loblaw. In addition, as a result of the agreement, we incurred ancillary asset impairment and severance costs, as well as ongoing project-related costs. In aggregate, CIBC incurred fees and charges of $98 million ($71 million after-tax) in the fourth quarter of 2017.

Aeroplan developments

Air Canada announced on May 11, 2017, that it will not be renewing its exclusive Aeroplan partnership with Aimia Inc. (Aimia) upon the expiry of the contract in 2020. CIBC's Aeroplan clients are not immediately impacted by this announcement, as Aeroplan members may continue to collect miles and redeem them for Air Canada travel until Aimia's contract with Air Canada expires in 2020.

Lease of new premises

On April 12, 2017, we announced that we had entered into a lease agreement to become the anchor tenant at a new office complex in downtown Toronto. We have agreed to lease up to 1.75 million square feet of total office space in two buildings to be constructed at the site within the next six years. The aggregate future minimum lease commitments related to the lease, which begins in 2020, are $2.3 billion.

Sale and lease back of certain retail properties

During the first quarter, we sold and leased back 89 retail properties located mainly in Ontario and British Columbia, and recognized a gain of $299 million ($245 million after-tax) in our Canadian Personal and Small Business Banking SBU.

Fourth quarter review

$ millions, except per share amounts, for the three months ended				**2017**				2016
	Oct. 31	**Jul. 31**	**Apr. 30**	**Jan. 31**	Oct. 31	Jul. 31	Apr. 30	Jan. 31
Revenue (1)								
Canadian Personal and Small Business Banking	**$ 2,093**	**$ 2,039**	**$ 1,937**	**$ 2,303**	$ 2,005	$ 1,946	$ 1,879	$ 1,918
Canadian Commercial Banking and Wealth Management	**922**	**903**	**886**	**879**	846	830	800	796
U.S. Commercial Banking and Wealth Management (2)	**422**	**239**	**102**	**113**	106	93	83	103
Capital Markets (2)	**622**	**679**	**692**	**830**	626	772	719	639
Corporate and Other (2)	**210**	**244**	**81**	**84**	98	495	150	131
Total revenue	**$ 4,269**	**$ 4,104**	**$ 3,698**	**$ 4,209**	$ 3,681	$ 4,136	$ 3,631	$ 3,587
Net interest income	**$ 2,464**	**$ 2,276**	**$ 2,095**	**$ 2,142**	$ 2,110	$ 2,113	$ 2,037	$ 2,106
Non-interest income	**1,805**	**1,828**	**1,603**	**2,067**	1,571	2,023	1,594	1,481
Total revenue	**4,269**	**4,104**	**3,698**	**4,209**	3,681	4,136	3,631	3,587
Provision for credit losses	**229**	**209**	**179**	**212**	222	243	324	262
Non-interest expenses	**2,570**	**2,452**	**2,275**	**2,274**	2,347	2,218	2,242	2,164
Income before income taxes	**1,470**	**1,443**	**1,244**	**1,723**	1,112	1,675	1,065	1,161
Income taxes	**306**	**346**	**194**	**316**	181	234	124	179
Net income	**$ 1,164**	**$ 1,097**	**$ 1,050**	**$ 1,407**	$ 931	$ 1,441	$ 941	$ 982
Net income attributable to:								
Non-controlling interests	**$ 5**	**$ 4**	**$ 5**	**$ 5**	$ 4	$ 6	$ 5	$ 5
Equity shareholders	**1,159**	**1,093**	**1,045**	**1,402**	927	1,435	936	977
EPS – basic	**$ 2.60**	**$ 2.61**	**$ 2.59**	**$ 3.50**	$ 2.32	$ 3.61	$ 2.35	$ 2.44
– diluted	**$ 2.59**	**$ 2.60**	**$ 2.59**	**$ 3.50**	$ 2.32	$ 3.61	$ 2.35	$ 2.43

(1) Certain information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.
(2) Capital Markets and U.S. Commercial Banking and Wealth Management revenue and income taxes are reported on a TEB basis with an equivalent offset in the revenue and income taxes of Corporate and Other.

Compared with Q4/16

Net income for the quarter was $1,164 million, up $233 million or 25% from the fourth quarter of 2016.

Net interest income was up $354 million or 17%, primarily due to the inclusion of the results of CIBC Bank USA, which included $31 million of accretion of the acquisition date fair value discount on the acquired loans, included as an item of note, and volume growth across Canadian personal and commercial products, partially offset by lower trading income.

Non-interest income was up $234 million or 15%, primarily due to trading income compared with trading losses in the same quarter last year, higher investment management and custodial fees driven by higher average AUM and AUA, and higher credit fees and investment portfolio gains.

Provision for credit losses was up $7 million or 3% from the same quarter last year. In Canadian Personal and Small Business Banking, the provision was down due to lower bankruptcies and write-offs in the card portfolio, and lower losses in the small business banking portfolio. In Canadian Commercial Banking and Wealth Management, the provision was down primarily due to lower losses in the commercial banking portfolio. In U.S. Commercial Banking and Wealth Management, the provision was up primarily due to the inclusion of the results of CIBC Bank USA, including the establishment of a $35 million collective allowance for new loan originations and renewals of acquired loans, shown as an item of note. In Capital Markets, the provision was comparable with the same quarter last year. In Corporate and Other, the current quarter included a reversal of credit losses compared with a provision for credit losses in the same quarter last year, primarily due to a reduction in the collective allowance in the current quarter, shown as an item of note, which was net of a higher provision in the Caribbean region mainly due to the recent hurricanes.

Non-interest expenses were up $223 million or 10%, primarily due to the inclusion of the results of CIBC Bank USA. In addition, the current quarter included higher spending on strategic initiatives including fees and charges related to the launch of Simplii Financial and the related wind-down of President's Choice Financial, as well as transaction and integration-related costs associated with the acquisition of The PrivateBank, both shown as items of note. The increase was partially offset by restructuring charges in the same quarter last year, primarily relating to employee severance, shown as an item of note.

Income tax expense was up $125 million or 69%, primarily due to substantially lower tax-exempt income and higher income.

Compared with Q3/17

Net income for the quarter was up $67 million or 6% from the prior quarter.

Net interest income was up $188 million or 8%, primarily due to a full quarter of net interest income from CIBC Bank USA, and volume growth and wider spreads in Canadian Personal and Small Business Banking.

Non-interest income was down $23 million or 1%, primarily due to lower trading income, partially offset by higher investment management and custodial fees driven by higher average AUM and AUA.

Provision for credit losses was up $20 million or 10% from the prior quarter. In Canadian Personal and Small Business Banking, the provision was down mainly due to lower bankruptcies and write-offs in the card and personal lending portfolios. In Canadian Commercial Banking and Wealth Management, the current quarter included a provision for credit losses compared with a reversal of credit losses in the prior quarter, mainly due to higher losses and lower reversals in the commercial banking portfolio. In U.S. Commercial Banking and Wealth Management, the provision was up primarily due to a higher collective allowance established for new loan originations and renewals of acquired loans, and new impairments in CIBC Bank USA, partially offset by lower losses in our pre-existing U.S. real estate finance portfolio. In Capital Markets, the provision was comparable with the prior quarter. In Corporate and Other, the provision was comparable with the prior quarter, as a higher reduction in the collective allowance was offset by higher losses in CIBC FirstCaribbean.

Non-interest expenses were up $118 million or 5%, primarily due to higher spending on strategic initiatives, including the fees and charges related to the launch of Simplii Financial noted above, and a full quarter of non-interest expenses from CIBC Bank USA. The increase was partially offset by legal provisions in the prior quarter, shown as an item of note.

Income tax expense was down $40 million or 12%, primarily due to higher tax-exempt income and the impact of changes in the proportion of income subject to varying rates of tax in different jurisdictions.

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 Small Business Banking revenue has benefited from volume growth, partially offset by the continued low interest rate environment, and attrition in our exited FirstLine mortgage broker business. The first quarter of 2017 included a gain on the sale and lease back of certain retail properties.

Canadian Commercial Banking and Wealth Management has benefited from strong volume growth in deposits and loans, and continued growth in AUA and AUM as a result of market appreciation and positive net sales of long-term mutual funds. This was partially offset by a sustained low interest rate environment.

U.S. Commercial Banking and Wealth Management includes the revenue of CIBC Bank USA after the close of the acquisition on June 23, 2017.

Capital Markets revenue is influenced, to a large extent, by market conditions and activity in the equity derivatives business, which includes tax-exempt income. Tax-exempt income is substantially lower in the second half of 2017 versus prior quarters. The first quarter of 2017 included higher trading revenue, while the third quarter of 2016 included a gain from the structured credit run-off business.

Corporate and Other includes the offset related to the TEB component of tax-exempt income reported in the revenue of Capital Markets and U.S. Commercial Banking and Wealth Management. We recognized a gain, net of related transaction costs, on the sale of our minority investment in ACI in the third quarter of 2016. The second quarter of 2016 included a gain on sale of a processing centre. We ceased recognition of income from equity-accounted associates relating to ACI following the announcement of the sale in the first quarter of 2016.

Provision for credit losses

Provision for credit losses is dependent upon the credit cycle in general and on the credit performance of the loan portfolios. In Canadian Personal and Small Business Banking, losses in the card and personal lending portfolios trended higher after the first quarter of 2016. In Canadian Commercial Banking and Wealth Management, the fourth quarters of 2017 and 2016 included higher losses in the commercial banking portfolio. In U.S. Commercial Banking and Wealth Management, the second half of 2017 included the results of CIBC Bank USA after the close of the acquisition on June 23, 2017. The third quarter of 2017 included losses in our pre-existing U.S. real estate finance portfolio. In Capital Markets, losses in the oil and gas sector were elevated in the first half of 2016; however performance in this sector has improved since the fourth quarter of 2016. The third quarter of 2016 had higher losses in our exited European leveraged finance portfolio. In Corporate and Other, the final three quarters of 2017 included reductions in the collective allowance. The first two quarters of 2016 included increases in the collective allowance.

Non-interest expenses

Non-interest expenses have fluctuated over the period largely due to changes in employee-related compensation and benefits, higher spending on strategic initiatives, and movement in foreign exchange rates. The fourth quarter of 2017 included fees and charges related to the launch of Simplii Financial and the related wind-down of President's Choice Financial. Non-interest expenses increased in the second half of 2017, as the results of CIBC Bank USA were included after the close of the acquisition on June 23, 2017. The third quarter of 2017 and second quarter of 2016 included legal provisions in Corporate and Other, shown as items of note. The fourth quarter of 2016 included restructuring charges primarily relating to employee severance.

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. Income taxes increased in the second half 2017, primarily due to substantially lower tax-exempt income and the inclusion of the results of CIBC Bank USA following the close of the acquisition on June 23, 2017. The second quarter of 2016 included an income tax recovery due to the settlement of transfer pricing-related matters. The first quarter of 2016 included an income tax recovery arising from a change in our expected utilization of certain tax loss carryforwards.

Review of 2016 financial performance

$ millions, for the year ended October 31		Canadian Personal and Small 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
2016 [2]	Net interest income	$ 5,473	$ 930	$ 169	$ 1,958	$ (164)	$ 8,366
	Non-interest income	1,896	2,732	216	787	1,038	6,669
	Intersegment revenue [3]	379	(390)	–	11	–	–
	Total revenue	7,748	3,272	385	2,756	874	15,035
	Provision for (reversal of) credit losses	736	29	(2)	155	133	1,051
	Non-interest expenses	4,114	1,890	288	1,328	1,351	8,971
	Income (loss) before income taxes	2,898	1,353	99	1,273	(610)	5,013
	Income taxes	738	362	12	281	(675)	718
	Net income	$ 2,160	$ 991	$ 87	$ 992	$ 65	$ 4,295
	Net income attributable to:						
	Non-controlling interests	$ –	$ –	$ –	$ –	$ 20	$ 20
	Equity shareholders	2,160	991	87	992	45	4,275
2015 [2]	Net interest income	$ 5,160	$ 893	$ 178	$ 1,691	$ (7)	$ 7,915
	Non-interest income	1,867	2,619	261	703	491	5,941
	Intersegment revenue [3]	353	(363)	–	10	–	–
	Total revenue	7,380	3,149	439	2,404	484	13,856
	Provision for credit losses	664	5	11	44	47	771
	Non-interest expenses	3,975	1,889	294	1,264	1,439	8,861
	Income (loss) before income taxes	2,741	1,255	134	1,096	(1,002)	4,224
	Income taxes	715	334	30	249	(694)	634
	Net income (loss)	$ 2,026	$ 921	$ 104	$ 847	$ (308)	$ 3,590
	Net income (loss) attributable to:						
	Non-controlling interests	$ –	$ –	$ –	$ –	$ 14	$ 14
	Equity shareholders	2,026	921	104	847	(322)	3,576

(1) Capital Markets and U.S. Commercial Banking and Wealth Management revenue and income taxes are reported on a TEB basis with an equivalent offset in the revenue and income taxes of Corporate and Other.
(2) Certain information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.
(3) Intersegment revenue represents internal sales commissions and revenue allocations under the Manufacturer/Customer Segment/Distributor Management Model.

The following discussion provides a comparison of our results of operations for the years ended October 31, 2016 and 2015.

Overview

Net income for 2016 was $4,295 million, compared with $3,590 million in 2015. The increase in net income of $705 million was due to higher revenue, partially offset by a higher provision for credit losses and higher non-interest expenses.

Revenue by segment

Canadian Personal and Small Business Banking

Revenue was up $368 million or 5% from 2015, primarily due to volume growth and higher fees, partially offset by lower revenue from our exited FirstLine mortgage broker business. 2015 included a gain arising from accounting adjustments on credit card-related balance sheet amounts, shown as an item of note.

Canadian Commercial Banking and Wealth Management

Revenue was up $123 million or 4% from 2015. Commercial banking was up due to volume growth and higher fees, partially offset by narrower spreads. Wealth management was up due to higher average AUM, driven by net sales of long-term mutual funds and market appreciation.

U.S. Commercial Banking and Wealth Management

Revenue was down $54 million or 12% from 2015. Commercial banking was down due to lower revenue from U.S. real estate finance. Wealth management was down due to lower annual performance fees earned by CIBC Atlantic Trust.

Capital Markets

Revenue was up $352 million or 15% from 2015, primarily due to higher interest rate and foreign exchange trading revenue, higher revenue from global markets financing activity, and a gain on the sale of an AFS equity investment in our structured credit run-off business.

Corporate and Other

Revenue was up $390 million or 81% from 2015, primarily due to the gain, net of transaction costs, on the sale of our minority investment in ACI, and a gain on sale of a processing centre, both shown as items of note, partially offset by lower treasury revenue.

Consolidated CIBC

Net interest income

Net interest income was up $451 million or 6% from 2015, primarily due to volume growth across retail products, higher trading income, and higher corporate banking revenue. These factors were partially offset by lower treasury revenue, a gain arising from accounting adjustments on credit card-related balance sheet amounts in 2015, shown as an item of note, and lower revenue from our exited FirstLine mortgage broker business.

Non-interest income
Non-interest income was up $728 million or 12% from 2015, primarily due to the gain, net of transaction costs, on the sale of our minority investment in ACI, and a gain on the sale of a processing centre, both shown as items of note. 2016 also included higher credit fees, and AUM and AUA growth in our retail brokerage and CIBC Atlantic Trust businesses.

Provision for credit losses
Provision for credit losses was up $280 million or 36% from 2015. In Canadian Personal and Small Business Banking, the provision was up primarily due to higher write-offs and bankruptcies in the card and the personal lending portfolios. In Canadian Commercial Banking and Wealth Management, the provision was up due to higher losses in the commercial banking portfolio. In U.S. Commercial Banking and Wealth Management, a reversal of credit losses compared with a provision for credit losses in 2015 due to lower losses in our U.S. real estate finance portfolio. In Capital Markets, the provision was up primarily due to higher losses in the oil and gas sector and losses in our exited European leveraged finance portfolio, shown as an item of note. In Corporate and Other, the provision was up due to increases in the collective allowance, shown as items of note, partially offset by lower losses in CIBC FirstCaribbean.

Non-interest expenses
Non-interest expenses increased by $110 million or 1% from 2015, primarily due to legal provisions, shown as an item of note, and higher spending on strategic initiatives. Both years included restructuring charges primarily relating to employee severance, shown as items of note.

Income taxes
Income tax expense was $718 million, compared with $634 million in 2015, primarily due to higher income in 2016. This was partially offset by income tax recoveries from the settlement of transfer pricing-related matters, and a change in our expected utilization of certain tax loss carryforwards, primarily due to the sale of our minority investment in ACI, both shown as items of note.

Outlook for calendar year 2018
Canada's economy is likely to moderate with real gross domestic product expected to grow at a still healthy rate of roughly 2% in 2018, as it begins to feel the constraints on labour supply after reaching full employment in some provinces. The Bank of Canada could raise interest rates by a further 50 basis points over the course of the year as it seeks to contain subsequent inflation pressures. In response to higher rates and tightening mortgage regulations, housing could become a weaker source of growth. Capital spending by business could remain on a cautious path owing to uncertainties tied to NAFTA talks, while consumer spending should see a moderation in growth after a very strong run.

The U.S. has room to grow at just over 2% without inflationary concerns, with ongoing job creation and a modest pick-up in wage gains supporting a consumer-led expansion. Although core inflation is expected to start the year below the central bank's target, a very gradual increase over the course of the year should justify modest additional interest rate increases from the U.S. Federal Reserve. Should a deficit-financed tax cut bill gain approval, it would add to economic momentum, but could also lead to some additional monetary tightening.

Canadian Personal and Small Business Banking should see a moderation in consumer and mortgage lending growth reflecting interest rate increases and regulatory measures.

Growth in corporate profits should support equity-related business in Capital Markets and Canadian Commercial Banking and Wealth Management, while financing infrastructure spending should offset lower government deficits as a driver of fixed income activity. Growth in corporate bond issuance is likely to moderate after a sharp acceleration in 2017. Credit quality should remain healthy given low unemployment and stable energy prices. Business loan demand is expected to grow at a steady pace, having moderated in 2017 as companies extended term in the bond market.

In U.S. Commercial Banking and Wealth Management, commercial banking activity should benefit from the impact of further rate increases on margins, and from the financing needs associated with steady economic growth and healthy business credit quality. Wealth management could benefit as potential U.S. tax reforms and economic growth provide a greater high-net-worth savings pool. Although interest rates are moving higher, they remain low by historical standards, and should support growth in U.S. real estate finance.

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 analyzing financial 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 intangibles, 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 facilitate 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 basis, 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 basis, as applicable.

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.

Economic capital

Economic capital provides a framework to evaluate the returns of each SBU, commensurate with risk assumed. The economic capital measure is based upon an estimate of equity capital required by the businesses to absorb unexpected losses consistent with our targeted risk rating over a one-year horizon. Economic capital comprises primarily credit, market, operational and strategic risk capital. The difference between our total equity capital and economic capital is held in Corporate and Other. There is no comparable GAAP measure for economic capital.

Economic profit

Net income attributable to equity shareholders, adjusted for a charge on economic capital, determines economic profit. This measures the return generated by each SBU in excess of our cost of capital, thus enabling users of our financial information to identify relative contributions to shareholder value. Reconciliation of net income attributable to equity shareholders to economic profit is provided with segmented information.

Segmented return on equity

We use ROE on a segmented basis as one of the measures for performance evaluation and resource allocation decisions. While ROE for total CIBC provides a measure of return on common equity, ROE on a segmented basis provides a similar metric relating to the economic capital allocated to the segments. As a result, segmented ROE is a non-GAAP measure.

The following table provides a reconciliation of non-GAAP to GAAP measures related to CIBC on a consolidated basis.

$ millions, for the year ended October 31		2017 [(1)]	2016	2015	2014	2013
Reported and adjusted diluted EPS						
Reported net income attributable to common shareholders	A	**$ 4,647**	$ 4,237	$ 3,531	$ 3,131	$ 3,253
After-tax impact of items of note [(2)]		**(53)**	(191)	232	442	219
After-tax impact of items of note on non-controlling interests		**–**	–	(2)	(10)	–
Adjusted net income attributable to common shareholders [(3)]	B	**$ 4,594**	$ 4,046	$ 3,761	$ 3,563	$ 3,472
Diluted weighted-average common shares outstanding (thousands)	C	**413,563**	395,919	397,832	398,420	401,261
Reported diluted EPS ($)	A/C	**$ 11.24**	$ 10.70	$ 8.87	$ 7.86	$ 8.11
Adjusted diluted EPS ($) [(3)]	B/C	**11.11**	10.22	9.45	8.94	8.65
Reported and adjusted efficiency ratio						
Reported total revenue	D	**$ 16,280**	$ 15,035	$ 13,856	$ 13,363	$ 12,705
Pre-tax impact of items of note [(2)]		**(305)**	(505)	(40)	(276)	(30)
TEB		**300**	474	482	421	357
Adjusted total revenue [(3)]	E	**$ 16,275**	$ 15,004	$ 14,298	$ 13,508	$ 13,032
Reported non-interest expenses	F	**$ 9,571**	$ 8,971	$ 8,861	$ 8,512	$ 7,608
Pre-tax impact of items of note [(2)]		**(259)**	(262)	(338)	(539)	(249)
Adjusted non-interest expenses [(3)]	G	**$ 9,312**	$ 8,709	$ 8,523	$ 7,973	$ 7,359
Reported efficiency ratio	F/D	**58.8 %**	59.7 %	63.9 %	63.7 %	59.9 %
Adjusted efficiency ratio [(3)]	G/E	**57.2 %**	58.0 %	59.6 %	59.0 %	56.5 %
Reported and adjusted dividend payout ratio						
Dividends paid to common shareholders	H	**$ 2,121**	$ 1,879	$ 1,708	$ 1,567	$ 1,523
Reported dividend payout ratio	H/A	**45.6 %**	44.3 %	48.4 %	50.0 %	46.8 %
Adjusted dividend payout ratio [(3)]	H/B	**46.2 %**	46.4 %	45.4 %	44.0 %	43.9 %
Reported and adjusted return on common shareholders' equity						
Average common shareholders' equity	I	**$ 25,393**	$ 21,275	$ 18,857	$ 17,067	$ 15,167
Reported return on common shareholders' equity	A/I	**18.3 %**	19.9 %	18.7 %	18.3 %	21.4 %
Adjusted return on common shareholders' equity [(3)]	B/I	**18.1 %**	19.0 %	19.9 %	20.9 %	22.9 %
Reported and adjusted effective tax rate						
Reported income before income taxes	J	**$ 5,880**	$ 5,013	$ 4,224	$ 3,914	$ 3,976
Pre-tax impact of items of note [(2)]		**(29)**	(94)	298	408	298
Adjusted income before income taxes [(3)]	K	**$ 5,851**	$ 4,919	$ 4,522	$ 4,322	$ 4,274
Reported income taxes	L	**$ 1,162**	$ 718	$ 634	$ 699	$ 626
Tax impact of items of note [(2)]		**24**	97	66	(34)	79
Adjusted income taxes [(3)]	M	**$ 1,186**	$ 815	$ 700	$ 665	$ 705
Reported effective tax rate	L/J	**19.8 %**	14.3 %	15.0 %	17.9 %	15.8 %
Adjusted effective tax rate [(3)]	M/K	**20.3 %**	16.6 %	15.5 %	15.4 %	16.5 %

$ millions, for the year ended October 31		Canadian Personal and Small Business Banking	Canadian Commercial Banking and Wealth Management	U.S. Commercial Banking and Wealth Management [(1)]	Capital Markets	Corporate and Other	CIBC Total
2017	**Reported net income (loss)**	**$ 2,420**	**$ 1,138**	**$ 203**	**$ 1,090**	**$ (133)**	**$ 4,718**
	After-tax impact of items of note [(2)]	**(170)**	**1**	**19**	**–**	**97**	**(53)**
	Adjusted net income (loss) [(3)]	**$ 2,250**	**$ 1,139**	**$ 222**	**$ 1,090**	**$ (36)**	**$ 4,665**
2016 [(4)]	Reported net income (loss)	$ 2,160	$ 991	$ 87	$ 992	$ 65	$ 4,295
	After-tax impact of items of note [(2)]	(25)	2	6	28	(202)	(191)
	Adjusted net income (loss) [(3)]	$ 2,135	$ 993	$ 93	$ 1,020	$ (137)	$ 4,104
2015 [(4)]	Reported net income (loss)	$ 2,026	$ 921	$ 104	$ 847	$ (308)	$ 3,590
	After-tax impact of items of note [(2)]	(28)	2	7	8	243	232
	Adjusted net income (loss) [(3)]	$ 1,998	$ 923	$ 111	$ 855	$ (65)	$ 3,822
2014	Reported net income (loss)	$ 2,459	$ 470	n/a	$ 869	$ (583)	$ 3,215
	After-tax impact of items of note [(2)]	(64)	15	n/a	18	473	442
	Adjusted net income (loss) [(3)]	$ 2,395	$ 485	n/a	$ 887	$ (110)	$ 3,657
2013	Reported net income (loss)	$ 2,377	$ 385	n/a	$ 699	$ (111)	$ 3,350
	After-tax impact of items of note [(2)]	38	4	n/a	118	59	219
	Adjusted net income (loss) [(3)]	$ 2,415	$ 389	n/a	$ 817	$ (52)	$ 3,569

(1) Includes the results of CIBC Bank USA following the completion of the acquisition on June 23, 2017. The results of CIBC Bank USA are included in the U.S. Commercial Banking and Wealth Management SBU. See "Significant events" for additional details.
(2) Reflects impact of items of note under "2017 Financial results" section and below.
(3) Non-GAAP measure.
(4) Certain information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.
n/a Not available.

Impact of items of note in prior years

2015

Net income was affected by the following items of note:

- $296 million ($225 million after-tax) in cumulative restructuring charges primarily relating to employee severance (Corporate and Other);
- $46 million ($34 million after-tax) gain arising from accounting adjustments on credit card-related balance sheet amounts (Canadian Personal and Small Business Banking);
- $42 million ($33 million after-tax) amortization of intangible assets ($6 million after-tax in Canadian Personal and Small Business Banking, $2 million after-tax in Canadian Commercial Banking and Wealth Management, $7 million after-tax in U.S. Commercial Banking and Wealth Management, and $18 million after-tax in Corporate and Other)[1];
- $29 million ($21 million after-tax) loss from the structured credit run-off business (Capital Markets); and
- $23 million ($13 million after-tax) gain on sale of an investment in our merchant banking portfolio (Capital Markets).

The above items of note increased revenue by $40 million and non-interest expenses by $338 million, and decreased income taxes by $66 million. In aggregate, these items of note decreased net income by $232 million.

2014

Net income was affected by the following items of note:

- $543 million ($543 million after-tax) of charges relating to CIBC FirstCaribbean, comprising a goodwill impairment charge of $420 million ($420 million after-tax) and loan losses of $123 million ($123 million after-tax), reflecting revised expectations on the extent and timing of the anticipated economic recovery in the Caribbean region (Corporate and Other);
- $190 million ($147 million after-tax) gain in respect of the Aeroplan transactions with Aimia and TD, net of costs relating to the development of our enhanced travel rewards program ($87 million after-tax in Canadian Personal and Small Business Banking, and $60 million after-tax in Corporate and Other);
- $112 million ($82 million after-tax) charge relating to the incorporation of FVA into the valuation of our uncollateralized derivatives (Capital Markets);
- $78 million ($57 million after-tax) gain, net of associated expenses, on the sale of an equity investment in our exited European leveraged finance portfolio (Capital Markets);
- $52 million ($30 million after-tax) gain within an equity-accounted investment in our merchant banking portfolio (Capital Markets);
- $36 million ($28 million after-tax) amortization of intangible assets ($4 million after-tax in Canadian Personal and Small Business Banking, $15 million after-tax in Canadian Commercial Banking and Wealth Management, and $9 million after-tax in Corporate and Other);
- $26 million ($19 million after-tax) reduction in the portion of the collective allowance recognized in Corporate and Other[2], including lower estimated credit losses relating to the Alberta floods (Corporate and Other);
- $26 million ($19 million after-tax) charge resulting from operational changes in the processing of write-offs in Canadian Personal and Small Business Banking;
- $22 million ($12 million after-tax) loan losses in our exited U.S. leveraged finance portfolio (Capital Markets); and
- $15 million ($11 million after-tax) loss from the structured credit run-off business (Capital Markets).

The above items of note increased revenue by $276 million, provision for credit losses by $145 million, non-interest expenses by $539 million, and income taxes by $34 million. In aggregate, these items of note decreased net income by $442 million.

2013

Net income was affected by the following items of note:

- $114 million ($84 million after-tax) loss from the structured credit run-off business, including the charge in respect of a settlement of the U.S. Bankruptcy Court adversary proceeding brought by the Estate of Lehman Brothers Holdings, Inc. (Capital Markets);
- $39 million ($37 million after-tax) restructuring charge relating to CIBC FirstCaribbean (Corporate and Other);
- $38 million ($28 million after-tax) increase in the portion of the collective allowance recognized in Corporate and Other[2], including $56 million of estimated credit losses relating to the Alberta floods;
- $35 million ($19 million after-tax) impairment of an equity position associated with our exited U.S. leveraged finance portfolio (Capital Markets);
- $24 million ($18 million after-tax) costs relating to the development of our enhanced travel rewards program and to the Aeroplan transactions with Aimia and TD (Canadian Personal and Small Business Banking);
- $23 million ($19 million after-tax) amortization of intangible assets[3] ($5 million after-tax in Canadian Personal and Small Business Banking, $4 million after-tax in Canadian Commercial Banking and Wealth Management, and $10 million after-tax in Corporate and Other);
- $21 million ($15 million after-tax) loan losses in our exited European leveraged finance portfolio (Capital Markets);
- $20 million ($15 million after-tax) charge resulting from a revision of estimated loss parameters on our unsecured lending portfolios (Canadian Personal and Small Business Banking); and
- $16 million ($16 million after-tax) gain, net of associated expenses, on the sale of our Hong Kong and Singapore-based private wealth management business (Corporate and Other).

The above items of note increased revenue by $30 million, provision for credit losses by $79 million and non-interest expenses by $249 million, and decreased income taxes by $79 million. In aggregate, these items of note decreased net income by $219 million.

(1) Certain information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.
(2) Relates to collective allowance, except for: (i) residential mortgages greater than 90 days delinquent; (ii) personal loans and scored small business loans greater than 30 days delinquent; and (iii) net write-offs for the cards portfolio, which are all reported in the respective SBUs.
(3) Beginning in the fourth quarter of 2013, also includes amortization of intangible assets for equity-accounted associates.

Strategic business units overview

CIBC has four SBUs – Canadian Personal and Small 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 – Administration, Client Connectivity and Innovation, Finance, Human Resources and Communications, Internal Audit, Risk Management, and Technology and Operations, 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 functional and support costs of CIBC Bank USA are recognized directly in the expenses of U.S. Commercial Banking and Wealth Management. 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 2017, affecting the results of our SBUs. See "External reporting changes" for additional details.

Business unit allocations

Treasury activities impact the reported 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. Once the interest and liquidity risk inherent in our client-driven assets and liabilities is transfer priced into Treasury, it is 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 economic costs with the underlying benefits and risks associated with SBU activities. Earnings on unattributed capital remain in Corporate and Other. We review our transfer pricing methodologies on an ongoing basis to ensure they reflect changing market environments and industry practices.

Revenue, expenses, and other balance sheet resources related to certain activities are fully allocated to the lines of business within the SBUs.

To measure and report the results of operations of the lines of business within our Canadian Personal and Small Business Banking and Canadian Commercial Banking and Wealth Management SBUs, we use a Manufacturer/Customer Segment/Distributor Management Model. The model uses certain estimates and allocation methodologies to process internal payments between lines of business for sales, renewals and trailer commissions to facilitate preparation of segmented financial information. Periodically, the sales, renewals and trailer commission rates paid to customer segments for certain products/services are revised and applied prospectively.

Non-interest expenses are attributed to the SBUs to which they relate based on appropriate criteria.

The individual allowances and related provisions are reported in the respective SBUs. The collective allowances and related provisions are reported in Corporate and Other except for: (i) residential mortgages greater than 90 days delinquent; (ii) personal loans and scored small business loans greater than 30 days delinquent; and (iii) net write-offs for the card portfolio, which are all reported in the respective SBUs. All allowances and related provisions for CIBC FirstCaribbean are reported in Corporate and Other. All allowances and related provisions for CIBC Bank USA are reported in U.S. Commercial Banking and Wealth Management.

Revenue, taxable equivalent basis

The SBUs evaluate revenue on a TEB basis. In order to arrive at the TEB amount, the SBUs gross up tax-exempt revenue on certain securities to a TEB basis, 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 Small Business Banking

Canadian Personal and Small Business Banking provides personal and small business clients across Canada with financial advice, products and services through a team of advisors in our banking centres, as well as through our direct, mobile and remote channels.

Our business strategy

In 2017 we focused on building a strong, innovative, relationship-oriented bank. To accelerate our transformation and deliver on our objective to be the best retail and small business bank in Canada, we maintained two strategic priorities:

- Enhancing the client experience by making it easier for our clients to bank when, where, and how they want.
- Profitable revenue growth achieved by helping our clients through deeper relationships and advice.

2017 progress

In 2017, we made good progress on our strategy.

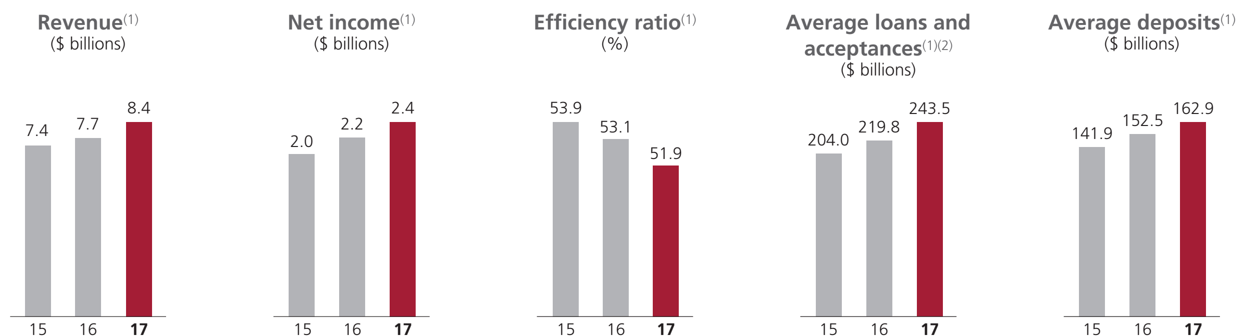
Enhancing the client experience

- Completed our 100th banking centre transformation in the third quarter. These transformed centres increase our focus on advice and client conversations, while adding iPads, Wi-Fi, and enhanced ATMs to help clients leverage digital channels for routine transactions.
- Earned the top score among the five largest Canadian banks for mobile banking for the fourth year in a row, and online banking functionality for the third consecutive year in Forrester Research's Mobile Banking and Online Banking benchmark studies.
- Announced Simplii Financial, our new direct banking brand, to meet the needs of Canadians who value straightforward, no-fee daily banking.
- We were the first Canadian financial institution to offer all three leading mobile wallets to our clients.
- We were the first major Canadian bank to introduce free mobile credit scores for clients.

Accelerating profitable revenue growth

- Continued to invest in advice roles within our banking centres, while leveraging digital channels to facilitate more day-to-day banking transactions from clients across our network.
- We expanded the Mobile Investment Consultant channel from 50 to nearly 300 team members, delivering personal advice to clients at a time and place of their choosing.
- Launched Digital Cart, allowing clients to sign up for multiple banking products entirely through their mobile devices or online – a first in the mobile space in Canada.
- Launched the Business Plus Credit Cards, offering CIBC branded business credit cards that are underwritten based on business credit rather than personal credit.

2017 financial review



(1) Certain prior period information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.
(2) Total average loans and acceptances includes FirstLine mortgages.

Our focus for 2018

Entering a new fiscal year, we are refreshing our strategy to build on our momentum with clients and sharpen our focus on meeting client needs in key growth markets. Our priorities in 2018 are to:

- Make it easy to bank with us.
- Win the relationship, emphasizing financial planning and advice to earn primary banking relationships particularly among affluent clients and business owners.
- Deliver market leading solutions through a product lineup that meets our clients' needs.

Results[1]

$ millions, for the year ended October 31	2017	2016 [2]	2015 [2]
Revenue			
Personal and small business banking	**$ 8,033**	$ 7,675	$ 7,286
Other	**339**	73	94
Total revenue	**8,372**	7,748	7,380
Provision for credit losses	**766**	736	664
Non-interest expenses	**4,348**	4,114	3,975
Income before income taxes	**3,258**	2,898	2,741
Income taxes	**838**	738	715
Net income	**$ 2,420**	$ 2,160	$ 2,026
Net income attributable to:			
Equity shareholders (a)	**$ 2,420**	$ 2,160	$ 2,026
Efficiency ratio	**51.9 %**	53.1 %	53.9 %
Return on equity [3]	**64.3 %**	58.7 %	63.2 %
Charge for economic capital [3] (b)	**$ (367)**	$ (359)	$ (385)
Economic profit [3] (a+b)	**$ 2,053**	$ 1,801	$ 1,641
Average assets ($ billions)	**$ 246.3**	$ 222.6	$ 206.4
Average loans and acceptances ($ billions)	**$ 243.5**	$ 219.8	$ 204.0
Average deposits ($ billions)	**$ 162.9**	$ 152.5	$ 141.9
Full-time equivalent employees	**14,709**	15,501	16,582

(1) For additional segmented information, see Note 28 to the consolidated financial statements.
(2) Certain information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.
(3) For additional information, see the "Non-GAAP measures" section.

Financial overview

Net income was up $260 million or 12% from 2016, primarily due to higher revenue, partially offset by higher non-interest expenses and a higher provision for credit losses. Revenue in the current year included a gain on the sale and lease back of certain retail properties, shown as an item of note.

Revenue

Revenue was up $624 million or 8% from 2016.

Personal and small business banking revenue was up $358 million or 5%, primarily due to volume growth and higher fees, partially offset by narrower spreads.

Other revenue was up $266 million, primarily due to the gain noted above, partially offset by lower revenue from our exited FirstLine mortgage broker business.

Provision for credit losses

Provision for credit losses was up $30 million or 4% from 2016, primarily due to higher write-offs in the card and personal lending portfolios, and higher losses in the mortgage portfolio, partially offset by lower losses in the small business lending portfolio.

Non-interest expenses

Non-interest expenses were up $234 million or 6% from 2016, primarily due to fees and charges related to the launch of Simplii Financial and the related wind-down of President's Choice Financial, shown as an item of note, and higher spending on other strategic initiatives that have accelerated our transformation into a modern, convenient and relationship-focused bank.

Income taxes

Income taxes were up $100 million or 14% from 2016, primarily due to higher income, partially offset by the impact of a lower effective tax rate on the gain noted above. The prior year included an income tax recovery from the settlement of transfer pricing-related matters, shown as an item of note.

Average assets

Average assets were up $23.7 billion or 11% from 2016 due to growth across all products.

Canadian Commercial Banking and Wealth Management

Canadian Commercial Banking and Wealth Management provides high-touch, relationship-oriented commercial and private banking, as well as wealth management services to meet the needs of middle-market companies, entrepreneurs, high-net-worth individuals and families, along with institutional clients across Canada.

Our business strategy

Our goal is to be the leading relationship bank in Canada for our commercial and wealth clients by delivering best-in-class advisory capabilities, value, and long-term growth.

2017 progress

The commercial banking and wealth management lines of business were brought together into a single SBU in the fourth quarter of 2017. During the year, each business made progress in driving growth through client focus.

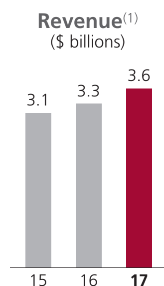
In commercial banking:

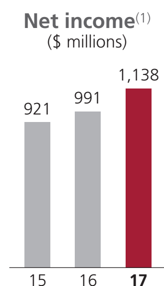
- Continued to focus on relationship-based growth by increasing the number of client-facing relationship managers across the team to meet client needs.
- Met more of our clients' needs on both sides of the border with the ability to make and receive cross-border client referrals in partnership with our commercial banking colleagues in the U.S.
- Introduced the new CIBC Integrated Payments service that enables businesses to streamline their local or global treasury and accounting operations.

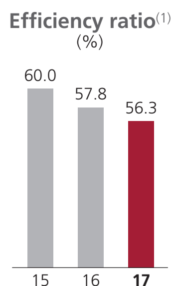
In wealth management:

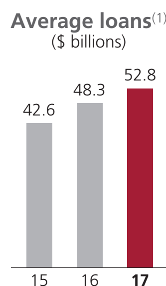
- Co-located private banking teams with CIBC Wood Gundy teams in select locations across the country to deliver a more integrated offer for high-net-worth clients.
- Introduced a suite of new, lower-cost CIBC Passive Portfolios to improve value and accessibility for Canadian investors.
- Enhanced our investment lineup including management fee reductions, lower investment minimums and a simplified product offering.
- Launched the CIBC Active Global Currency Pool for institutional investors, leveraging our 20-year track record of managing active currency strategies.

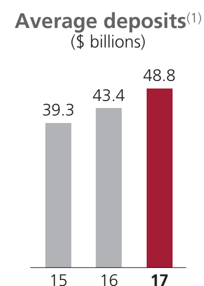
2017 financial review





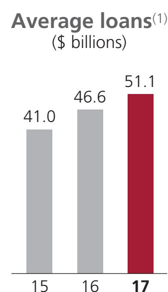


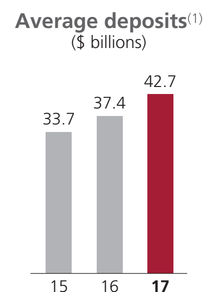




Commercial banking

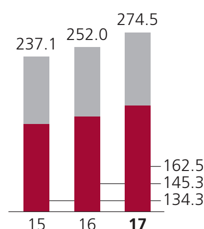
- 10% growth in lending
- 14% growth in deposits

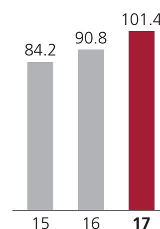




Wealth management

- 12% growth in AUM
- 9% growth in AUA
- Achieved strong net flows in our mutual funds and Canadian private wealth management business





(1) Certain prior period information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.
(2) AUM amounts are included in the amounts reported under AUA.

Our focus for 2018

To build on our momentum across this newly created SBU, we will continue to focus on client relationships by:

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

Results(1)

$ millions, for the year ended October 31		2017		2016 (2)		2015 (2)
Revenue						
Commercial banking	$	**1,324**	$	1,211	$	1,119
Wealth management		**2,266**		2,061		2,030
Total revenue		**3,590**		3,272		3,149
Provision for credit losses		**16**		29		5
Non-interest expenses		**2,021**		1,890		1,889
Income before income taxes		**1,553**		1,353		1,255
Income taxes		**415**		362		334
Net income	$	**1,138**	$	991	$	921
Net income attributable to:						
Non-controlling interests	$	**–**	$	–	$	–
Equity shareholders (a)		**1,138**		991		921
Efficiency ratio		**56.3 %**		57.8 %		60.0 %
Return on equity (3)		**37.6 %**		34.5 %		36.5 %
Charge for economic capital (3) (b)	$	**(295)**	$	(279)	$	(303)
Economic profit (3) (a+b)	$	**843**	$	712	$	618
Average assets ($ billions)	$	**50.8**	$	46.6	$	40.6
Average loans ($ billions)	$	**52.8**	$	48.3	$	42.6
Average deposits ($ billions)	$	**48.8**	$	43.4	$	39.3
AUA ($ billions)	$	**274.5**	$	252.0	$	237.1
AUM ($ billions)	$	**162.5**	$	145.3	$	134.3
Full-time equivalent employees		**5,081**		4,986		5,024

(1) For additional segmented information, see Note 28 to the consolidated financial statements.
(2) Certain information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.
(3) For additional information, see the "Non-GAAP measures" section.

Financial overview

Net income was up $147 million or 15% from 2016, primarily due to higher revenue, partially offset by higher non-interest expenses.

Revenue

Revenue was up $318 million or 10% from 2016.

Commercial banking revenue was up $113 million or 9%, primarily due to volume growth and higher fees, partially offset by narrower spreads.

Wealth management revenue was up $205 million or 10%, mainly due to higher investment management and custodial fees, and mutual fund fees from higher average AUM and AUA.

Provision for credit losses

Provision for credit losses was down $13 million or 45% from 2016, primarily due to lower losses in the commercial banking portfolio.

Non-interest expenses

Non-interest expenses were up $131 million or 7% from 2016, primarily due to higher performance-based and employee-related compensation.

Income taxes

Income taxes were up $53 million or 15% from 2016, primarily due to higher income.

Assets under administration

AUA were up $22.5 billion or 9% from 2016, due to market appreciation and strong net sales. AUM amounts are included in the amounts reported under AUA.

Average assets

Average assets were up $4.2 billion or 9% from 2016, primarily due to growth in commercial loans.

U.S. Commercial Banking and Wealth Management

U.S. Commercial Banking and Wealth Management provides high-touch, relationship-oriented commercial, personal and small business banking, as well as wealth management services to meet the needs of middle-market companies, executives, entrepreneurs, high-net-worth individuals and families in the markets we serve in the U.S.

On June 23, 2017, we completed the acquisition of PrivateBancorp and its subsidiary The PrivateBank, subsequently rebranded as CIBC Bank USA. The results of CIBC Bank USA are included in this SBU from the date of acquisition (131 days in 2017). See "Significant events" for additional details.

Our business strategy

Our goal is to build the go-to commercial and wealth management bank for our chosen client segments and markets with a focus on developing deep, profitable relationships leveraging the full complement of CIBC's products and services across our North American platform.

2017 progress

In 2017, we made good progress on our strategy.

Add high-quality U.S. banking and private wealth capabilities	Build client relationships and drive profitable growth	Optimize our business platform
• Acquired The PrivateBank, a Chicago-based commercial bank with personal banking and wealth management capabilities that shares our client-first culture and strategy. The acquisition expanded our U.S. presence, provided enhanced growth opportunities, and is a pivotal milestone as we build a strong cross-border platform. • Expanded our private wealth management client base and investment management capabilities through the acquisition of Geneva Advisors, an independent private wealth management firm headquartered in Chicago and focused on high-net-worth clients.	• Achieved solid loan, deposit, and revenue growth, reflecting the acquisition of The PrivateBank and the continued focus on building full, profitable client relationships. • Generated strong growth in AUM and AUA, reflecting acquisitions and continued client development efforts. • Received first-time deposit ratings from Moody's Investors Service, Inc. (Moody's) and Fitch Ratings, Inc. (Fitch), expanding our capabilities to serve new and existing commercial clients.	• Extended the CIBC brand across North America, as The PrivateBank took the CIBC name and began operating as CIBC Bank USA. • Expanded investment management offering to Geneva Advisors and CIBC Bank USA clients through CIBC Atlantic Trust's platform and product strategies. • Leveraged CIBC's banking platform to provide CIBC Atlantic Trust and Geneva Advisors' clients with access to a full complement of private banking solutions.

2017 financial review

Commercial banking

- Strong loan and deposit growth reflecting our continued focus on building client relationships
- Asset quality remained strong, with nonperforming assets representing 0.6% of total assets at year end

Wealth management

- 29% growth in AUM and 27% growth in AUA during the fourth quarter, largely due to the acquisition of Geneva Advisors
- CIBC Atlantic Trust was recognized with two Private Asset Management awards for our industry-leading performance

Our focus for 2018

We are building a relationship-focused bank. To build on our momentum across this newly created SBU, we will continue to align our focus in 2018 to CIBC's overall strategy and priorities. We will do this by:

- Continuing to successfully execute our integration, working as one coordinated team.
- Remaining focused on maintaining and developing profitable client relationships, leveraging our combined strengths, resources, and expanded capabilities to accelerate organic growth in the U.S.
- Improving operating leverage in our U.S. businesses by leveraging the best innovative practices.

Results[1]

$ millions, for the year ended October 31	2017	2016 [2]	2015 [2]
Revenue			
Commercial banking	**$ 523**	$ 166	$ 212
Wealth management	**318**	217	226
Other	**35**	2	1
Total revenue [3]	**876**	385	439
Provision for (reversal of) credit losses	**84**	(2)	11
Non-interest expenses	**534**	288	294
Income before income taxes	**258**	99	134
Income taxes [3]	**55**	12	30
Net income	**$ 203**	$ 87	$ 104
Net income attributable to:			
Equity shareholders (a)	**$ 203**	$ 87	$ 104
Efficiency ratio	**61.0 %**	74.8 %	67.0 %
Return on equity [4]	**7.5 %**	17.6 %	20.7 %
Charge for economic capital [4] (b)	**$ (256)**	$ (48)	$ (60)
Economic profit [4] (a+b)	**$ (53)**	$ 39	$ 44
Average assets ($ billions)	**$ 19.9**	$ 8.4	$ 7.6
Average loans ($ billions)	**$ 15.9**	$ 8.0	$ 7.2
Average deposits ($ billions)	**$ 7.6**	$ 0.1	$ 0.1
AUA ($ billions)	**$ 74.0**	$ 44.1	$ 41.3
AUM ($ billions)	**$ 58.7**	$ 38.0	$ 35.6
Full-time equivalent employees	**1,753**	310	308

(1) For additional segmented information, see Note 28 to the consolidated financial statements.
(2) Certain information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.
(3) Revenue and income taxes are reported on a TEB basis. Accordingly, revenue and income taxes include a TEB adjustment of $2 million (2016: nil; 2015: nil). 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 $116 million or 133% from 2016. CIBC Bank USA contributed $96 million to net income during the year.

Revenue

Revenue was up $491 million or 128% from 2016. CIBC Bank USA contributed $448 million to revenue during the year.

Commercial banking revenue was up $357 million or 215%, primarily due to the inclusion of the results of CIBC Bank USA, and higher revenue in U.S. real estate finance. In addition, the current year included accretion of the acquisition date fair value discount on the acquired loans of The PrivateBank[1].

Wealth management revenue was up $101 million or 47%, primarily due to the inclusion of the results of CIBC Bank USA, and growth in average AUM mainly due to the acquisition of Geneva Advisors. In addition, the current year included accretion of the acquisition date fair value discount on the acquired loans of The PrivateBank[1].

Other revenue primarily includes the Treasury activities of CIBC Bank USA.

Provision for credit losses

Provision for credit losses was $84 million, compared with a reversal of credit losses of $2 million in 2016. The increase was primarily due to the establishment of a $48 million collective allowance for new loan originations and renewals of acquired loans relating to CIBC Bank USA, of which $35 million was shown as an item of note in the fourth quarter of 2017. In addition, the current year included losses in our pre-existing U.S. real estate finance portfolio.

Non-interest expenses

Non-interest expenses were up $246 million or 85% from 2016, primarily due to the inclusion of the results of CIBC Bank USA of $244 million, which included compensation expenses of $40 million related to the retention of key employees.

Income taxes

Income taxes were up $43 million or 358% from 2016, primarily due to higher income from the inclusion of the results of CIBC Bank USA.

Average assets

Average assets were up $11.5 billion or 137% from 2016 due to the inclusion of the balances of CIBC Bank USA.

Assets under administration

AUA were up $29.9 billion or 68% from 2016 due to the inclusion of the balances of CIBC Bank USA and Geneva Advisors.

[1] 2017 included $45 million of accretion of the acquisition date fair value discount on the acquired loans of The PrivateBank, of which $31 million was included as an item of note in the fourth quarter of 2017.

Capital Markets

Capital Markets provides integrated global markets products and services, investment banking advisory and execution, corporate banking and top-ranked research to corporate, government and institutional clients around the world.

Our business strategy

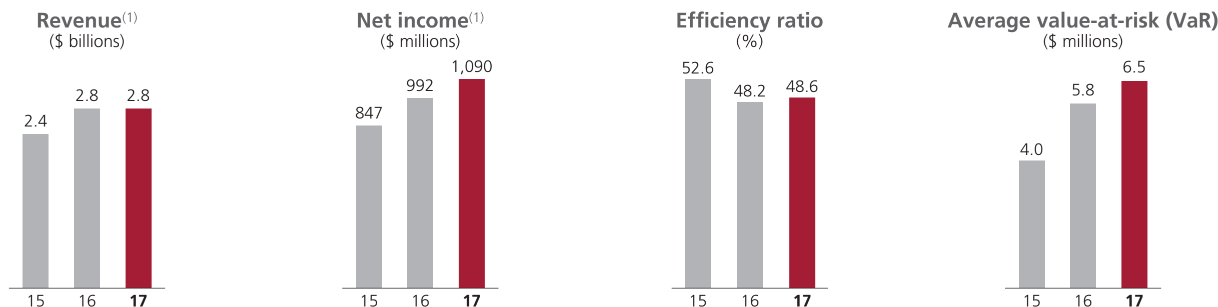
Our goal is to be the leading capital markets franchise for our core clients in Canada and the lead relationship bank for our core clients globally by delivering best-in-class insight, advice and execution. To enable CIBC's strategy and priorities, we collaborated with our partners across our bank to deepen and enhance client relationships.

2017 progress

We made good progress in 2017 on our strategy.

Continue to strengthen our platform in Canada for our clients	Build a North American client platform and expand coverage in key sectors globally	Deliver innovation to clients across CIBC
• Continued to hold leadership positions in syndicated loans, debt and equity underwriting, advisory services, equity trading, commodities and foreign exchange. • Supported our clients by investing in our talent, further developing our proprietary technology, expanding our structuring expertise and advice and leveraging our market expertise. • 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.	• Continued the organic expansion of our platform and capabilities in the U.S. by employing our client-led strategy. • Continued to leverage our strengths and added talent to complement our investments and infrastructure in the U.S. • Helped our clients navigate market movements and volatility through proactive advice and trading solutions.	• Strengthened our no-fee CIBC Global Money Transfer service by increasing the number of countries to which clients can send money. • Introduced *International Student Pay*, a first-of-its-kind partnership in Canada with academic institutions to enable students to make tuition payments in their local currency. • Expanded our Technology & Innovation team to provide specialized insight and advice, and collaborated with our banking partners to further our bank's strategic innovation agenda.

2017 financial review



(1) Certain prior period information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.

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

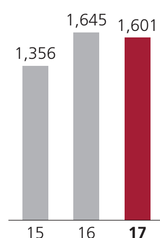
- Exclusive financial advisor to Pembina Pipeline Corp. on its $9.7 billion acquisition of Veresen Inc.;
- Joint bookrunner on a $1.4 billion issue of convertible unsecured subordinated debentures represented by installment receipts for Hydro One Ltd. in support of the acquisition of Avista Corporation, joint global coordinator and joint bookrunner on a $2.8 billion bought secondary offering of Hydro One Ltd. common shares by the Province of Ontario and joint bookrunner for a $950 million dual-tranche offering of medium-term notes;
- Financial Advisor to Metro Inc. in its $4.5 billion acquisition of The Jean Coutu Group (PJC) Inc. and joint bookrunner and co-lead arranger on the establishment of $3.45 billion in new facilities to support the acquisition; in addition, co-Manager on Metro's sale of $650 million subordinate voting shares of Couche-Tard by way of a block trade bought deal;
- Joint bookrunner on Kinder Morgan Canada Ltd.'s $1.75 billion initial public offering and joint bookrunner and co-lead arranger for the $5.5 billion in credit facilities to fund TMEP as well as joint bookrunner on a $300 million issue of preferred shares;
- Lead underwriter and joint bookrunner on a $1.4 billion 4-tranche issue of senior secured nominal amortizing bonds for Alberta PowerLine LP;
- Exclusive financial advisor to Teck Resources Limited on its $1.2 billion sale of the Waneta Dam;
- Financial advisor to Sentry Investments on its $780 million sale to CI Financial;
- Exclusive financial advisor to Barrick Gold on its US$960 million sale of a 50% interest in the Veladero Mine in Argentina to Shandong Gold Mining Co., Ltd.;
- Lead manager and joint bookrunner on a $414 million bought deal offering of subscription receipts and on a $300 million offering of preferred shares, and joint lead and joint bookrunner on a $425 million issue of unsecured medium term notes for Intact Financial Corporation in support of its acquisition of OneBeacon Insurance Group, Ltd for US$1.7 billion; and

- Lead bookrunner on Canada Goose Holdings Inc.'s $391 million dual-listed initial public offering on the TSX and NYSE and its follow-on US$259 million secondary offering of subordinate voting shares, as well as joint lead on its US$163 million Term Loan B offering, and agent and joint lead arranger on its $250 million asset-backed loan facility.

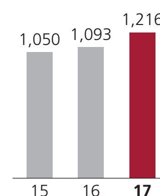
Capital Markets awards and recognition

- Canada Derivatives House Of The Year – 2017 *GlobalCapital Americas Derivatives Awards*
- 2017 Canadian Hedge Fund Award for Top Canadian Prime Broker – *Alternative IQ*
- Multi-deal winner at the 2017 *IJGlobal Americas Deals of the Year Awards*:
  - Project Financing, Americas – Kingston Jamaica Port Terminal
  - Refinancing, Americas – Sabine Pass & Creole Trail Refinancing
  - Acquisition Financing, Americas – Chicago Skyway
  - Acquisition Financing, Europe – London City Airport
  - Acquisition Financing, Asia Pacific – Port of Melbourne
  - Project Financing, Africa – Oyu Tolgoi Copper Project, Mongolia
- Ranked #1 for number of deals led in Canadian Loan Syndication *Thomson Reuters and Bloomberg Lead Arranger League Tables*, January-September 2017

Revenue – Global markets(1)
($ millions)



Revenue – Corporate and investment banking(1)
($ millions)



(1) Certain prior period information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.

Our focus for 2018

To support our bank's long-term objectives, Capital Markets remains focused on driving client-focused growth, and collaborating with our partners across our bank to deepen and enhance client relationships. We will continue to do this by:

- Strengthening our leadership positions in Canada.
- Building a North American client platform and aligning our global capabilities.
- Delivering innovative solutions to profitably grow and protect our businesses.

Results(1)

$ millions, for the year ended October 31	**2017**	2016 (2)	2015 (2)
Revenue			
Global markets	**$ 1,601**	$ 1,645	$ 1,356
Corporate and investment banking	**1,216**	1,093	1,050
Other	**6**	18	(2)
Total revenue (3)	**2,823**	2,756	2,404
Provision for (reversal of) credit losses	**(4)**	155	44
Non-interest expenses	**1,373**	1,328	1,264
Income before income taxes	**1,454**	1,273	1,096
Income taxes (3)	**364**	281	249
Net income	**$ 1,090**	$ 992	$ 847
Net income attributable to:			
Equity shareholders (a)	**$ 1,090**	$ 992	$ 847
Efficiency ratio	**48.6 %**	48.2 %	52.6 %
Return on equity (4)	**35.5 %**	30.6 %	35.7 %
Charge for economic capital (4) (b)	**$ (299)**	$ (314)	$ (284)
Economic profit (4) (a+b)	**$ 791**	$ 678	$ 563
Average assets ($ billions)	**$ 156.4**	$ 154.8	$ 134.7
Full-time equivalent employees	**1,314**	1,260	1,270

(1) For additional segmented information, see Note 28 to the consolidated financial statements.
(2) Certain information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.
(3) Revenue and income taxes are reported on a TEB basis. Accordingly, revenue and income taxes include a TEB adjustment of $298 million (2016: $474 million; 2015: $482 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 $98 million or 10% from 2016, primarily due to a reversal of credit losses compared with a provision for credit losses in 2016, and higher revenue, partially offset by higher non-interest expenses and income taxes.

Revenue

Revenue was up $67 million or 2% from 2016.

Global markets revenue was down $44 million or 3%, primarily due to lower revenue from equity derivatives, interest rate, and foreign exchange trading, partially offset by higher revenue from global markets financing activities, equity trading, the movement in reserves related to derivative client exposure, and a gain on sale of an investment.

Corporate and investment banking revenue was up $123 million or 11%, primarily due to higher investment portfolio gains, higher debt underwriting activity, and higher revenue from corporate banking, partially offset by lower revenue from equity underwriting.

Other revenue was down $12 million or 67%, due to lower revenue from our run-off businesses, as 2016 included a gain from the structured credit run-off business, shown as an item of note.

Provision for credit losses

2017 included a reversal of credit losses of $4 million, compared with a provision for credit losses of $155 million in 2016, primarily due to better performance in the oil and gas sector. The prior year also included losses in our exited European leveraged finance portfolio, shown as an item of note.

Non-interest expenses

Non-interest expenses were up $45 million or 3% from 2016, primarily due to higher spending on strategic initiatives and performance-based compensation.

Income taxes

Income taxes were up $83 million or 30% from 2016, primarily due to higher income and the impact of changes in the proportion of income subject to varying rates of tax in different jurisdictions.

Average assets

Average assets were up $1.6 billion or 1% from 2016, primarily due to an increase in trading securities, partially offset by a decrease in loan balances.

Corporate and Other

Corporate and Other includes the following functional groups – Administration, Client Connectivity and Innovation, Finance, Human Resources and Communications, Internal Audit, Risk Management, and Technology and Operations, 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 functional and support costs of CIBC Bank USA are recognized directly in the expenses of U.S. Commercial Banking and Wealth Management. 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	**2017**	2016 [2]	2015 [2]
Revenue			
International banking	**$ 723**	$ 722	$ 678
Other	**(104)**	152	(194)
Total revenue [3]	**619**	874	484
Provision for (reversal of) credit losses	**(33)**	133	47
Non-interest expenses	**1,295**	1,351	1,439
Loss before income taxes	**(643)**	(610)	(1,002)
Income taxes [3]	**(510)**	(675)	(694)
Net income (loss)	**$ (133)**	$ 65	$ (308)
Net income (loss) attributable to:			
Non-controlling interests	**$ 19**	$ 20	$ 14
Equity shareholders	**(152)**	45	(322)
Full-time equivalent employees	**22,071**	21,156	21,017

(1) For additional segmented information, see Note 28 to the consolidated financial statements.
(2) Certain information has been reclassified to conform to the presentation adopted in the current year. See "External reporting changes" for additional details.
(3) Revenue and income taxes of Capital Markets and U.S. Commercial Banking and Wealth Management are reported on a TEB basis. 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 $300 million (2016: $474 million; 2015: $482 million).

Financial overview

Net loss was $133 million compared with net income of $65 million in 2016, primarily due to lower revenue and a lower income tax benefit, partially offset by a reversal of credit losses compared with a provision for credit losses in 2016, and lower non-interest expenses.

Revenue

Revenue was down $255 million or 29% from 2016.

International banking revenue was comparable with 2016, as better performance in CIBC FirstCaribbean was partially offset by the unfavourable impact of foreign exchange rates.

Other revenue was down $256 million or 168% from 2016, as the prior year included a gain, net of transaction costs, on the sale of our minority investment in ACI, and a gain on sale of a processing centre, both shown as items of note. The decrease was partially offset by a lower TEB adjustment[3] and higher treasury revenue.

Provision for credit losses

2017 included a reversal of credit losses of $33 million, compared with a provision for credit losses of $133 million in 2016. The current year included a reduction in the collective allowance, shown as an item of note, which was net of a higher provision in the Caribbean region mainly due to the recent hurricanes. The prior year included increases in the collective allowance, shown as items of note.

Non-interest expenses

Non-interest expenses were down $56 million or 4% from 2016, as the prior year included restructuring charges primarily relating to employee severance, and a legal provision, both shown as items of note. The decrease was partially offset by higher spending on strategic initiatives in the current year, including transaction and integration-related costs associated with the acquisition of The PrivateBank, and a legal provision, both shown as items of note.

Income taxes

Income tax benefit was down $165 million, primarily due to a lower TEB adjustment[3], and an income tax recovery arising from a change in our expected utilization of certain tax loss carryforwards, shown as an item of note in 2016. The decrease was partially offset by higher losses in the current year, as 2016 included the gain on sale of ACI noted above.

Financial condition

Review of condensed consolidated balance sheet

$ millions, as at October 31	2017 [1]	2016
Assets		
Cash and deposits with banks	**$ 14,152**	$ 14,165
Securities		
Trading	**50,679**	49,915
AFS and held-to-maturity (HTM)	**42,592**	37,253
FVO	**148**	255
	93,419	87,423
Securities borrowed or purchased under resale agreements	**45,418**	33,810
Loans and acceptances		
Residential mortgages	**207,271**	187,298
Personal	**40,937**	38,041
Credit card	**12,378**	12,332
Business and government	**106,590**	83,801
Allowance for credit losses	**(1,618)**	(1,691)
	365,558	319,781
Derivative instruments	**24,342**	27,762
Other assets	**22,375**	18,416
	$ 565,264	$ 501,357
Liabilities and equity		
Deposits		
Personal	**$ 159,327**	$ 148,081
Business and government	**225,622**	190,240
Bank	**13,789**	17,842
Secured borrowings	**40,968**	39,484
	439,706	395,647
Obligations related to securities lent or sold short or under repurchase agreements	**43,708**	24,550
Derivative instruments	**23,271**	28,807
Acceptances	**8,828**	12,395
Other liabilities	**15,305**	12,919
Subordinated indebtedness	**3,209**	3,366
Equity	**31,237**	23,673
	$ 565,264	$ 501,357

(1) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.

Assets

Total assets as at October 31, 2017 were up $63.9 billion or 13% from 2016, net of a decrease of approximately $3 billion due to the depreciation of the U.S. dollar. The assets of CIBC Bank USA were approximately $33 billion as at October 31, 2017.

Securities increased by $6.0 billion or 7%, primarily due to the inclusion of securities from CIBC Bank USA. Further details on the composition of securities are provided in the "Supplementary annual financial information" section and Note 4 to the consolidated financial statements.

Securities borrowed or purchased under resale agreements increased by $11.6 billion or 34%, primarily due to client-driven activities.

Net loans and acceptances increased by $45.8 billion or 14% due to an increase in domestic residential mortgages and an increase in U.S. business and government loans from CIBC Bank USA. Further details on the composition of loans and acceptances are provided in the "Supplementary annual financial information" section and Note 5 to the consolidated financial statements.

Derivative instruments decreased by $3.4 billion or 12%, largely driven by a decrease in interest rate and foreign exchange derivatives valuation, partially offset by an increase in equity derivatives valuation.

Other assets increased by $4.0 billion or 21%, primarily due to the increase in goodwill as a result of the acquisition of The PrivateBank.

Liabilities

Total liabilities as at October 31, 2017 were up $56.3 billion or 12% from 2016, net of a decrease of approximately $3 billion due to the depreciation of the U.S. dollar. The liabilities of CIBC Bank USA were approximately $26 billion as at October 31, 2017.

Deposits increased by $44.1 billion or 11%, primarily due to the inclusion of the balances of CIBC Bank USA, 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 10 to the consolidated financial statements.

Obligations related to securities lent or sold short or under repurchase agreements increased by $19.2 billion or 78%, primarily due to client-driven activities.

Derivative instruments decreased by $5.5 billion or 19%, largely driven by a decrease in interest rate and foreign exchange derivatives valuation, partially offset by an increase in equity derivatives valuation.

Acceptances decreased by $3.6 billion or 29%, driven by changes in client activities.

Other liabilities increased by $2.4 billion or 18%, primarily due to an increase in broker payables, collateral received for derivatives, and accrued liabilities.

Equity

Equity as at October 31, 2017 was up $7.6 billion or 32% from 2016, primarily due to share issuance arising from the acquisitions of The PrivateBank and Geneva Advisors and from our shareholder and employee plans, as well as a net increase in retained earnings.

Capital resources

Our capital strength protects our depositors and creditors from risks inherent in our businesses, allows us to absorb unexpected losses, and enables us to take advantage of attractive business opportunities. It also enables us to maintain a favourable credit standing and to raise additional capital or other funding on attractive terms. Our objective is to maintain a strong and efficient capital base. Capital needs to be monitored and rebalanced continually; we manage and monitor our capital to maximize risk-adjusted return to shareholders and to maintain a sufficient capital buffer to ensure that we meet regulatory requirements.

Regulatory capital requirements under Basel III

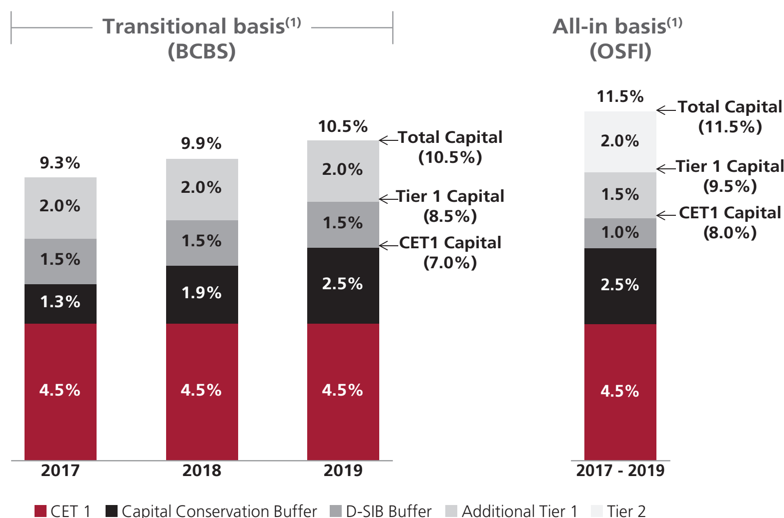
Our regulatory capital requirements are determined in accordance with guidelines issued by OSFI, which are based upon the risk-based capital standards developed by the Basel Committee on Banking Supervision (BCBS).

Regulatory capital consists of CET1, Tier 1 and Tier 2 capital. OSFI requires all institutions to achieve target capital ratios that meet or exceed the 2019 all-in minimum ratios plus a conservation buffer. "All-in" is defined by OSFI as capital calculated to include all of the regulatory adjustments that will be required by 2019, but retaining the phase-out rules for non-qualifying capital instruments. Certain deductions from CET1 capital are phased in at 20% per year from 2014 for the determination of capital under the transitional rules. Amounts not yet deducted from capital under OSFI's transitional rules are risk weighted, creating a difference between RWAs on a transitional and all-in basis.

CIBC, along with the Bank of Montreal, the Bank of Nova Scotia, the National Bank of Canada, the Royal Bank of Canada, and the Toronto-Dominion Bank, have been designated by OSFI as domestic systemically important banks (D-SIBs) in Canada, and they are subject to a 1.0% CET1 surcharge, which commenced January 1, 2016. This results in current minimum targets for CET1, Tier 1 and Total capital ratios of 8.0%, 9.5%, and 11.5%, respectively, for the D-SIBs. These targets may be higher for certain institutions at OSFI's discretion. Additionally, effective beginning in the first quarter of 2017, banks need to hold an incremental countercyclical capital buffer equal to the weighted average of buffers deployed in Canada and across certain other jurisdictions, where private sector credit exposures exist[(1)].

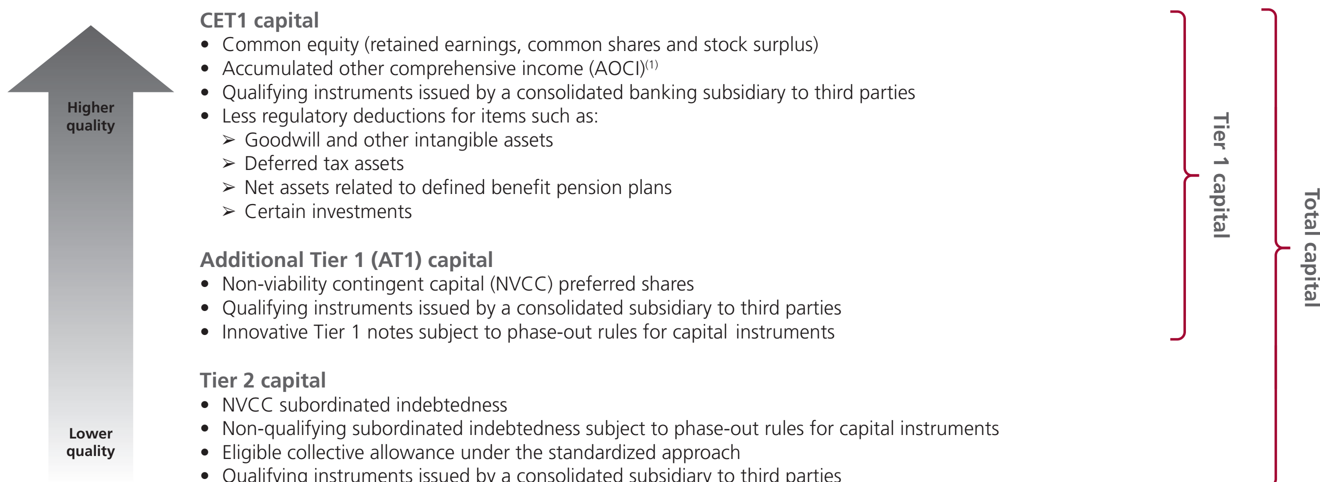
Capital adequacy requirements are applied on a consolidated basis. The consolidation basis applied to our financial statements is described in Note 1 of the consolidated financial statements, except for our insurance subsidiaries (CIBC Reinsurance Company Limited and CIBC Life Insurance Company Limited), which are excluded from the regulatory scope of consolidation. CIBC Life Insurance Company Limited is subject to OSFI's Minimum Continuing Capital Surplus Requirements for life insurance companies. Starting January 2018, CIBC Life Insurance Company Limited will be subject to OSFI's Life Insurance Capital Adequacy Test.

A comparison of the BCBS transitional capital ratio requirements and the OSFI all-in target capital ratio requirements is as follows:



(1) A countercyclical capital buffer is also applicable, but is insignificant for CIBC as at October 31, 2017.

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 FVO liabilities attributable to changes in own credit risk.

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	Basel provides three approaches for calculating credit risk capital requirements – standardized, foundation and advanced internal ratings-based (AIRB). OSFI expects financial institutions in Canada with assets in excess of $5 billion to use the AIRB approach for all material portfolios and credit businesses. Basel provides two approaches for calculating credit risk capital requirements for securitization positions in the banking book – standardized and internal ratings-based (IRB) approaches.	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 use the IRB approach for securitization exposures, which comprises several calculation approaches (Ratings-Based, Supervisory Formula, Internal Assessment Approach). Some portfolios, for which sufficient historical data is unavailable, remain on the standardized approach.
Market risk	Market risk capital requirements can be determined under the standardized or internal models approaches. The latter involves 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, and IRC. We also use the IRB approach for trading book securitization positions.
Operational risk	Operational risk capital requirements can be determined under the basic indicator approach, standardized approach or advanced measurement approach (AMA).	We use AMA and standardized approaches based on OSFI rules to calculate operational risk capital.

Since the introduction of Basel II in 2008, OSFI has prescribed a capital floor requirement for institutions that use the AIRB approach for credit risk. The capital floor is determined by comparing a capital requirement calculated by reference to Basel I against the Basel III calculation, as specified by OSFI. Any shortfall in the Basel III capital requirement compared with the Basel I floor is added to RWAs.

Regulatory capital and ratios

The components of our regulatory capital and ratios under Basel III (all-in basis) are presented in the table below:

$ millions, as at October 31	2017	2016
Common Equity Tier 1 (CET1) capital: instruments and reserves		
Directly issued qualifying common share capital plus related stock surplus	**$ 12,685**	$ 8,096
Retained earnings	**16,101**	13,584
AOCI (and other reserves)	**452**	790
Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	**109**	113
CET1 capital before regulatory adjustments	**29,347**	22,583
CET1 capital: regulatory adjustments		
Prudential valuation adjustments	**62**	69
Goodwill (net of related tax liabilities)	**5,284**	1,461
Other intangibles other than mortgage-servicing rights (net of related tax liabilities)	**1,654**	1,258
Deferred tax assets excluding those arising from temporary differences (net of related tax liabilities)	**18**	70
Defined benefit pension fund net assets (net of related tax liabilities)	**160**	156
Significant investments in the common stock of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions (amount above 10% threshold)	**–**	–
Other	**551**	421
Total regulatory adjustments to CET1 capital	**7,729**	3,435
CET1 capital	**21,618**	19,148
Additional Tier 1 (AT1) capital: instruments		
Directly issued qualifying AT1 instruments plus related stock surplus [1]	**1,797**	1,000
Directly issued capital instruments subject to phase out from AT1 [2]	**1,253**	1,504
Additional Tier 1 Instruments issued by subsidiaries and held by third parties (amount allowed in AT1)	**14**	14
AT1 capital before regulatory adjustments	**3,064**	2,518
AT1 capital: regulatory adjustments		
Other deductions from Tier 1 capital as determined by OSFI	**–**	–
Total regulatory adjustments to AT1 capital	**–**	–
AT1 capital	**3,064**	2,518
Tier 1 capital (T1 = CET1 + AT1)	**24,682**	21,666
Tier 2 capital: instruments and provisions		
Directly issued qualifying Tier 2 instruments plus related stock surplus [3]	**1,961**	2,001
Directly issued capital instruments subject to phase out from Tier 2	**1,204**	1,323
Tier 2 instruments issued by subsidiaries and held by third parties (amount allowed in Tier 2)	**19**	19
Collective allowances	**263**	74
Tier 2 capital before regulatory adjustments	**3,447**	3,417
Total regulatory adjustments to Tier 2 capital	**–**	–
Tier 2 capital (T2)	**3,447**	3,417
Total capital (TC = T1 + T2)	**$ 28,129**	$ 25,083
CET1 capital RWA [4]	**$ 203,321**	$ 168,996
Tier 1 capital RWA [4]	**203,321**	169,322
Total capital RWA [4]	**203,321**	169,601
Capital ratios		
CET1 ratio	**10.6 %**	11.3 %
Tier 1 capital ratio	**12.1 %**	12.8 %
Total capital ratio	**13.8 %**	14.8 %

(1) Comprises non-cumulative Class A Preferred Shares Series 39, 41, 43 and 45 which are treated as non-viability contingent capital (NVCC) in accordance with OSFI's capital adequacy guidelines.
(2) Comprises CIBC Tier 1 Notes – Series A and Series B due June 30, 2108 (together, the Tier 1 Notes).
(3) Comprises Debentures due on October 28, 2024 and January 26, 2026 which are treated as NVCC in accordance with OSFI's capital adequacy guidelines.
(4) All-in RWAs as at October 31, 2017 include a capital floor adjustment. See "Risk-weighted assets" section on page 31 for additional details.

The components of our regulatory capital and ratios on a transitional basis are presented in the table below:

$ millions, as at October 31	2017	2016
CET1 capital	**$ 23,254**	$ 20,751
Tier 1 capital	**25,198**	22,596
Total capital	**28,594**	25,949
RWA [1]	**207,910**	173,902
CET1 ratio	**11.2 %**	11.9 %
Tier 1 ratio	**12.1 %**	13.0 %
Total capital ratio	**13.8 %**	14.9 %

(1) Transitional RWAs as at October 31, 2017 and 2016 include capital floor adjustments.

The components of our RWAs and corresponding minimum total capital requirements are presented in the table below:

$ millions, as at October 31	2017		2016	
	RWA (All-in basis)	**Minimum total capital required** (1)	RWA (All-in basis)	Minimum total capital required (1)
Credit risk (2)				
Standardized approach				
Corporate	**$ 28,029**	**$ 2,242**	$ 3,645	$ 292
Sovereign	**1,597**	**128**	780	62
Banks	**488**	**39**	521	42
Real estate secured personal lending	**2,735**	**219**	2,181	174
Other retail	**933**	**75**	667	53
Trading book	**187**	**15**	123	10
	33,969	**2,718**	7,917	633
AIRB approach				
Corporate	**64,924**	**5,194**	64,856	5,188
Sovereign (3)	**2,093**	**167**	2,185	175
Banks	**3,215**	**257**	3,526	282
Real estate secured personal lending	**14,738**	**1,179**	12,115	969
Qualifying revolving retail	**17,355**	**1,388**	17,512	1,401
Other retail	**7,579**	**606**	7,813	625
Equity	**759**	**61**	705	56
Trading book	**3,345**	**268**	3,576	286
Securitization	**1,341**	**107**	2,218	177
Adjustment for scaling factor	**6,911**	**553**	6,860	549
	122,260	**9,780**	121,366	9,708
Other credit RWA	**11,427**	**914**	10,815	865
Total credit risk (before adjustment for CVA phase-in) (4)	**167,656**	**13,412**	140,098	11,206
Market risk (Internal Models and IRB Approach)				
VaR	**935**	**75**	881	70
Stressed VaR	**2,058**	**165**	1,623	130
Incremental risk charge	**1,843**	**147**	1,624	130
Securitization and other	**556**	**44**	47	4
Total market risk	**5,392**	**431**	4,175	334
Operational risk	**24,664**	**1,973**	21,746	1,740
Total RWA before adjustment for CVA phase-in	**$ 197,712**	**$ 15,816**	$ 166,019	$ 13,280
CVA adjustment (4)				
CET1 RWA	**$ 3,498**	**$ 280**	$ 2,977	$ 238
Tier 1 RWA	**3,741**	**299**	3,303	264
Total RWA	**3,935**	**315**	3,582	287
Capital floor adjustment (4)				
CET1 RWA	**$ 2,111**	**$ 169**	n/a	n/a
Tier 1 RWA	**1,868**	**150**	n/a	n/a
Total RWA	**1,674**	**134**	n/a	n/a
Total RWA after adjustment for CVA phase-in (4)				
CET1 capital RWA	**$ 203,321**	**$ 16,265**	$ 168,996	$ 13,518
Tier 1 capital RWA	**203,321**	**16,265**	169,322	13,544
Total capital RWA	**203,321**	**16,265**	169,601	13,567

(1) Refers to the minimum standard established by the BCBS before the application of the capital conservation buffer and any other capital buffers including but not limited to the capital surcharge for global/domestic systemically important banks that may be established by regulators from time to time. It is calculated by multiplying RWA by 8%.
(2) Credit risk for CIBC Bank USA and CIBC FirstCaribbean are calculated under the standardized approach.
(3) Includes residential mortgages insured by Canada Mortgage and Housing Corporation (CMHC), an agency of the Government of Canada, and government guaranteed student loans.
(4) Before any capital floor requirement as applicable, there are three different levels of RWAs for the calculation of the CET1, Tier 1, and Total capital ratios arising from the option CIBC has chosen for the phase-in of the CVA capital charge. All-in RWAs as at October 31, 2017 include a capital floor adjustment.

CET1 ratio (All-in basis)

The CET1 ratio at October 31, 2017 decreased 0.7% from October 31, 2016, driven by an increase in CET1 capital RWAs, partially offset by an increase in CET1 capital. The increase in CET1 RWAs was primarily due to the inclusion of the balances of CIBC Bank USA, organic growth, portfolio migrations, a Basel I capital floor adjustment and capital methodology updates, partially offset by net foreign exchange movement and capital model updates. The increase in CET1 capital was the result of share issuance arising from the acquisitions of The PrivateBank and Geneva Advisors, our shareholder investment plan and employee share purchase plan, and internal capital generation (net income less dividends), partially offset by higher regulatory deductions for goodwill and intangible assets arising from the acquisitions and net foreign exchange movement.

We hold regulatory capital against the underlying exposures associated with our credit card securitization trust, CARDS II Trust, as we have in the past provided non-contractual support to the trust. Applying this treatment resulted in a reduction of our 2017 Basel III CET1, Tier 1 and Total capital ratios by approximately 0.12%, 0.14% and 0.15%, respectively (2016: 0.08%, 0.08% and 0.08%, respectively).

Movement in total regulatory capital

Changes in regulatory capital (all-in basis) under Basel III are presented in the table below:

$ millions, for the year ended October 31	2017	2016
Balance at beginning of year	$ 25,083	$ 23,434
Issue of common shares pursuant to the acquisition of The PrivateBank	3,443	–
Issue of common shares pursuant to the acquisition of Geneva Advisors	126	–
Other issue of common shares	208	109
Issue of preferred shares	800	–
Issue of subordinated indebtedness	–	1,000
Purchase of common shares for cancellation	–	(61)
Redemption of preferred shares	–	–
Net income attributable to equity shareholders	4,699	4,275
Preferred and common share dividends	(2,173)	(1,917)
Premium on purchase of common shares for cancellation	–	(209)
Shares issued in lieu of cash dividends	749	164
Change in AOCI balances included in regulatory capital		
Net foreign currency translation adjustments	(376)	79
Net change in AFS securities	(101)	67
Net change in cash flow hedges	10	1
Net change in post-employment defined benefit plans	139	(390)
Change in shortfall of allowance to expected losses	(191)	(162)
Change in goodwill and other intangible assets	(4,219)	185
Redemption of subordinated indebtedness	–	(1,500)
Other, including change in regulatory adjustments	(68)	8
Balance at end of year	$ 28,129	$ 25,083

Movement in CET1 capital RWAs

The following tables show the movement in CET1 capital RWAs (all-in basis) relating to credit, market and operational risks.

Credit risk

$ millions, for the year ended October 31	2017		2016	
	Credit risk	Of which counterparty credit risk [1]	Credit risk	Of which counterparty credit risk [1]
Balance at beginning of year	$ 143,075	$ 8,861	$ 133,505	$ 7,898
Book size [2]	13,151	1,881	13,456	1,402
Book quality [3]	(4,628)	(1,116)	1,779	(408)
Model updates [4]	(3,080)	(37)	(1,600)	–
Methodology and policy [5]	1,155	361	–	–
Acquisitions and disposals	26,517	90	(1,712)	–
Foreign exchange movements	(2,119)	(87)	565	44
Other	(2,917)	172	(2,918)	(75)
Balance at end of year [6]	$ 171,154	$ 10,125	$ 143,075	$ 8,861

(1) Comprises derivatives and repo-style transactions.
(2) Relates to net increase/decrease in the underlying exposures.
(3) Relates to changes in credit risk mitigation and credit quality of the borrower/counterparty.
(4) Relates to internal model or parameter changes.
(5) Relates to regulatory changes implemented on an industry-wide basis (i.e., Basel III) and any capital methodology changes implemented within CIBC for our portfolios.
(6) Includes $3,498 million (2016: $2,977 million) of CET1 CVA RWAs relating to bilateral over-the-counter (OTC) derivatives.

The increase in credit risk RWAs is primarily due to the inclusion of the balances of CIBC Bank USA, as well as organic growth across our businesses throughout the year. The decrease in the book quality category reflects the impact of portfolio upgrades during the year. Model updates include refinements and normal course updates to our underlying AIRB models and parameters.

Market risk

$ millions, for the year ended October 31	2017	2016
Balance at beginning of year	$ 4,175	$ 4,408
Movement in risk levels [1]	1,149	(268)
Model updates [2]	(252)	(46)
Methodology and policy [3]	–	5
Acquisitions and disposals	59	–
Foreign exchange movements	261	76
Other	–	–
Balance at end of year	$ 5,392	$ 4,175

(1) Relates to changes in open positions and market data.
(2) Relates to internal model or parameter changes.
(3) Relates to regulatory changes implemented on an industry-wide basis (i.e., Basel III) and any capital methodology changes implemented within CIBC for our portfolios.

The overall increase in market risk RWAs is primarily driven by movement in risk levels, which includes changes in open positions and the market rates affecting these positions, along with foreign exchange movement. These factors were partially offset by internal model updates.

Operational risk

$ millions, for the year ended October 31	2017	2016
Balance at beginning of year	$ 21,746	$ 18,194
Movement in risk levels (1)	1,227	1,154
Methodology and policy (2)	–	2,398
Acquisitions and disposals	1,691	–
Balance at end of year	$ 24,664	$ 21,746

(1) Relates to changes in loss experience and business environment and internal control factors.
(2) Relates to regulatory changes implemented on an industry-wide basis (i.e., Basel III) and any capital methodology changes implemented within CIBC for our portfolios.

The increase in operational risk RWAs is primarily driven by the inclusion of the balances of CIBC Bank USA and Geneva Advisors. The movement in risk levels under the advanced measurement approach reflects changes in loss experience, changes in the business environment, internal control factors and gross income, as defined by the BCBS. Methodology and policy updates reflect capital methodology changes implemented within CIBC for our portfolios.

Continuous enhancement to risk-based capital requirements

The BCBS and OSFI have published a number of proposals for changes to the existing risk-based capital requirements to strengthen the regulation, supervision, and practices of banks with the overall objective of enhancing financial stability. Since the start of the fiscal year, the BCBS and OSFI publications have included the proposals discussed below.

In October 2017, the BCBS issued the final guideline on the identification and management of step-in risk, with a proposed implementation timeline of no later than 2020. Step-in risk is the risk that a bank might provide financial support to an unconsolidated entity beyond, or in the absence of, any contractual obligations or equity ties, should the entity experience financial stress. The focus of the guideline is on unconsolidated entities such as securitization conduits, structured investment vehicles, and money market funds. The objective of the guideline is to mitigate this risk through banks' self-assessment and reporting to supervisors, and not by the automatic application of a Pillar I liquidity or capital charge.

In August 2017, OSFI issued for public consultation revisions to the capital adequacy requirements (CAR) Guideline for implementation in the first quarter of 2018. The draft CAR Guideline proposed capital treatment for the expected credit losses accounting framework under IFRS 9 and that domestic implementation of the standardized approach for measuring counterparty credit risk exposures will be required by the first quarter of 2019, subject to confirming the implementation readiness of key foreign market counterparties during 2018. It also indicated that the revised securitization framework is expected to be implemented in the first quarter of 2019.

In July 2017, the BCBS issued the consultative document "Capital treatment for simple, transparent and comparable short-term securitisations", setting out additional guidance and requirements for eligibility to apply preferential regulatory capital treatment for banks that act as investors in, or sponsors of simple, transparent and comparable short-term securitizations. The proposed treatment is consistent with the BCBS' July 2016 revisions to the securitization framework.

In July 2017, OSFI announced that it is extending the Canadian implementation timeline for adoption of the BCBS' market risk framework from the end of 2019 to no earlier than the first quarter of 2021. The date was revised from the BCBS' expected 2019 timeline due to the challenges and uncertainties associated with implementation of the requirements as well as likely delays in implementation by the majority of key foreign jurisdictions.

Prior to this fiscal year, the BCBS and OSFI issued the following publications which have not yet been implemented:

In July 2016, the BCBS published the final standard on capital treatment of securitization exposure titled "Revisions to the securitisation framework". The framework aims to reduce mechanistic reliance on external ratings, increase risk sensitivity, and re-calibrate the risk-weights for certain exposures. It also includes the capital treatment for "simple, transparent and comparable" securitizations.

In April 2016, the BCBS issued the final standard for interest rate risk in the banking book (IRRBB). This standard represents a Pillar 2 supervisory approach, which promotes enhanced disclosures and improves comparability through providing extensive guidance to banks' IRRBB management processes. These rules aim to promote sufficient capital to cover potential losses from exposures to changes in interest rates, and to limit incentives for capital arbitrage between the banking and trading books.

In March 2016, the BCBS issued two consultative papers:

"Reducing variation in credit risk-weighted assets – constraints on the use of internal model approaches" aims to limit the use of IRB approaches and adopt exposure-level, model-parameter floors for certain exposures. The objectives of the proposed changes are to: (i) reduce complexity; (ii) improve comparability; and (iii) address excessive variability in the capital requirements for credit risk.

"Standardised measurement approach for operational risk" proposed further revisions to the operational risk capital frameworks, with the stated objective of providing a balance between simplicity, comparability, and risk sensitivity. A non-model-based standardized measurement approach is proposed to replace the existing standardized approach and AMA. The proposed method combines a financial statement-based measure with past operational losses for the estimation of operational risk capital.

In January 2016, the BCBS published final standards for its market risk framework, which aims to ensure that the standardized and internal model approaches to market risk deliver credible capital outcomes and promote consistent implementation across jurisdictions. The BCBS will require banks to report under the new standards by the end of 2019. OSFI has not yet established a timeline for Canadian banks.

"Revisions to the standardised approach for credit risk" was released in December 2015, with the purpose of reducing variability in RWAs and promoting comparability across banks and jurisdictions. Key changes from the initial paper include the use of external credit ratings and the methodology for risk weighting real estate loans. This consultative document, along with the new standardized approaches to operational and market risk, is designed to complement the capital floors proposal published in December 2014 titled "Capital floors: the design of a framework based on standardized approaches", with the objective of mitigating model risk and measurement errors stemming from internal models, and to address excessive variability in RWA calculations between banks.

In 2014, the BCBS issued the final standard "The standardized approach for measuring counterparty credit risk exposures". The standard includes a comprehensive, non-modelled approach for measuring counterparty credit risk associated with OTC derivatives, exchange-traded derivatives, and long settlement transactions. The new standardized approach replaces the existing Current Exposure Method and the Standardized Method.

CIBC will continue to monitor and prepare for developments impacting risk-based capital requirements.

Basel III leverage ratio

The Basel III capital reforms included 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.

$ millions, as at October 31		2017	2016
Transitional basis			
Tier 1 capital	A	**$ 25,198**	$ 22,596
Leverage ratio exposure	B	**610,769**	546,136
Leverage ratio	A/B	**4.1 %**	4.1 %
All-in basis			
Tier 1 capital	C	**$ 24,682**	$ 21,666
Leverage ratio exposure	D	**610,353**	545,480
Leverage ratio	C/D	**4.0 %**	4.0 %

Leverage ratio (All-in basis)

The leverage ratio at October 31, 2017 remained unchanged from October 31, 2016 at 4.0%, as an increase in leverage ratio exposure was offset by an increase in Tier 1 capital. The increase in leverage ratio exposure was primarily driven by an increase in on-balance sheet assets primarily resulting from the inclusion of the balances of CIBC Bank USA and an increase in securities financing transaction exposures. The increase in Tier 1 capital was primarily driven by the factors noted in the CET1 capital discussion above, as well as the issuance of preferred shares, partially offset by an increase in the phase-out of non-qualifying Tier 1 capital instruments from Additional Tier 1 capital.

Proposed revisions to leverage ratio framework

In April 2016, the BCBS issued a consultative document "Revisions to the Basel III leverage ratio framework" for comment. At this time, there is no change to the minimum leverage ratio requirement of 3%. However, consideration is being given to additional requirements for global systemically important banks (G-SIBs). Areas subject to proposed changes include measurement for derivative exposures, treatment of regular-way purchases and sales of financial assets, and revisions to credit conversion factors for off-balance sheet items. The implementation date is not known at this point.

Revised Pillar 3 disclosure requirements

In January 2015, the BCBS issued "Revised Pillar 3 disclosure requirements", which set out the first phase of an initiative to replace existing Pillar 3 disclosure requirements for the various types of risk. Pillar 3 aims to promote market discipline through regulatory disclosure requirements, in order to improve comparability and consistency of risk disclosures and increase transparency and confidence about a bank's exposure to risk and the overall adequacy of its regulatory capital.

In April 2017, OSFI released its guidelines confirming expectations for domestic implementation of the BCBS Pillar 3 first phase requirements, with implementation required by the fourth quarter of 2018.

In March 2017, the BCBS released "Pillar 3 disclosure requirements – consolidated and enhanced framework", a standard establishing the second phase of the project. This standard includes enhancements to the January 2015 requirements, the introduction of several new disclosure requirements, and the consolidation of all existing BCBS disclosure requirements into the Pillar 3 framework. The BCBS has also commenced a third phase of its review of Pillar 3. OSFI has not yet released its requirements for the second and third phases.

CIBC will continue to monitor and prepare for developments in this area.

Global systemically important banks – public disclosure requirements

In March 2017, the BCBS released "Global Systemically Important Banks – Revised Assessment Framework", a consultative document proposing revisions to the G-SIB assessment framework, designed to capture new dimensions of systemic risk not included in the current framework. The proposal includes new G-SIB indicators as well as amendments to the definition and potential weighting of existing indicators. The revised assessment methodology is expected to be finalized in 2017 and to become effective for the 2019 G-SIB assessment.

Bank recapitalization (Bail-in) conversion regulations

The overarching policy objective is to strengthen financial stability while protecting taxpayers in the event of a D-SIB failure, and is consistent with the objectives of the Financial Stability Board's rules for Total Loss-Absorbing Capacity (TLAC) applicable to G-SIBs. The bail-in regime is designed to enable the expedient conversion, in whole or in part, of certain bank liabilities (bail-in debt) into common equity, thus ensuring that the D-SIB emerges from conversion as adequately capitalized. In June 2016, a legislative framework for a bail-in regime for Canada's D-SIBs received royal assent.

On June 16, 2017, the Department of Finance issued a pre-publication of bail-in regulations. These provide statutory powers to the Canada Deposit Insurance Corporation (CDIC) to enact the bail-in regime including the ability to convert specified eligible shares and liabilities of D-SIBs into common shares in the event such a bank becomes non-viable. OSFI is responsible for designating D-SIBs, setting minimum bail-in/TLAC requirements, and determining that a bank is non-viable. In line with previous consultations, liabilities subject to bail-in are unsecured and tradable liabilities with original term to maturity of more than 400 days. Consumer deposits, derivatives and structured notes would not be eligible for bail-in. The regulations become effective 180 days after the regulations are registered.

In conjunction with the pre-publication of bail-in regulations, OSFI issued draft guidelines on TLAC for Canada's D-SIBs and holdings of TLAC instruments for public consultation. OSFI's TLAC guideline requires D-SIBs to maintain a minimum of 21.5% of TLAC-eligible instruments[(1)] relative to their RWAs and 6.75% relative to their leverage exposures. In addition, D-SIBs will be expected to hold buffers above the minimum TLAC ratios. TLAC-eligible liabilities must satisfy all of the requirements set out in the bail-in regulations and have a residual maturity greater than 365 days, among other requirements. The minimum TLAC requirements are proposed to be effective in fiscal 2022.

OSFI's TLAC holdings proposal is in line with the BCBS' TLAC holdings standard finalized in October 2016. Under the draft guideline, our investment in other G-SIBs' and Canadian D-SIBs' TLAC instruments are to be deducted from our own Tier 2 capital if our aggregate holdings, together with investments in capital instruments of other financial institutions, exceeds certain thresholds in relation to our own CET1 capital.

(1) The sum of a D-SIB's TLAC, subject to certain adjustments, including Tier 1 capital, Tier 2 capital, and prescribed shares and liabilities that are subject to conversion into common shares and meet the eligibility criteria set out in OSFI's TLAC draft guideline.

Capital management and planning

Basel establishes a framework for a bank's Internal Capital Adequacy Assessment Process (ICAAP), which includes oversight by the CIBC Board of Directors (the Board). Our capital management policy is reviewed and approved by the Board in support of the ICAAP. The policy includes a set of guiding principles 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 guidelines relate to capital strength and mix – the former being the overriding guideline, while the latter specifically relates to maintaining a cost effective capital structure. CIBC's 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 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 and establishment of strategic objectives, and is developed in accordance with the capital management policy. Each year, a Capital Plan and three-year outlook are developed, which encompass all of the key elements of capital including forecasts of sources and uses, maturities, redemptions, new issuances, corporate initiatives and business growth. The annual Capital Plan establishes targets for the coming year and business plans to achieve those targets. The Capital Plan also relates the level of capital to our level of risk in a stressed environment as a part of the enterprise-wide stress testing discussed below.

Capital initiatives

The following main capital initiatives were undertaken in 2017:

Normal course issuer bid

On March 10, 2017, we announced that the Toronto Stock Exchange had accepted the notice of CIBC's intention to commence a normal course issuer bid. Purchases under this bid will terminate upon the earlier of: (i) CIBC purchasing up to a maximum of 8 million common shares; (ii) CIBC providing a notice of termination; or (iii) March 13, 2018. No common shares have been purchased under this bid. See Note 15 to the consolidated financial statements for additional information.

Common share issuance pursuant to the acquisition of The PrivateBank

On June 23, 2017, we completed the acquisition of The PrivateBank, and in connection therewith, we issued 32,137,402 CIBC common shares. For further details, see Note 3 and Note 15 to the consolidated financial statements.

Common share issuance pursuant to the acquisition of Geneva Advisors

On August 31, 2017, we completed the acquisition of Geneva Advisors, and in connection therewith, we issued 1,204,344 CIBC common shares. For further details, see Note 3 and Note 15 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 6,870,584 common shares for consideration of $749 million for the year ended October 31, 2017.

Dividends

Our quarterly common share dividend was increased from $1.27 per share to $1.30 per share for the quarter ending October 31, 2017, $1.24 per share to $1.27 per share for the quarter ended April 30, 2017, and $1.21 per share to $1.24 per share for the quarter ended January 31, 2017.

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 15 and 16 to the consolidated financial statements.

Preferred shares

On June 2, 2017, we issued 32 million Non-cumulative Rate Reset Class A Preferred Shares Series 45 (NVCC) with a par value of $25.00 per share, for gross proceeds of $800 million. See the "Outstanding share data" section below and Note 15 to the consolidated financial statements for further details.

Subordinated indebtedness

During the quarter ended July 31, 2017, we purchased and cancelled $42 million (US$34 million) of our Floating Rate Debenture Notes Due 2084.

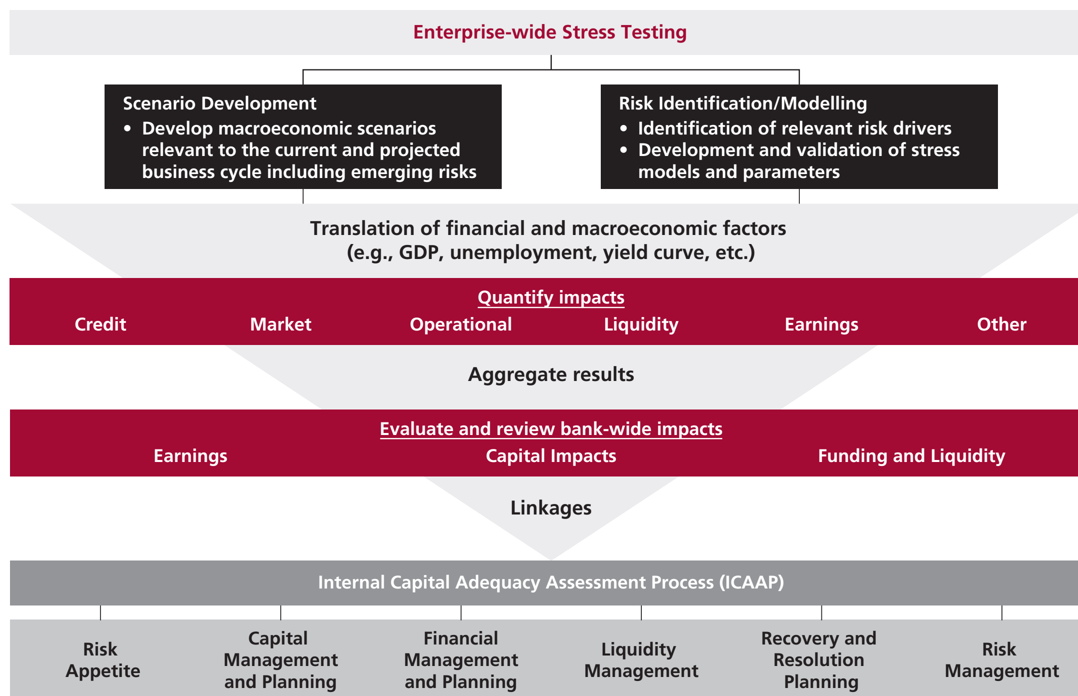
During the quarter ended April 30, 2017, we purchased and cancelled $25 million (US$19 million) of our Floating Rate Debenture Notes Due 2085.

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 II 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 the businesses 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 bottom-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 the businesses 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 constraints.

A key objective of the enterprise-wide stress tests is to identify 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.

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 24, 2017	Shares outstanding		Minimum conversion price per common share	Maximum number of common shares issuable on conversion/exercise
	Number of shares	Amount		
Common shares	439,432,245	$ 12,560		
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
Treasury shares – preferred shares [1][2]	85,626	$ 2		
Treasury shares – common shares	160,203	$ 19		
Subordinated indebtedness [2][3]				
3.00% Debentures due October 28, 2024 (NVCC)	n/a	1,000	5.00	300,000,000
3.42% Debentures due January 26, 2026 (NVCC)	n/a	1,000	5.00	300,000,000
Stock options outstanding				4,975,774
Total		$ 3,800		960,000,000

(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).
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 69% based on the number of CIBC common shares outstanding as at October 31, 2017. As described in the Capital Adequacy Guidelines, a Trigger Event occurs when OSFI determines the bank is or is about to become non-viable and, if after conversion of all contingent instruments and consideration of any other relevant factors or circumstances, it is reasonably likely that its viability will be restored or maintained; or if the bank has accepted or agreed to accept a capital injection or equivalent support from a federal or provincial government, without which OSFI would have determined the bank to be non-viable.

Non-cumulative Rate Reset Class A Preferred Shares Series 39 (NVCC) (Series 39 shares)
For the initial five year period to the earliest redemption date of July 31, 2019, the Series 39 shares pay quarterly cash dividends, if declared, at a rate of 3.90%. On July 31, 2019, and on July 31 every five years thereafter, the dividend rate will reset to be equal to the then current five-year Government of Canada bond yield plus 2.32%.

Holders of the Series 39 shares will have the right to convert their shares on a one-for-one basis into Non-cumulative Floating Rate Class A Preferred Shares Series 40 (NVCC) (Series 40 shares), subject to certain conditions, on July 31, 2019 and on July 31 every five years thereafter. Holders of the Series 40 shares will be entitled to receive a quarterly floating rate dividend, if declared, equal to the three-month Government of Canada Treasury Bill yield plus 2.32%. Holders of the Series 40 shares may convert their shares on a one-for-one basis into Series 39 shares, subject to certain conditions, on July 31, 2024 and on July 31 every five years thereafter.

Subject to regulatory approval and certain provisions of the shares, we may redeem all or any part of the then outstanding Series 39 shares at par on July 31, 2019, and on July 31 every five years thereafter; we may redeem all or any part of the then outstanding Series 40 shares at par on July 31, 2024, and on July 31 every five years thereafter.

Non-cumulative Rate Reset Class A Preferred Shares Series 41 (NVCC) (Series 41 shares)
For the initial five year period to the earliest redemption date of January 31, 2020, the Series 41 shares pay quarterly cash dividends, if declared, at a rate of 3.75%. On January 31, 2020, and on January 31 every five years thereafter, the dividend rate will reset to be equal to the then current five-year Government of Canada bond yield plus 2.24%.

Holders of the Series 41 shares will have the right to convert their shares on a one-for-one basis into Non-cumulative Floating Rate Class A Preferred Shares Series 42 (NVCC) (Series 42 shares), subject to certain conditions, on January 31, 2020 and on January 31 every five years thereafter. Holders of the Series 42 shares will be entitled to receive a quarterly floating rate dividend, if declared, equal to the three-month Government of Canada Treasury Bill yield plus 2.24%. Holders of the Series 42 shares may convert their shares on a one-for-one basis into Series 41 shares, subject to certain conditions, on January 31, 2025 and on January 31 every five years thereafter.

Subject to regulatory approval and certain provisions of the shares, we may redeem all or any part of the then outstanding Series 41 shares at par on January 31, 2020 and on January 31 every five years thereafter; we may redeem all or any part of the then outstanding Series 42 shares at par on January 31, 2025 and on January 31 every five years thereafter.

Non-cumulative Rate Reset Class A Preferred Shares Series 43 (NVCC) (Series 43 shares)
For the initial five year period to the earliest redemption date of July 31, 2020, the Series 43 shares pay quarterly cash dividends, if declared, at a rate of 3.60%. On July 31, 2020, and on July 31 every five years thereafter, the dividend rate will reset to be equal to the then current five-year Government of Canada bond yield plus 2.79%.

Holders of the Series 43 shares will have the right to convert their shares on a one-for-one basis into Non-cumulative Floating Rate Class A Preferred Shares Series 44 (NVCC) (Series 44 shares), subject to certain conditions, on July 31, 2020 and on July 31 every five years thereafter. Holders of the Series 44 shares will be entitled to receive a quarterly floating rate dividend, if declared, equal to the three-month Government of Canada Treasury Bill yield plus 2.79%. Holders of the Series 44 shares may convert their shares on a one-for-one basis into Series 43 shares, subject to certain conditions, on July 31, 2025 and on July 31 every five years thereafter.

Subject to regulatory approval and certain provisions of the shares, we may redeem all or any part of the then outstanding Series 43 shares at par on July 31, 2020 and on July 31 every five years thereafter; we may redeem all or any part of the then outstanding Series 44 shares at par on July 31, 2025 and on July 31 every five years thereafter.

Non-cumulative Rate Reset Class A Preferred Shares Series 45 (NVCC) (Series 45 shares)
For the initial five year period to the earliest redemption date of July 31, 2022, the Series 45 shares pay quarterly cash dividends, if declared, at a rate of 4.40%. On July 31, 2022, and on July 31 every five years thereafter, the dividend rate will reset to be equal to the then current five-year Government of Canada bond yield plus 3.38%.

Holders of the Series 45 shares will have the right to convert their shares on a one-for-one basis into Non-cumulative Floating Rate Class A Preferred Shares Series 46 (NVCC) (Series 46 shares), subject to certain conditions, on July 31, 2022 and on July 31 every five years thereafter. Holders of the Series 46 shares will be entitled to receive a quarterly floating rate dividend, if declared, equal to the three-month Government of Canada Treasury Bill yield plus 3.38%. Holders of the Series 46 shares may convert their shares on a one-for-one basis into Series 45 shares, subject to certain conditions, on July 31, 2027 and on July 31 every five years thereafter.

Subject to regulatory approval and certain provisions of the shares, we may redeem all or any part of the then outstanding Series 45 shares at par on July 31, 2022 and on July 31 every five years thereafter; we may redeem all or any part of the then outstanding Series 46 shares at par on July 31, 2027 and on July 31 every five years thereafter.

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 with the exception of the commercial mortgage securitization trust.

CIBC-sponsored conduits

We manage and administer a single-seller conduit and several CIBC-sponsored multi-seller conduits in Canada. Our 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. Our 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 retained interest. 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 our 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 our 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 our own 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 $45 million in 2017 (2016: $36 million). All fees earned in respect of activities with the conduits are on a market basis.

As at October 31, 2017, the amount funded for the various asset types in our multi-seller conduits amounted to $5.7 billion (2016: $5.4 billion). The estimated weighted-average life of these assets was 1.7 years (2016: 1.5 years). Our holdings of commercial paper issued by our non-consolidated sponsored multi-seller conduits that offer commercial paper to external investors were nil (2016: $10 million). Our committed backstop liquidity facilities to these conduits were $8.7 billion (2016: $7.2 billion). We also provided credit facilities of $40 million (2016: $40 million) to these conduits.

We participated in a syndicated facility for a three-year commitment of $700 million to our single-seller conduit that provides funding to franchisees of a major Canadian retailer. Our portion of the commitment was $130 million (2016: $130 million). As at October 31, 2017, we funded $94 million (2016: $103 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, 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.

Our on- and off-balance sheet amounts related to the structured entities (SEs) that are not consolidated are set out in the table below. For additional details on our SEs, see Note 6 to the consolidated financial statements.

$ millions, as at October 31	2017			2016		
	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	**$ 94**	**$ 5,741** [3]	**$ –**	$ 113	$ 5,500 [3]	$ –
Third-party structured vehicles – continuing	**3,025**	**2,259**	**–**	4,647	1,398	–
Structured vehicles run-off	**109**	**13**	**179**	910	28	319
Other	**528**	**94**	**–**	441	75	–

(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 (2016: $536 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 $148 million (2016: $174 million). Notional of $161 million (2016: $277 million) was hedged with credit derivatives protection from third parties. The fair value of these hedges net of CVA was $130 million (2016: $139 million). An additional notional of $18 million (2016: $36 million) was hedged through a limited recourse note.
(3) Excludes an additional $3.0 billion (2016: $1.8 billion) relating to our backstop liquidity facilities provided to the multi-seller conduits as part of their commitment to fund purchases of additional assets and nil (2016: $10 million) relating to our direct investments in the multi-seller conduits which we consider investment exposure.

Other financial transactions

We are the sponsor of several mutual and pooled funds, in the form of trusts. We are the administrator of these funds. In addition, we may act in other capacities, including custodian, trustee, and broker. We earn fees at market rates from these trusts. We do not guarantee either principal or returns to investors in these funds, except in very limited circumstances. We act as a trustee of a number of personal trusts and have a fiduciary responsibility to act in the best interests of the beneficiaries of the trusts. We earn a fee for acting as a trustee. We also participate in transactions to modify the cash flows of trusts managed by third-party asset managers to create investments with specific risk profiles, or to assist clients in the efficient management of other risks. Typically, these involve the use of derivative products, which transfer the risks and returns to or from a trust.

Derivatives

We participate in derivatives transactions, as a market maker facilitating the needs of our clients or as a principal to manage the risks associated with our funding, investing and trading strategies. All derivatives are recorded at fair value on our consolidated balance sheet. See Notes 12 and 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 12 and 22 to the consolidated financial statements, respectively.

Management of risk

We have provided certain disclosures required under IFRS 7 "Financial Instruments – Disclosures" 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 risk", and "Regulatory compliance risk" sections.

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77 Regulatory compliance risk
77 Environmental risk

Risk overview

CIBC faces a wide variety of risks across all of its areas of business. Identifying and understanding risks and their impact allows CIBC to frame its risk appetite and risk management practices. Defining acceptable levels of risk, and establishing sound principles, policies and practices for managing risks, is fundamental to achieving consistent and sustainable long-term performance, while remaining within our risk appetite.

Our risk appetite defines tolerance levels for various risks. This is the foundation for our risk management culture and our risk management framework.

Our risk management framework includes:

- CIBC and SBU-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 compliance with 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:

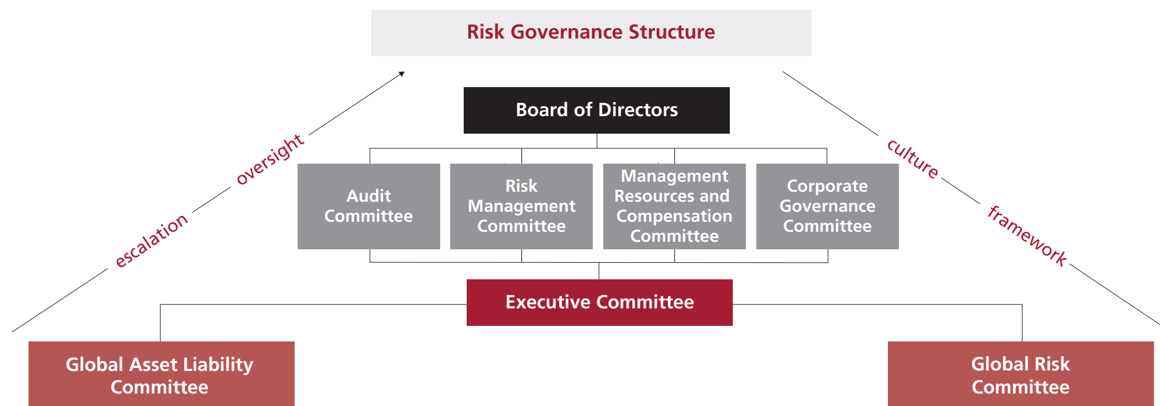
(i) CIBC's lines of business and functional groups own the risk and are responsible for managing all risks associated with their activities, including identifying, assessing, mitigating and controlling them – this is the first line of defence;
(ii) As the second line of defence, CIBC's Risk Management, and other functional groups are responsible for providing guidance and effective independent oversight and challenge of the enterprise-wide risks inherent in CIBC's business activities; and
(iii) As the third line of defence, CIBC's internal audit function provides an independent assessment of the design and operating effectiveness of risk management controls, processes and systems.

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 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 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: 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 policies, procedures and 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 fulfilling its governance and supervisory responsibilities for strategic oversight of CIBC's human capital. This encompasses talent strategy, succession planning and total rewards; and their alignment with CIBC's strategy of building a strong, innovative and relationship-oriented bank, its risk appetite and control framework.

Corporate Governance Committee (CGC): The primary function of the CGC is to assist the Board in fulfilling its corporate governance oversight responsibilities.

Executive Committee (ExCo): The ExCo, led by the 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 committees:

- *Global Asset Liability Committee (GALCO):* This committee, which comprises members from the ExCo and senior Treasury and Risk Management 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. GALCO is supported by four subcommittees – Liquidity Risk Management Committee, Asset Liability Management Committee, Balance Sheet Resource Committee, and Funds Transfer Pricing Committee – that are composed of senior executives with business and oversight responsibilities for the respective activities.
- *Global Risk Committee (GRC):* This committee, which comprises 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 the 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:

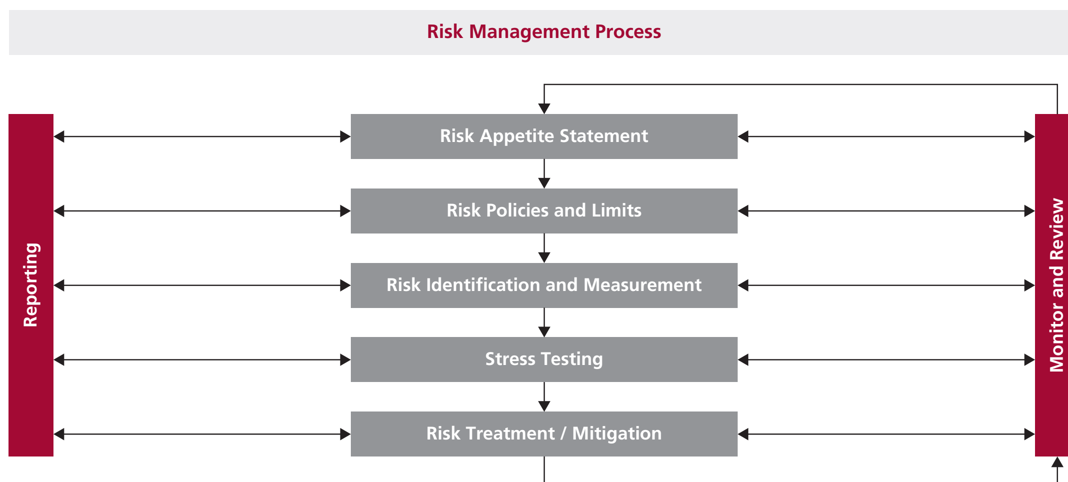
- Developing CIBC's risk appetite and associated management control metrics;
- Setting risk strategy to manage risks in alignment with our risk appetite and business strategy;
- Establishing and communicating risk policies, procedures and limits to control risks in alignment with risk strategy;
- Measuring, 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 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 associated with our commercial, wholesale 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 develops the systems and tools to facilitate the identification of operational risks, and has global accountability for the measurement and monitoring of all operational risk types.
- *Risk Analytics, Reporting and Credit Decisioning* – This group is responsible for enterprise-wide analysis, including enterprise-wide stress testing and reporting, risk policy and governance, risk systems and models, recovery and resolution planning, as well as economic and regulatory capital methodologies. In addition, this group manages credit risk in personal and small business products offered through the various distribution channels (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 anti-money laundering outcomes.
- *Compliance* – This group provides timely and proactive advice and independent oversight of CIBC's compliance with applicable regulatory and anti-money laundering requirements.
- *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 and reporting to the Senior Executive Vice-President, U.S. Region. The group provides independent oversight for the identification, management, measurement, monitoring and control of risks in CIBC's U.S. Commercial Banking and Wealth Management SBU. In addition, the CRO also oversees, through a joint oversight structure, the U.S. CRO, to ensure the relevant aspects of the U.S. Risk Management group are consistent with the above-noted practices.

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 vision, values, and strategy, 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;
- 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; and
- Achieving/maintaining an AA rating.

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

Our CIBC 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 reinforce appropriate behaviours.

Every year, all employees are required to complete formal training on risk appetite, reputation risk, operational risk, code of conduct, anti-money laundering 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

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.

The MRCC oversees the performance management and compensation process. The MRCC is responsible for assisting the Board in fulfilling its governance and supervisory responsibilities for the strategic oversight of CIBC's human capital and overseeing CIBC's compensation policies, processes and practices. 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 changes to existing material compensation policies;
- Reviewing and recommending for Board approval new material compensation plans or changes to existing material plans;
- Assessing the appropriateness and alignment of compensation relative to actual business performance and risks;

- Reviewing and recommending for Board approval incentive compensation funding and allocations, based on an assessment of business performance and risk;
- Reviewing and recommending for Board approval individual compensation for the ExCo 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:

Enterprise-wide Risk Management Framework

Risk Appetite Statement and Risk Appetite Framework

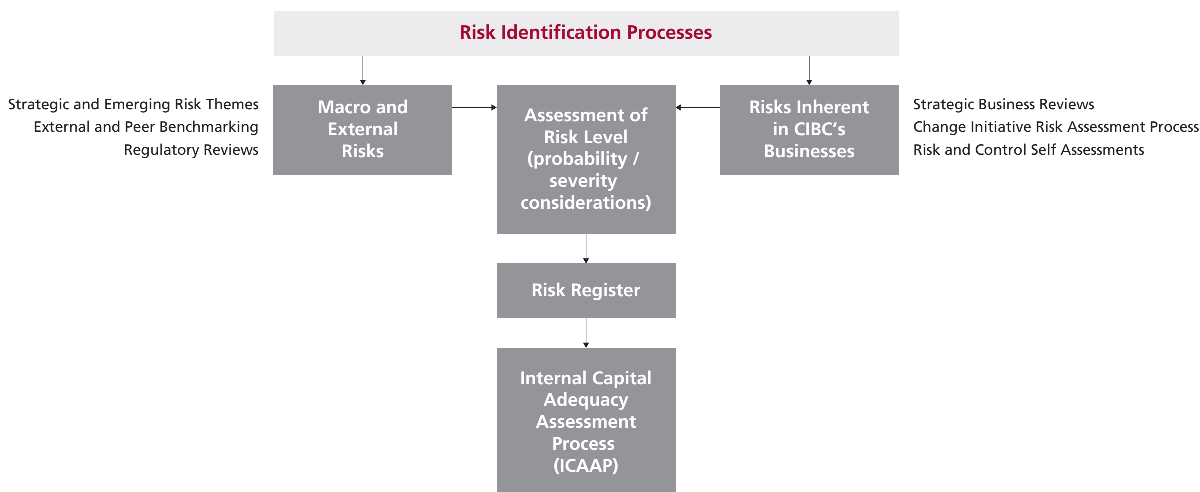
Risk	Overarching Framework / Policy	Risk Limits	Management Oversight
Credit	Credit Risk Management Policy	Credit Concentration Limits Delegated Credit Approval Authorities	Credit Committees Global Risk Committee
Market	Capital Markets Risk Management Policies Structural Risk Management Policy	Market Risk Limits Delegated Risk Authorities	Capital Markets Authorized Products Committee Global Risk Committee Global Asset Liability Committee
Operational	Operational Risk Management Policy Control Framework	Key Risk Indicators	Operational Risk and Control Committee Global Risk Committee
Reputation	Reputation Risk Management Framework and Policy	Key Risk Indicators	Reputation and Legal Risks Committee
Liquidity	Liquidity Risk Management Policy Pledging Policy	Liquidity and Funding Limits Pledging Limits	Global Asset Liability Committee Global Risk Committee
Strategic	Strategic Planning Policy	Risk Appetite Statement	Executive Committee
Regulatory	Regulatory Compliance Management Policy	Key Risk Indicators	Global Risk 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 has developed 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 as an input for 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 materiality, 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 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 and benchmarking of credit exposures.

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 resources" section for additional details.

Model risk mitigation policies

We have policies, procedures, standards and controls that surround the introduction, independent review, usage and parameter selection of pricing and hedge ratio models, risk models (VaR, economic and regulatory capital), retail credit scoring models (e.g., application and behavioural scorecards), credit models for the calculation of loss severity, and models for monitoring of scorecard performance.

A model review and validation is the independent and ongoing documentary evidence that risk quantification and pricing models, rating or scoring systems and parameters are sound and CIBC can rely on the output. The following procedures provide evidence of this review:

- Review of model documentation;
- Comprehensive, systematic testing of the model implementation with respect to pricing, hedge ratio, and parameter estimation routines (as applicable);
- Replication of the risk quantification process helps 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 is conducted 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;
- Reviewing the internal usage of the model/parameter applications to ensure consistency of application;
- Maintaining an inventory of regulatory models and parameters and reporting their status to the Model and Parameter Risk Committee;
- Maintaining a Risk Register to ensure that all material risks are captured to support the end-to-end validation of ICAAP methods; and
- A comprehensive report that identifies the conditions for valid application of the model and summarizing these findings for the Model and Parameter Risk Committee.

Stress testing
Stress testing supplements our other risk management tools by providing an estimate of tail risk (i.e., low probability, high severity events). 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/mitigation
Risk treatment/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 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 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. Onward 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 if required. 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. This section describes the top and emerging risks that we consider to have potential negative implications, as well as regulatory and accounting developments that are material for 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. CIBC has cyber insurance coverage to help mitigate loss associated with cyber incidents.

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.

Given the importance of electronic financial systems, including secure online and mobile banking provided by CIBC to its clients, CIBC continues to develop controls and processes to protect our systems and client information from damage and unauthorized disclosure. CIBC monitors the changing environment globally, including cyber threats, evolving regulatory requirements, and mitigation strategies. In addition, we continually perform cyber security preparedness and testing exercises to validate our defences, benchmark against best practices and provide regular updates to the Board.

Despite our commitment to information and cyber security, CIBC and its related third parties may not be able to fully mitigate all risks associated with the increased complexity and high rate of change in the threat landscape. However, CIBC continuously monitors its risk posture for changes and continues to refine security protection approaches to minimize the impact of any incidents that may occur.

Disintermediation risk
Canadian banking clients are increasingly shifting their service transactions from branches to digital platforms. As such, competitive pressure from digital disruptors, both global technology leaders and smaller financial technology entrants, is increasing and the risk of disintermediation is growing due to the level of sophistication of these non-traditional competitors.

CIBC manages disintermediation risk through strategic risk 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.

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 shocks could hurt the net income of our trading and non-trading market risk positions. Although Canada is unlikely to be directly subject to geo-political risk, the indirect impact of reduced economic growth, as well as potential impacts on commodity prices and the recent rise of protectionism, could have serious negative implications for general economic and banking activities.

Currently, there are several areas of concern which have raised the level of uncertainty in global financial markets. These include tensions between the U.S. and North Korea, the volatile situation in the Middle East, and uncertainties surrounding the North American Free Trade Agreement (NAFTA) and Brexit negotiations. 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.

The administration in the U.S. continues to pose economic policy uncertainties that could either add or subtract to Canadian economic activity. The downside risks would be associated with an increase in protectionism that does not exempt duties on Canadian goods and services, as well as heightened competition for business investment if the U.S. eases up on corporate taxes and regulations. There could also be positive implications for Canada if U.S. growth accelerates due to fiscal stimulus. While the governments of Canada, the U.S. and Mexico recently held discussions relating to NAFTA, with a view to renegotiating specific terms of the agreement, the outcome remains uncertain. We will monitor these developments as details emerge.

Canadian consumer debt and the housing market

As a consequence of historically low interest rates, Canadians have increased debt levels at a pace that has exceeded growth in their income. Most of the increase in household debt levels has been driven by higher levels of mortgage debt, which is tied to the Canadian housing market. The Bank of Canada's recent and potential increases in interest rates can be viewed in concert with measures that OSFI, the Department of Finance and provincial governments are delivering (e.g., tax on foreign ownership, revised mortgage underwriting guidelines) to slow down borrowing and calm the housing market.

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. Therefore, our variable rate borrowers should be able to withstand some increase in interest rates. OSFI recently revised its B-20 rules on mortgage lending. See the "Credit risk" section for further details. While we believe that the probability of a severe housing crash that generates significant losses for mortgage portfolios remains low, increases in rates and new measures put in place elevate the risk associated with an inflated housing market, along with high levels of consumer debt that would be a concern should the economy falter and unemployment rates begin to increase.

In addition, we run our enterprise-wide statistical stress tests at lower home prices to determine potential direct losses, and have also conducted stress tests to assess the impact of rising unemployment rates on borrowers' ability to repay loan obligations.

Acquisition risk

CIBC seeks out acquisition opportunities which align with its strategies, risk appetite and financial goals. The ability to successfully execute these strategies to integrate acquisitions, and the ability to anticipate and manage risks associated with them, are subject to certain factors. These include 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, developing and executing appropriate integration plans, and monitoring performance following the acquisition. However, acquisitions 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.

U.S. banking regulation

In conjunction with our acquisition of The PrivateBank (subsequently rebranded as CIBC Bank USA), completed on June 23, 2017, our wholly-owned subsidiary, CIBC Bancorp USA Inc. (CIBC Bancorp; formerly CIBC Holdco Inc.), became a bank holding company registered under the U.S. Bank Holding Company Act of 1956, as amended, and is subject to regulation as a bank holding company by the U.S. Board of Governors of the Federal Reserve System (Federal Reserve). CIBC Bank USA, as a state-chartered bank with greater than $10 billion of total assets, is subject to regulation by the U.S. Federal Deposit Insurance Corporation (FDIC), the U.S. Consumer Financial Protection Board (CFPB), and the Illinois Department of Financial and Professional Regulation.

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 and the FDIC 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 place limits on our ability to grow our U.S. banking operation, whether through acquisitions or organically, if, among other things, they have supervisory concerns about risk management or compliance practices at CIBC Bancorp or CIBC Bank USA. In addition, the CFPB has been active in recent years in pursuing enforcement actions and imposing fines against U.S. financial institutions for violations of federal consumer protection laws.

Commodity prices

The global growth upturn in 2017 has led to increased commodity prices, although they continue to experience a high degree of fluctuation. Growing geo-political tensions in the Middle East have also provided support to the rally in oil prices.

So far, our overall commodity exposure continues to perform within our risk appetite, with losses in our oil and gas portfolio down significantly. Clients in our oil and gas portfolio are currently being assessed on the basis of our enhanced risk metrics, and our portfolio is being monitored in a prudent manner. We have run our enterprise statistical stress tests at lower oil prices to determine potential direct losses, and have also conducted stress tests to assess the secondary impacts of lower oil prices on our retail portfolio for the affected regions, where we could see higher losses if unemployment trends negatively.

China economic policy risk

While meeting the government-set quarterly targets, China's economy continues to be on a relatively slower growth trajectory as, in addition to cyclical factors, the country tries to rebalance growth from an export-oriented and investment-driven performance to a more sustainable service-oriented and consumption-driven economy. Concerns have been raised regarding high rates of credit growth in the Chinese economy and the potential for disruption in economic growth if credit quality deteriorates or credit access is tightened sharply. The capital controls deployed by the People's Bank of China late last year which were designed to slow capital outflows remain in place and are believed to be having an impact on Canadian cities such as Vancouver and Toronto, where foreign purchasers have contributed to the sharp rise in house prices over recent years. These capital controls could also slow the market in Canada for mergers and acquisitions.

We continue to monitor economic policy both within the country and the region for signs of stress or directional change, and have taken a prudent stance in addressing our tolerance for exposure to the country. We currently have little direct exposure to China, but any negative impact from the Chinese economic slowdown could affect clients that export to China or sell into a market where prices have been pushed down by weakness in Chinese demand, and could raise the credit risk associated with our exposure to trading counterparties.

Anti-money laundering

Recognizing the threat of money laundering, terrorist financing activities and other related crimes to the stability and integrity of a country's financial sector and its broader economy, the international community has made the fight against these illegal activities a priority. Several laws and regulations have been enacted by governments and regulatory bodies globally. As a potential conduit for illegal operations, financial institutions bear a significant responsibility in mitigating the risks associated with these activities.

CIBC is committed to adhering to all regulatory requirements pertaining to Anti-Money Laundering (AML) and Anti-Terrorist Financing (ATF) and implementing best practices to minimize the impact of such activities. As such, CIBC has implemented procedures to ensure that relevant regulatory obligations with respect to the reporting of large cash transactions, electronic funds transfers, and cross-border movements of cash and monetary instruments, are met in each jurisdiction. In addition, all employees are required to complete CIBC's AML/ATF training annually.

Environmental risks and pandemic outbreaks

A number of environmental events have occurred over the past several years, including hurricanes, tsunamis, earthquakes, wildfires, droughts and floods, oil spills, and industrial accidents. There is also concern that the outbreak of certain illnesses could have the potential to reach pandemic levels. In addition to the humanitarian impact, these phenomena, along with the potential impact of climate change, introduce uncertainty and pose risks to the global economy, as well as our clients and our operations.

CIBC monitors these events and has measures in place including disaster recovery, insurance and business continuity programs, to ensure client needs continue to be met.

Regulatory developments

See the "Taxes", "Capital resources", "Credit risk", "Liquidity risk" and "Accounting and control matters" sections for additional information on regulatory developments.

Accounting developments

See the "Accounting and control matters" section and Note 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 RWAs and economic capital as at October 31, 2017:

CIBC

	Canadian Personal and Small Business Banking	Canadian Commercial Banking and Wealth Management	U.S. Commercial Banking and Wealth Management	Capital Markets	Corporate and Other
SBUs	Canadian Personal and Small 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 • Small business lending • Insurance	• Commercial banking • Full service brokerage • Asset management • Private wealth management	• Commercial banking • Asset management • Private wealth management • Personal and small business banking	• Credit products • Global markets • Investment banking • Investment portfolios	• International banking • Investment portfolios • Joint ventures • Functional and support groups (see page 28)
Balance sheet ($ millions)					
Average assets	246,316	50,832	19,905	156,440	68,872
Average deposits	162,904	48,836	7,594	27,983	176,820
CET1 RWA (All-in basis) ($ millions)					
Credit risk	45,215	38,273	30,950 [(1)]	39,527 [(2)]	17,189 [(3)]
Market risk	–	–	52	4,928	412
Operational risk	10,874	5,432	2,386	5,714	258
Capital floor adjustment [(4)]					2,111
Economic capital [(5)] (%)					
Proportion of total CIBC	19	16	33	15	17
Comprising:					
Credit risk [(6)]	56	61	33	71	22
Market risk	31	3	2	9	9
Operational/Strategic risks	13	36	65	20	69

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 risks.

(1) Includes counterparty credit risk of $105 million, which comprises derivatives and repo-style transactions.
(2) Includes counterparty credit risk of $9,448 million, which comprises derivatives and repo-style transactions.
(3) Includes counterparty credit risk of $572 million, which comprises derivatives and repo-style transactions.
(4) Since the introduction of Basel II in 2008, OSFI has prescribed a capital floor requirement for institutions that use the AIRB approach for credit risk. The capital floor is determined by comparing a capital requirement under Basel I and Basel III, as specified by OSFI. Any shortfall in the Basel III capital requirement compared with the Basel I requirement is added to the RWAs. All-in RWAs as at October 31, 2017 include a capital floor adjustment.
(5) For additional information, see the "Non-GAAP measures" section.
(6) Includes investment risk.

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 include our trading activities, including our OTC derivatives, debt securities, and our repo-style transaction activity. In addition to losses on the default of a borrower or counterparty, unrealized gains or losses may occur due to changes in the credit spread of the counterparty, which could impact the carrying or fair value of our assets.

Governance and management

Credit risk is managed through the three lines of defence model. Frontline businesses own the risks and are responsible for identifying and assessing risks inherent in line of business activities, establishing controls to mitigate those risks, and ensuring the ongoing design and operating effectiveness of controls – this is the first line of defence.

The second line of defence is Risk Management and other functional groups, which provide guidance and effective independent challenge of the adjudication and oversight of credit risks associated with CIBC's commercial, wholesale and wealth management activities, as well as risk assessments and decisions for the first line of defence.

Internal Audit provides the third line of defence, by providing reasonable assurance on the effectiveness of governance practices, risk management processes and internal controls.

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. Key groups in Risk Management with credit risk responsibility include:

Capital Markets Risk Management: This group is responsible for independent oversight of trading credit risk, including adjudication of trading credit facilities for non-bank financial institutions where the client has no other credit relationship with CIBC. In addition, Capital Markets Risk Management is responsible for managing the country risk rating and the country exposure limits processes.

Global Credit Risk Management: This group is responsible for the adjudication and oversight of credit risks associated with CIBC's commercial, wholesale and wealth management activities, management of the risks in CIBC's investment portfolios, as well as management of special loan portfolios. This excludes adjudication of some non-bank financial entities, prime brokerage clients and central clearing counterparties trading credit risks where the client has no other credit relationship – adjudication and oversight for these credits is managed by Capital Markets Risk Management.

Risk Analytics, Reporting and Credit Decisioning: This group manages credit risk in personal and small business products offered through the various distribution channels (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 anti-money laundering 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 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 United States.

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 with counterparties by employing the International Swaps and Derivatives Association (ISDA) Master Agreement, as well as Credit Support Annexes (CSAs) or similar agreements. See Note 12 to the consolidated financial statements for additional details on the risks related to the use of derivatives and how we manage these risks.

ISDA Master Agreements 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 are often included in ISDA Master Agreements. They mitigate counterparty credit risk 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 also designate acceptable collateral types, and set out rules for re-hypothecation and interest calculation on collateral.

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 economic or legal reasons related to a borrower's financial difficulties, and we may grant a concession in the form of below-market rates or terms that would not otherwise be considered, for the purpose of maximizing recovery of our exposure to the loan. In circumstances where the concession is considered below market, the modification is reported as a troubled debt restructuring (TDR). TDRs are subject to our normal quarterly impairment review which considers, amongst other factors, covenants and/or payment delinquencies. An appropriate level of loan loss provision by portfolio segment is then established.

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. While these solutions often provide more favourable conditions than those originally provided and are intended to increase the ability of borrowers to service their obligation to CIBC overall, we consider these solutions to be at market and comparable to terms and conditions we would have offered to new clients with comparable credit ratings.

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.

During the year, $347 million (2016: $192 million) of loans have undergone TDR, of which $97 million related to CIBC Bank USA.

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 referred to the Credit Committee, a subcommittee of the GRC, or to the RMC for approval.

After initial approval, individual credit exposures continue to be monitored, with a formal risk assessment, including review of assigned ratings, documented at least annually. Higher risk-rated accounts are subject to closer monitoring and are reviewed at least quarterly. Collections and specialized loan workout groups handle the day-to-day management of high risk loans to maximize recoveries.

Risk measurement

Exposures subject to AIRB approach

Business and government portfolios (excluding scored small business) – risk-rating method

This section describes the portfolio rating categories. The portfolio comprises exposures to corporate, sovereign, and bank obligors. Our adjudication process and criteria includes assigning an obligor rating that reflects our estimate of the financial strength of the borrower, and a facility rating that reflects the security applicable to the exposure.

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.

A mapping between our internal ratings and the ratings used by external ratings agencies is presented in the table below.

Corporate and Banks				
Grade	PD bands	CIBC rating	S&P equivalent	Moody's equivalent
Investment grade	0.03% – 0.42%	10 – 47	AAA to BBB-	Aaa to Baa3
Non-investment grade	0.43% – 12.11%	51 – 67	BB+ to B-	Ba1 to B3
Watch list	12.12% – 99.99%	70 – 80	CCC+ to C	Caa1 to Ca
Default	100%	90	D	C

Sovereigns				
Grade	PD bands	CIBC rating	S&P equivalent	Moody's equivalent
Investment grade	0.01% – 0.42%	00 – 47	AAA to BBB-	Aaa to Baa3
Non-investment grade	0.43% – 12.11%	51 – 67	BB+ to B-	Ba1 to B3
Watch list	12.12% – 99.99%	70 – 80	CCC+ to C	Caa1 to Ca
Default	100%	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. The risk ratings are used for portfolio management, risk limit setting, product pricing, and in the determination of 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. Embedded in our credit policies and criteria is an assessment of risk exposure using the following three dimensions:

- 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 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.

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 of: real estate secured personal lending (residential mortgages and personal loans and lines secured by residential property); qualifying revolving retail exposures (credit cards 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 assessed through statistical techniques, such as credit scoring and computer-based models. 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%

Back-testing

We monitor the three key risk parameters – PD, EAD, and LGD – on a monthly basis. 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. Amounts provided are net of the CVA related to financial guarantors, derivative master netting agreements, and before allowance for credit losses and other risk mitigation. 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			2017			2016
	AIRB approach	**Standardized approach** (1)	**Total**	AIRB approach	Standardized approach (1)	Total
Business and government portfolios						
Corporate						
Drawn	**$ 78,312**	**$ 23,390**	**$ 101,702**	$ 72,807	$ 3,370	$ 76,177
Undrawn commitments	**39,078**	**4,085**	**43,163**	36,845	145	36,990
Repo-style transactions	**76,899**	**39**	**76,938**	53,644	33	53,677
Other off-balance sheet	**13,484**	**697**	**14,181**	18,350	229	18,579
OTC derivatives	**8,990**	**64**	**9,054**	9,001	–	9,001
	216,763	**28,275**	**245,038**	190,647	3,777	194,424
Sovereign						
Drawn	**41,439**	**11,827**	**53,266**	44,055	4,773	48,828
Undrawn commitments	**5,642**	**–**	**5,642**	4,670	–	4,670
Repo-style transactions	**14,374**	**–**	**14,374**	10,020	–	10,020
Other off-balance sheet	**533**	**–**	**533**	753	–	753
OTC derivatives	**2,660**	**–**	**2,660**	3,581	–	3,581
	64,648	**11,827**	**76,475**	63,079	4,773	67,852
Banks						
Drawn	**10,422**	**2,021**	**12,443**	10,715	1,940	12,655
Undrawn commitments	**840**	**8**	**848**	1,011	–	1,011
Repo-style transactions	**21,469**	**–**	**21,469**	22,720	–	22,720
Other off-balance sheet	**64,176**	**–**	**64,176**	62,107	–	62,107
OTC derivatives	**7,527**	**232**	**7,759**	6,005	167	6,172
	104,434	**2,261**	**106,695**	102,558	2,107	104,665
Gross business and government portfolios	**385,845**	**42,363**	**428,208**	356,284	10,657	366,941
Less: repo-style transaction collateral	**101,315**	**–**	**101,315**	76,263	–	76,263
Net business and government portfolios	**284,530**	**42,363**	**326,893**	280,021	10,657	290,678
Retail portfolios						
Real estate secured personal lending						
Drawn	**223,291**	**3,423**	**226,714**	201,580	2,645	204,225
Undrawn commitments	**18,922**	**3**	**18,925**	18,375	–	18,375
	242,213	**3,426**	**245,639**	219,955	2,645	222,600
Qualifying revolving retail						
Drawn	**21,982**	**–**	**21,982**	21,597	–	21,597
Undrawn commitments	**49,140**	**–**	**49,140**	47,140	–	47,140
Other off-balance sheet	**293**	**–**	**293**	319	–	319
	71,415	**–**	**71,415**	69,056	–	69,056
Other retail						
Drawn	**10,755**	**1,158**	**11,913**	9,671	794	10,465
Undrawn commitments	**2,396**	**28**	**2,424**	2,026	26	2,052
Other off-balance sheet	**37**	**–**	**37**	32	–	32
	13,188	**1,186**	**14,374**	11,729	820	12,549
Total retail portfolios	**326,816**	**4,612**	**331,428**	300,740	3,465	304,205
Securitization exposures (2)	**14,174**	**–**	**14,174**	18,863	–	18,863
Gross credit exposure	**726,835**	**46,975**	**773,810**	675,887	14,122	690,009
Less: repo-style transaction collateral	**101,315**	**–**	**101,315**	76,263	–	76,263
Net credit exposure	**$ 625,520**	**$ 46,975**	**$ 672,495**	$ 599,624	$ 14,122	$ 613,746

(1) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details. Credit risk for CIBC Bank USA and CIBC FirstCaribbean are calculated under the standardized approach.
(2) Under IRB approach.

Net credit exposure increased by $58.7 billion in 2017, primarily due to the acquisition of The PrivateBank, as well as business growth in our Canadian lending portfolios.

Exposures subject to the standardized approach

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 exposures before allowance for credit losses by risk-weight category is provided below.

$ millions, as at October 31	Risk-weight category							2017	2016
	0%	20%	35%	50%	75%	100%	150%	Total	Total
Corporate	$ –	$ 69	$ –	$ 17	$ –	$ 28,068	$ 121	$ 28,275	$ 3,777
Sovereign	6,820	4,216	–	110	–	644	37	11,827	4,773
Bank	–	1,893	–	114	–	254	–	2,261	2,107
Real estate secured personal lending	–	–	–	–	3,205	–	221	3,426	2,645
Other retail	–	–	–	–	1,109	24	53	1,186	820
	$ 6,820	$ 6,178	$ –	$ 241	$ 4,314	$ 28,990	$ 432	$ 46,975	$ 14,122

Trading credit exposures

We have trading credit exposure (also called counterparty credit exposure) that arises from our OTC derivatives and our repo-style transactions. The nature of our derivatives exposure and how it is mitigated is further explained in Note 12 to the consolidated financial statements. Our repo-style transactions consist of our securities bought or sold under repurchase agreements, and our securities borrowing and lending activity.

The PD of our counterparties is estimated using models consistent with the models used for our direct lending activity. Due to the fluctuations in the market values of interest rates, exchange rates, and equity and commodity prices, counterparty credit exposure cannot be quantified with certainty at the inception of the trade. Counterparty credit exposure is estimated using the current fair value of the exposure, plus an estimate of the maximum potential future exposure due to changes in the fair value. Credit risk associated with these counterparties is managed within the same process as our lending business, and for the purposes of credit adjudication, the exposure is aggregated with any exposure arising from our lending business. The majority of our counterparty credit exposure benefits from the credit risk mitigation techniques discussed above, including daily re-margining, and posting of collateral.

We are also exposed to wrong-way risk. Specific wrong-way risk arises when CIBC receives financial collateral issued (or an underlying reference obligation of a transaction is issued) by the counterparty itself, or by a related entity that would be considered to be part of the same common risk group. General wrong-way risk arises when the exposure and/or collateral pledged to CIBC is highly correlated to that of the counterparty. Exposure to wrong-way risk with derivative counterparties is monitored by Capital Markets Risk Management. Where we may be exposed to wrong-way risk, our adjudication procedures subject those transactions to a more rigorous approval process. The exposure may be hedged with other derivatives to further mitigate the risk that can arise from these transactions.

We establish a CVA for expected future credit losses from each of our derivative counterparties. The expected future credit loss is a function of our estimates of the PD, the estimated loss in the event of default, and other factors such as risk mitigants.

Rating profile of OTC derivative mark-to-market (MTM) receivables

$ billions, as at October 31	2017 (1)		2016	
	Exposure (2)			
Investment grade	$ 7.19	84.1 %	$ 7.36	82.8 %
Non-investment grade	1.33	15.6	1.43	16.1
Watch list	0.02	0.2	0.03	0.3
Default	0.01	0.1	0.05	0.6
Unrated	–	–	0.02	0.2
	$ 8.55	100.0 %	$ 8.89	100.0 %

(1) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
(2) 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

The following table provides a geographic distribution of our business and government exposures under the AIRB approach. The classification of geography is based upon the country of ultimate risk. Amounts are before allowance for credit losses and risk mitigation, and net of the CVA related to financial guarantors and $101.3 billion (2016: $76.3 billion) of collateral held for our repurchase agreement activities.

$ millions, as at October 31, 2017	Canada	U.S.	Europe	Other	Total
Drawn	$ 80,338	$ 36,261	$ 4,683	$ 8,891	$ 130,173
Undrawn commitments	34,823	7,417	2,133	1,187	45,560
Repo-style transactions	6,962	2,790	1,035	640	11,427
Other off-balance sheet	52,371	19,358	5,900	564	78,193
OTC derivatives	9,133	4,754	3,306	1,984	19,177
	$ 183,627	$ 70,580	$ 17,057	$ 13,266	$ 284,530
October 31, 2016	$ 178,507	$ 73,352	$ 15,833	$ 12,329	$ 280,021

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. Amounts are before allowance for credit losses and risk mitigation, and net of the CVA related to financial guarantors and $101.3 billion (2016: $76.3 billion) of collateral held for our repurchase agreement activities.

$ millions, as at October 31	**Drawn**	**Undrawn commitments**	**Repo-style transactions**	**Other off-balance sheet**	**OTC derivatives**	**2017 Total**	2016 Total
Commercial mortgages	**$ 1,032**	**$ 33**	**$ –**	**$ –**	**$ –**	**$ 1,065**	$ 1,694
Financial institutions	**31,591**	**4,375**	**10,271**	**70,519**	**12,350** (1)	**129,106**	134,727
Retail and wholesale	**4,478**	**2,724**	**–**	**258**	**72**	**7,532**	6,967
Business services	**6,780**	**2,294**	**45**	**551**	**99**	**9,769**	8,682
Manufacturing – capital goods	**2,108**	**2,068**	**–**	**426**	**92**	**4,694**	4,651
Manufacturing – consumer goods	**3,033**	**1,618**	**–**	**230**	**28**	**4,909**	4,546
Real estate and construction	**28,470**	**6,478**	**26**	**964**	**129**	**36,067**	34,549
Agriculture	**5,338**	**1,507**	**–**	**27**	**64**	**6,936**	6,582
Oil and gas	**7,499**	**7,746**	**–**	**1,088**	**1,771**	**18,104**	17,655
Mining	**1,507**	**2,898**	**–**	**702**	**146**	**5,253**	5,104
Forest products	**465**	**459**	**–**	**146**	**13**	**1,083**	1,072
Hardware and software	**938**	**435**	**–**	**31**	**16**	**1,420**	1,108
Telecommunications and cable	**1,169**	**1,142**	**–**	**415**	**124**	**2,850**	2,040
Broadcasting, publishing and printing	**370**	**128**	**–**	**–**	**6**	**504**	889
Transportation	**3,783**	**1,856**	**–**	**444**	**646**	**6,729**	5,867
Utilities	**4,181**	**5,248**	**–**	**2,016**	**617**	**12,062**	11,197
Education, health, and social services	**2,673**	**894**	**21**	**107**	**226**	**3,921**	3,624
Governments	**24,758**	**3,657**	**1,064**	**269**	**2,778**	**32,526**	29,067
	$ 130,173	**$ 45,560**	**$ 11,427**	**$ 78,193**	**$ 19,177**	**$ 284,530**	$ 280,021

(1) Includes nil (2016: $2 million) of fair value net of CVA with financial guarantors hedging our derivative contracts.

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, 2017, we had credit protection purchased totalling $155 million (2016: $161 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, 75% are investment grade 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, 2017	Drawn	Undrawn commitments	Other off-balance sheet	OTC derivatives	Total
Exploration and production	**$ 3,931**	**$ 3,423**	**$ 412**	**$ 838**	**$ 8,604**
Midstream	**1,276**	**1,732**	**24**	**138**	**3,170**
Downstream	**267**	**196**	**71**	**2**	**536**
Integrated	**146**	**1,150**	**409**	**684**	**2,389**
Oil and gas services	**333**	**157**	**32**	**17**	**539**
Petroleum distribution	**1,546**	**1,088**	**140**	**92**	**2,866**
	$ 7,499	**$ 7,746**	**$ 1,088**	**$ 1,771**	**$ 18,104**
October 31, 2016	$ 6,873	$ 7,825	$ 963	$ 1,994	$ 17,655

Credit quality of portfolios

Credit quality of the risk-rated portfolios

The following table provides the credit quality of the risk-rated portfolios, under the AIRB approach. Amounts provided are before allowance for credit losses, and after credit risk mitigation, CVA, and collateral on repurchase agreement activities.

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				**2017**	2016
	EAD				
Obligor grade	**Corporate**	**Sovereign**	**Banks**	**Total**	Total
Investment grade	**$ 89,537**	**$ 50,798**	**$ 85,387**	**$ 225,722**	$ 223,743
Non-investment grade	**54,498**	**568**	**1,160**	**56,226**	51,806
Watch list	**1,171**	**2**	**–**	**1,173**	1,974
Default	**344**	**–**	**–**	**344**	803
Total risk-rated exposure	**$ 145,550**	**$ 51,368**	**$ 86,547**	**$ 283,465**	$ 278,326
LGD estimate	**Corporate**	**Sovereign**	**Banks**	**Total**	Total
Less than 10%	**$ 10,090**	**$ 42,107**	**$ 59,554**	**$ 111,751**	$ 116,963
10% – 25%	**39,926**	**2,598**	**11,916**	**54,440**	50,056
26% – 45%	**68,700**	**4,563**	**14,416**	**87,679**	80,216
46% – 65%	**25,879**	**1,931**	**500**	**28,310**	29,803
66% – 100%	**955**	**169**	**161**	**1,285**	1,288
	$ 145,550	**$ 51,368**	**$ 86,547**	**$ 283,465**	$ 278,326
Strong				**899**	1,467
Good				**131**	127
Satisfactory				**30**	86
Weak				**–**	8
Default				**5**	7
Total slotted exposure				**$ 1,065**	$ 1,695
Total business and government portfolios				**$ 284,530**	$ 280,021

The total exposures increased by $4.5 billion from October 31, 2016, largely attributable to growth in our Canadian lending portfolios. The investment grade category increased by $2.0 billion from October 31, 2016, while the non-investment grade category was up $4.4 billion. The decrease in watch list and default exposures was largely attributable to an improvement in the corporate lending portfolios, related to oil and gas and our exited European leveraged finance portfolio.

Credit quality of the retail portfolios

The following table presents the credit quality of the retail portfolios, under the AIRB approach. Amounts provided are before allowance for credit losses and after credit risk mitigation.

$ millions, as at October 31				**2017**	2016
	EAD				
Risk level	**Real estate secured personal lending**	**Qualifying revolving retail**	**Other retail**	**Total**	Total
Exceptionally low	**$ 192,583**	**$ 38,444**	**$ 3,689**	**$ 234,716**	$ 223,014
Very low	**24,861**	**10,437**	**1,208**	**36,506**	27,093
Low	**20,727**	**12,899**	**4,725**	**38,351**	34,980
Medium	**3,376**	**8,271**	**2,789**	**14,436**	12,991
High	**426**	**1,319**	**721**	**2,466**	2,373
Default	**240**	**45**	**56**	**341**	289
	$ 242,213	**$ 71,415**	**$ 13,188**	**$ 326,816**	$ 300,740

Securitization exposures

The following table provides details on our securitization exposures by credit ratings under the IRB approach.

$ millions, as at October 31	**2017**	2016
S&P rating equivalent	EAD (1)	
AAA to BBB-	**$ 11,196**	$ 11,227
BB+ to BB-	**–**	–
Below BB-	**13**	13
Unrated	**2,960**	7,367
	$ 14,169	$ 18,607

(1) EAD under IRB approach is net of financial collateral of $5 million (2016: $256 million).

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 tables provide details on our residential mortgage and HELOC portfolios:

	Residential mortgages				HELOC [1]		Total			
$ billions, as at October 31, 2017	Insured		Uninsured		Uninsured		Insured		Uninsured	
Ontario [2]	**$ 41.4**	**41 %**	**$ 60.3**	**59 %**	**$ 11.3**	**100 %**	**$ 41.4**	**37 %**	**$ 71.6**	**63 %**
British Columbia and territories [3]	**14.8**	**34**	**28.5**	**66**	**4.4**	**100**	**14.8**	**31**	**32.9**	**69**
Alberta	**15.8**	**61**	**10.2**	**39**	**2.8**	**100**	**15.8**	**55**	**13.0**	**45**
Quebec	**7.3**	**51**	**7.1**	**49**	**1.5**	**100**	**7.3**	**46**	**8.6**	**54**
Central prairie provinces	**4.7**	**62**	**2.9**	**38**	**0.9**	**100**	**4.7**	**55**	**3.8**	**45**
Atlantic provinces	**5.2**	**61**	**3.3**	**39**	**0.8**	**100**	**5.2**	**56**	**4.1**	**44**
Canadian portfolio [4][5]	**89.2**	**44**	**112.3**	**56**	**21.7**	**100**	**89.2**	**40**	**134.0**	**60**
U.S. portfolio [4][6]	**–**	**–**	**0.9**	**100**	**0.1**	**100**	**–**	**–**	**1.0**	**100**
International portfolio [4]	**–**	**–**	**2.5**	**100**	**–**	**–**	**–**	**–**	**2.5**	**100**
Total portfolio	**$ 89.2**	**44 %**	**$ 115.7**	**56 %**	**$ 21.8**	**100 %**	**$ 89.2**	**39 %**	**$ 137.5**	**61 %**
October 31, 2016	$ 97.4	53 %	$ 85.9	47 %	$ 20.3	100 %	$ 97.4	48 %	$ 106.2	52 %

(1) We did not have any insured HELOCs as at October 31, 2017 and 2016.
(2) Includes $20.4 billion (2016: $22.7 billion) of insured residential mortgages, $41.5 billion (2016: $28.3 billion) of uninsured residential mortgages, and $6.6 billion (2016: $5.8 billion) of HELOCs in the Greater Toronto Area (GTA).
(3) Includes $6.9 billion (2016: $7.8 billion) of insured residential mortgages, $21.1 billion (2016: $17.2 billion) of uninsured residential mortgages, and $2.7 billion (2016: $2.5 billion) of HELOCs in the Greater Vancouver Area (GVA).
(4) Geographic location is based on the address of the property.
(5) 74% (2016: 77%) 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.
(6) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.

The average LTV ratios[1] for our uninsured Canadian and international residential mortgages and HELOCs originated during the year are provided in the following table. We did not acquire uninsured residential mortgages or HELOCs from a third-party for the years presented in the table below.

For the year ended October 31	**2017**		2016	
	Residential mortgages	**HELOC**	Residential mortgages	HELOC
Ontario [2]	**64 %**	**67 %**	64 %	69 %
British Columbia and territories [3]	**60**	**64**	60	64
Alberta	**68**	**72**	68	72
Quebec	**68**	**72**	67	72
Central prairie provinces	**69**	**73**	69	73
Atlantic provinces	**72**	**73**	72	73
Canadian portfolio [4]	**64 %**	**67 %**	64 %	68 %
U.S. Portfolio [4][5]	**71**	**69**	n/a	n/a
International portfolio [4]	**73 %**	**n/m**	71 %	n/m

(1) LTV ratios for newly originated 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% (2016: 62%).
(3) Average LTV ratios for our uninsured GVA residential mortgages originated during the year were 58% (2016: 57%).
(4) Geographic location is based on the address of the property.
(5) Includes the results of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
n/a Not applicable.
n/m Not meaningful.

The following table provides the average LTV ratios on our total Canadian residential mortgage portfolio:

	Insured	Uninsured
October 31, 2017 [1][2]	**54 %**	**53 %**
October 31, 2016 [1][2]	57 %	56 %

(1) LTV ratios for residential mortgages are calculated based on weighted average. The house price estimates for October 31, 2017 and 2016 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, 2017 and 2016, 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 49% (2016: 53%). Average LTV ratio on our uninsured GVA residential mortgage portfolio was 43% (2016: 46%).

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 larger than the minimum contractual amount and/or higher frequency of payments.

Contractual payment basis

	Less than 5 years	5 – 10 years	10 – 15 years	15 – 20 years	20 – 25 years	25 – 30 years	30 – 35 years	35 years and above
Canadian portfolio								
October 31, 2017	**– %**	**1 %**	**2 %**	**5 %**	**37 %**	**53 %**	**2 %**	**– %**
October 31, 2016	– %	– %	3 %	6 %	30 %	58 %	3 %	– %
U.S. portfolio								
October 31, 2017 (1)	**– %**	**3 %**	**13 %**	**15 %**	**13 %**	**50 %**	**3 %**	**3 %**
October 31, 2016	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
International portfolio								
October 31, 2017	**8 %**	**15 %**	**26 %**	**23 %**	**17 %**	**10 %**	**1 %**	**– %**
October 31, 2016	8 %	16 %	27 %	24 %	16 %	8 %	1 %	– %

(1) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
n/a Not applicable.

Current customer payment basis

	Less than 5 years	5 – 10 years	10 – 15 years	15 – 20 years	20 – 25 years	25 – 30 years	30 – 35 years	35 years and above
Canadian portfolio								
October 31, 2017	**2 %**	**4 %**	**7 %**	**11 %**	**35 %**	**36 %**	**5 %**	**– %**
October 31, 2016	2 %	5 %	8 %	12 %	34 %	37 %	2 %	– %
U.S. portfolio								
October 31, 2017 (1)	**– %**	**4 %**	**14 %**	**15 %**	**13 %**	**46 %**	**2 %**	**6 %**
October 31, 2016	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
International portfolio								
October 31, 2017	**8 %**	**15 %**	**26 %**	**23 %**	**17 %**	**9 %**	**1 %**	**1 %**
October 31, 2016	8 %	16 %	26 %	23 %	16 %	8 %	2 %	1 %

(1) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
n/a Not applicable.

In October 2016, the Minister of Finance announced changes to strengthen the housing market that imposed the use of the government-posted mortgage qualifying rates on a wider range of insured mortgages, and closed loopholes related to the principal residence exemption for capital gains taxes. There is ongoing consultation with market participants on an approach to implement risk sharing for insured mortgages (i.e., sharing losses between banks and insurers).

In August 2016, the government of British Columbia introduced a 15% property transfer tax on the purchase of real estate in the GVA and surrounding regions by foreign buyers. In April 2017, the Ontario government introduced a number of housing-related regulations, including a 15% foreign buyers' tax in the GTA and surrounding regions. Indications have shown that residential real estate activity, including sales and average resale prices, have slowed in the GTA since the new tax was introduced, while the GVA has seen renewed activity levels after an initial decline. CIBC will continue to closely monitor the housing markets and the performance of our credit portfolios in these two regions, and will take risk mitigation action as required.

In October 2017, OSFI released final updates to its B-20 guidelines, which will come into effect on January 1, 2018. The guidelines introduce a number of key changes to qualifying interest rates for uninsured mortgages, dynamic and adjusted LTV ratios and more prescriptive guidance around the definitions of non-conforming loans.

Reflective of the government and regulatory measures noted above, in addition to changes in consumer behaviour, we expect our insured mortgage mix as a proportion of total mortgages to continue to decrease. We also anticipate that the change in rules may make it more difficult for certain Canadians to qualify for mortgages, which could result in fewer and/or smaller originations going forward.

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, 2017, our Canadian condominium mortgages were $23.8 billion (2016: $20.6 billion), of which 44% (2016: 54%) were insured. Our drawn developer loans were $0.9 billion (2016: $0.7 billion), or 0.9% (2016: 0.8%) of our business and government portfolio, and our related undrawn exposure was $2.4 billion (2016: $2.2 billion). The condominium developer exposure is diversified across 87 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, 2017, total loans and acceptances after allowance for credit losses were $365.6 billion (2016: $319.8 billion). Consumer loans (comprising residential mortgages, credit cards, and personal loans, including student loans) constitute 71% (2016: 74%) of the portfolio, and business and government loans (including acceptances) constitute the remainder of the portfolio.

Consumer loans were up by $22.9 billion or 10% from the prior year, primarily due to an increase in residential mortgages of $20.0 billion. Business and government loans (including acceptances) were up $22.8 billion or 27% from the prior year, mainly attributable to the inclusion of the results of CIBC Bank USA.

The following table provides details of our impaired loans and allowances for credit losses:

$ millions, as at or for the year ended October 31			**2017**			2016
	Business and government loans	**Consumer loans**	**Total**	Business and government loans	Consumer loans	Total
Gross impaired loans						
Balance at beginning of year	**$ 951**	**$ 707**	**$ 1,658**	$ 659	$ 760	$ 1,419
Classified as impaired during the year	**346**	**1,368**	**1,714**	1,100	1,222	2,322
Transferred to not impaired during the year	**(42)**	**(157)**	**(199)**	(16)	(125)	(141)
Net repayments	**(406)**	**(310)**	**(716)**	(405)	(266)	(671)
Amounts written off	**(131)**	**(926)**	**(1,057)**	(259)	(894)	(1,153)
Recoveries of loans and advances previously written off	**–**	**–**	**–**	–	–	–
Disposals of loans	**(169)**	**–**	**(169)**	(156)	–	(156)
Purchased credit-impaired loans [(1)]	**93**	**12**	**105**	–	–	–
Foreign exchange and other	**(16)**	**(10)**	**(26)**	28	10	38
Balance at end of year	**$ 626**	**$ 684**	**$ 1,310**	$ 951	$ 707	$ 1,658
Allowance for impairment [(2)]						
Balance at beginning of year	**$ 259**	**$ 313**	**$ 572**	$ 313	$ 333	$ 646
Amounts written off	**(131)**	**(926)**	**(1,057)**	(259)	(894)	(1,153)
Recoveries of amounts written off in previous years	**20**	**173**	**193**	14	169	183
Charge to income statement	**78**	**751**	**829**	208	724	932
Interest accrued on impaired loans	**(18)**	**(8)**	**(26)**	(20)	(9)	(29)
Disposals of loans	**–**	**–**	**–**	–	–	–
Foreign exchange and other	**(17)**	**(17)**	**(34)**	3	(10)	(7)
Balance at end of year	**$ 191**	**$ 286**	**$ 477**	$ 259	$ 313	$ 572
Net impaired loans						
Balance at beginning of year	**$ 692**	**$ 394**	**$ 1,086**	$ 346	$ 427	$ 773
Net change in gross impaired	**(325)**	**(23)**	**(348)**	292	(53)	239
Net change in allowance	**68**	**27**	**95**	54	20	74
Balance at end of year	**$ 435**	**$ 398**	**$ 833**	$ 692	$ 394	$ 1,086
Net impaired loans as a percentage of net loans and acceptances			**0.23%**			0.34%

(1) Includes the results of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
(2) Includes collective allowance relating to personal, scored small business and mortgage impaired loans that are greater than 90 days delinquent, and individual allowance.

Gross impaired loans

As at October 31, 2017, gross impaired loans were $1,310 million, down $348 million from the prior year. The decrease was mainly due to reductions in the oil and gas sector and in our exited European leveraged finance portfolio, as well as the impact of U.S. dollar depreciation on our existing portfolio. These factors were partially offset by the inclusion of the results of CIBC Bank USA and a new impairment in our pre-existing U.S. real estate finance portfolio.

Approximately 39% of gross impaired loans related to Canada, of which the residential mortgages and personal lending portfolios accounted for the majority.

Approximately 33% of gross impaired loans related to CIBC FirstCaribbean, of which the residential mortgages, real estate and construction, and personal lending portfolios accounted for the majority.

The remaining gross impaired loans related to the U.S., of which the real estate and construction, and the oil and gas sectors accounted for the majority.

Additional details on the geographic distribution and industry classification of impaired loans are provided in the "Supplementary annual financial information" section.

Allowance for impairment

Allowance for impairment was $477 million, down $95 million from the prior year.

The decrease was primarily due to decreases in our exited European leveraged finance portfolio, the residential mortgage portfolio of CIBC FirstCaribbean, and the oil and gas sector, as well as the impact of U.S. dollar depreciation on our existing portfolio. These factors were partially offset by a new impairment in our pre-existing U.S. real estate finance portfolio.

Exposure to certain countries and regions

Over the past several years, a number of countries in Europe experienced credit concerns. The following tables provide 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 allowances, if any), deposits with banks (stated at amortized cost net of allowances, if any) and securities (stated at fair value); (B) unfunded – unutilized credit commitments, letters of credit, and guarantees (stated at notional amount net of allowances, if any) and sold credit default swap (CDS) contracts where we do not benefit from subordination (stated at notional amount less fair value); 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 39% (2016: 34%) 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		
$ millions, as at October 31, 2017	Corporate	Sovereign	Bank	Total funded (A)	Corporate	Bank	Total unfunded (B)
Austria	$ –	$ 310	$ –	$ 310	$ –	$ 2	$ 2
Belgium	6	–	3	9	–	–	–
Finland	–	1	13	14	62	–	62
France	39	–	51	90	70	9	79
Germany	218	849	614	1,681	283	24	307
Ireland	18	–	2	20	–	13	13
Italy	–	–	1	1	–	–	–
Luxembourg	2	–	–	2	5	36	41
Netherlands	234	79	51	364	139	56	195
Spain	2	–	2	4	–	–	–
Total Eurozone	$ 519	$ 1,239	$ 737	$ 2,495	$ 559	$ 140	$ 699
Czech Republic	$ –	$ –	$ –	$ –	$ –	$ –	$ –
Denmark	–	–	17	17	–	22	22
Norway	–	117	4	121	307	–	307
Sweden	29	242	24	295	75	–	75
Switzerland	179	–	27	206	120	–	120
Turkey	–	–	61	61	–	4	4
United Kingdom	922	427	478	1,827	2,824	201	3,025
Total non-Eurozone	$ 1,130	$ 786	$ 611	$ 2,527	$ 3,326	$ 227	$ 3,553
Total Europe [1]	$ 1,649	$ 2,025	$ 1,348	$ 5,022	$ 3,885	$ 367	$ 4,252
October 31, 2016	$ 1,684	$ 1,401	$ 1,488	$ 4,573	$ 3,347	$ 296	$ 3,643

(1) Includes nil (2016: $162 million) of loans, net of allowance, related to the discontinued European leveraged finance business.

	Direct exposures (continued)						
	Derivative MTM receivables and repo-style transactions						
$ millions, as at October 31, 2017	Corporate	Sovereign	Bank	Gross exposure [1]	Collateral held [2]	Net exposure (C)	Total direct exposure (A)+(B)+(C)
Austria	$ –	$ 2	$ 28	$ 30	$ 25	$ 5	$ 317
Belgium	–	–	12	12	12	–	9
Finland	3	–	–	3	–	3	79
France	27	1	2,968	2,996	2,965	31	200
Germany	26	–	1,180	1,206	1,150	56	2,044
Ireland	–	–	2,265	2,265	2,212	53	86
Italy	–	–	3	3	–	3	4
Luxembourg	–	–	34	34	–	34	77
Netherlands	21	–	61	82	58	24	583
Spain	–	–	37	37	37	–	4
Total Eurozone	$ 77	$ 3	$ 6,588	$ 6,668	$ 6,459	$ 209	$ 3,403
Czech Republic	$ –	$ 1,656	$ –	$ 1,656	$ 1,569	$ 87	$ 87
Denmark	–	–	3	3	3	–	39
Norway	–	295	–	295	295	–	428
Sweden	9	–	307	316	305	11	381
Switzerland	–	–	3,682	3,682	3,525	157	483
Turkey	–	–	–	–	–	–	65
United Kingdom	628	–	3,823	4,451	3,749	702	5,554
Total non-Eurozone	$ 637	$ 1,951	$ 7,815	$ 10,403	$ 9,446	$ 957	$ 7,037
Total Europe	$ 714	$ 1,954	$ 14,403	$ 17,071	$ 15,905	$ 1,166	$ 10,440
October 31, 2016	$ 746	$ 1,056	$ 10,109	$ 11,911	$ 10,805	$ 1,106	$ 9,322

(1) The amounts shown are net of CVA.
(2) Collateral on derivative MTM receivables was $1.0 billion (2016: $1.2 billion), collateral on repo-style transactions was $14.9 billion (2016: $9.6 billion), and both are composed of cash and investment grade debt securities.

In addition to the European exposure identified above, we have $1 million (2016: $132 million) of indirect exposure, which comprises securities (primarily collateralized loan obligations (CLOs) classified as loans on our consolidated balance sheet). Our gross exposure before subordination is stated at carrying value.

We also have $181 million (2016: $399 million) of indirect exposure to European entities, as we hold debt or equity securities issued by European entities as collateral for our securities lending and borrowing 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 our other selected activities within our continuing and exited businesses that may be of particular interest to investors based on their risk characteristics and the current market environment.

Structured credit run-off business

In 2008, management made a decision to wind down our exposure in the structured credit business. The following table provides a summary of our exposures:

US$ millions, as at October 31	Investments and loans (1)				Written credit derivatives, liquidity and credit facilities		Purchased credit protection: Financial guarantors		Purchased credit protection: Other counterparties	
	Notional	Fair value of trading, AFS and FVO securities	Fair value of securities classified as loans	Carrying value of securities classified as loans	Notional	Fair value	Notional	Fair value net of CVA	Notional	Fair value net of CVA
2017	**$ 188**	**$ 73**	**$ 9**	**$ 9**	**$ 135**	**$ 100**	**$ –**	**$ –**	**$ 125**	**$ 100**
2016	$ 611	$ 252	$ 236	$ 236	$ 3,695	$ 120	$ 282	$ 2	$ 3,821	$ 103

(1) Excluded from the table above are equity AFS securities that we obtained in consideration for commutation of our U.S. residential mortgage market (USRMM) contracts with financial guarantors with a carrying value of US$7 million (2016: US$5 million).

As at October 31, 2017, our significant positions in investments and loans include:

- Notes that were originally received in exchange for our non-bank sponsored ABCP in January 2009, upon the ratification of the Montreal Accord restructuring, which include loans classified at amortized cost with a notional value of US$48 million and fair value and carrying value of nil; and
- US$83 million notional value of collateralized debt obligations (CDOs) consisting of trust preferred securities collateral, which are Tier I Innovative Capital Instruments issued by U.S. regional banks and insurers. These securities are classified as FVO securities and had a fair value of US$73 million.

As at October 31, 2017, our significant positions in written and purchased credit derivatives include:

- USRMM CDO positions consisting of a written and purchased credit derivative with the same notional value of US$125 million.

Net income for the year was $17 million (US$13 million), compared with $2 million (US$2 million) in 2016. During the year, our exposure significantly decreased due to maturities and unwinds, including the maturity of a corporate debt exposure in the first quarter of 2017, where CIBC had purchased and sold credit protection with a notional value of US$3.3 billion.

U.S. real estate lending

In our U.S. Commercial Banking and Wealth Management SBU, we operate a full-service real estate platform which offers credit to mid-market clients. 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, 2017, the portfolio was $95 million (October 31, 2016: $105 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.

Market risk

Market risk is the risk of economic financial loss in our trading and non-trading portfolios from adverse changes in underlying market factors, including interest rates, foreign exchange rates, equity market prices, commodity prices, credit spreads, and customer behaviour for retail products. 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. Frontline businesses are responsible for managing the market risk associated with their activities – this is the first line of defence.

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 provides the third line of defence, with independent assessment of the design and operating effectiveness of risk management controls, processes and systems.

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, 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. Tier 3 limits are set on VaR and a variety of metrics including stress.

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 control 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 CDS;
  - Equity risk measures the impact of changes in equity prices and volatilities, including implied market corrections;
  - 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; and
  - 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 ten 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; and
- Stress testing and scenario analyses provide insight into portfolio behaviour under extreme circumstances.

The following table provides balances on the consolidated balance sheet which are subject to market risk. Certain differences between accounting and risk classifications are detailed in the footnotes below:

$ millions, as at October 31	**2017** (1)				2016				
		Subject to market risk				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	**$ 3,440**	**$ –**	**$ 1,940**	**$ 1,500**	$ 3,500	$ –	$ 1,645	$ 1,855	Foreign exchange
Interest-bearing deposits with banks	**10,712**	**426**	**10,286**	**–**	10,665	347	10,318	–	Interest rate
Securities	**93,419**	**48,900** (2)	**44,519**	**–**	87,423	48,066 (2)	39,357	–	Equity, interest rate
Cash collateral on securities borrowed	**5,035**	**–**	**5,035**	**–**	5,433	–	5,433	–	Interest rate
Securities purchased under resale agreements	**40,383**	**–**	**40,383**	**–**	28,377	–	28,377	–	Interest rate
Loans									
Residential mortgages	**207,271**	**–**	**207,271**	**–**	187,298	–	187,298	–	Interest rate
Personal	**40,937**	**–**	**40,937**	**–**	38,041	–	38,041	–	Interest rate
Credit card	**12,378**	**–**	**12,378**	**–**	12,332	–	12,332	–	Interest rate
Business and government	**97,766**	**13,809** (3)	**83,957**	**–**	71,437	6,536 (3)	64,901	–	Interest rate
Allowance for credit losses	**(1,618)**	**–**	**(1,618)**	**–**	(1,691)	–	(1,691)	–	Interest rate
Derivative instruments	**24,342**	**21,120** (4)	**3,222**	**–**	27,762	24,130 (4)	3,632	–	Interest rate, foreign exchange
Customers' liability under acceptances	**8,824**	**–**	**8,824**	**–**	12,364	–	12,364	–	Interest rate
Other assets	**22,375**	**955**	**12,411**	**9,009**	18,416	1,466	9,190	7,760	Interest rate, equity, foreign exchange
	$ 565,264	**$ 85,210**	**$ 469,545**	**$ 10,509**	$ 501,357	$ 80,545	$ 411,197	$ 9,615	
Deposits	**$439,706**	**$ 510** (5)	**$ 391,831**	**$ 47,365**	$ 395,647	$ 331 (5)	$ 352,522	$ 42,794	Interest rate
Obligations related to securities sold short	**13,713**	**13,682**	**31**	**–**	10,338	10,256	82	–	Interest rate
Cash collateral on securities lent	**2,024**	**–**	**2,024**	**–**	2,518	–	2,518	–	Interest rate
Obligations related to securities sold under repurchase agreements	**27,971**	**–**	**27,971**	**–**	11,694	–	11,694	–	Interest rate
Derivative instruments	**23,271**	**21,029** (4)	**2,242**	**–**	28,807	24,433 (4)	4,374	–	Interest rate, foreign exchange
Acceptances	**8,828**	**–**	**8,828**	**–**	12,395	–	12,395	–	Interest rate
Other liabilities	**15,305**	**1,323**	**7,022**	**6,960**	12,919	927	5,445	6,547	Interest rate
Subordinated indebtedness	**3,209**	**–**	**3,209**	**–**	3,366	–	3,366	–	Interest rate
	$ 534,027	**$ 36,544**	**$ 443,158**	**$ 54,325**	$ 477,684	$ 35,947	$ 392,396	$ 49,341	

(1) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
(2) Excludes securities in the structured credit run-off business of $3 million (2016: $496 million), and certain other securities that are considered non-trading for market risk purposes.
(3) Excludes $95 million (2016: $103 million) of loans that are warehoused for future securitization purposes. These are considered non-trading for market risk purposes.
(4) Excludes derivatives relating to the structured credit and other run-off businesses which are considered non-trading for market risk purposes.
(5) 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; and
- 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	**2017**				2016			
	High	**Low**	**As at**	**Average**	High	Low	As at	Average
Interest rate risk	**$ 6.9**	**$ 1.8**	**$ 3.9**	**$ 4.1**	$ 4.4	$ 1.2	$ 2.1	$ 2.2
Credit spread risk	**3.8**	**0.7**	**0.9**	**2.1**	7.0	1.7	2.5	3.4
Equity risk	**18.5**	**1.8**	**3.1**	**3.3**	6.0	1.4	4.2	2.9
Foreign exchange risk	**10.3**	**0.8**	**1.2**	**3.2**	5.0	0.7	1.8	1.8
Commodity risk	**5.1**	**1.3**	**3.2**	**2.6**	5.6	1.0	2.9	1.9
Debt specific risk	**2.0**	**0.7**	**1.6**	**1.3**	2.1	0.8	1.1	1.3
Diversification effect [1]	**n/m**	**n/m**	**(8.8)**	**(10.1)**	n/m	n/m	(9.0)	(7.7)
Total VaR (one-day measure)	**$ 22.2**	**$ 3.7**	**$ 5.1**	**$ 6.5**	$ 9.9	$ 3.1	$ 5.6	$ 5.8

(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, 2017 was up $0.7 million from the prior year. The increase was driven by an increase in interest rate, foreign exchange, commodity, and equity risks, partially offset by a decrease in credit spread risk.

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 10, 2008 to September 8, 2009.

Stressed VaR by risk type – trading portfolio

$ millions, as at or for the year ended October 31	**2017**				2016			
	High	**Low**	**As at**	**Average**	High	Low	As at	Average
Interest rate risk	**$ 32.2**	**$ 6.4**	**$ 25.2**	**$ 15.1**	$ 21.5	$ 5.2	$ 11.7	$ 9.4
Credit spread risk	**13.8**	**4.1**	**5.6**	**7.9**	14.9	8.0	11.4	11.2
Equity risk	**11.3**	**0.8**	**1.9**	**2.2**	5.0	0.9	2.7	2.0
Foreign exchange risk	**28.2**	**0.6**	**1.8**	**7.1**	13.1	0.5	1.1	2.8
Commodity risk	**9.2**	**1.4**	**3.4**	**4.3**	8.9	1.5	3.1	3.2
Debt specific risk	**5.0**	**2.3**	**4.4**	**3.4**	4.5	1.9	2.6	2.9
Diversification effect [1]	**n/m**	**n/m**	**(35.6)**	**(27.9)**	n/m	n/m	(25.8)	(22.0)
Stressed total VaR (one-day measure)	**$ 35.0**	**$ 5.4**	**$ 6.7**	**$ 12.1**	$ 16.1	$ 4.9	$ 6.8	$ 9.5

(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, 2017 was up $2.6 million from the prior year. The increase was driven by an increase in interest rate, foreign exchange, commodity, debt specific, and equity risks, partially offset by a reduction in credit spread 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	**2017**				2016			
	High	**Low**	**As at**	**Average**	High	Low	As at	Average
Default risk	**$ 329.1**	**$ 69.4**	**$ 69.5**	**$ 110.5**	$ 102.5	$ 42.2	$ 72.0	$ 64.6
Migration risk	**145.1**	**27.3**	**77.9**	**64.0**	80.3	21.1	57.9	32.8
IRC (one-year measure) [1]	**$ 387.8**	**$ 122.2**	**$ 147.4**	**$ 174.5**	$ 137.1	$ 73.0	$ 129.9	$ 97.4

(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, 2017 was up $77.1 million from the prior year due to increases in inventory size in the trading 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 contents of the portfolio remained unchanged. The back-testing process is conducted on a daily basis at the consolidated CIBC level. Back-testing is also performed for business lines and individual portfolios.

Static profit and loss and trading losses 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.

Internal Audit also reviews our models, validation processes, and results of our back-testing. 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 no negative back-testing breaches of the total VaR measure.

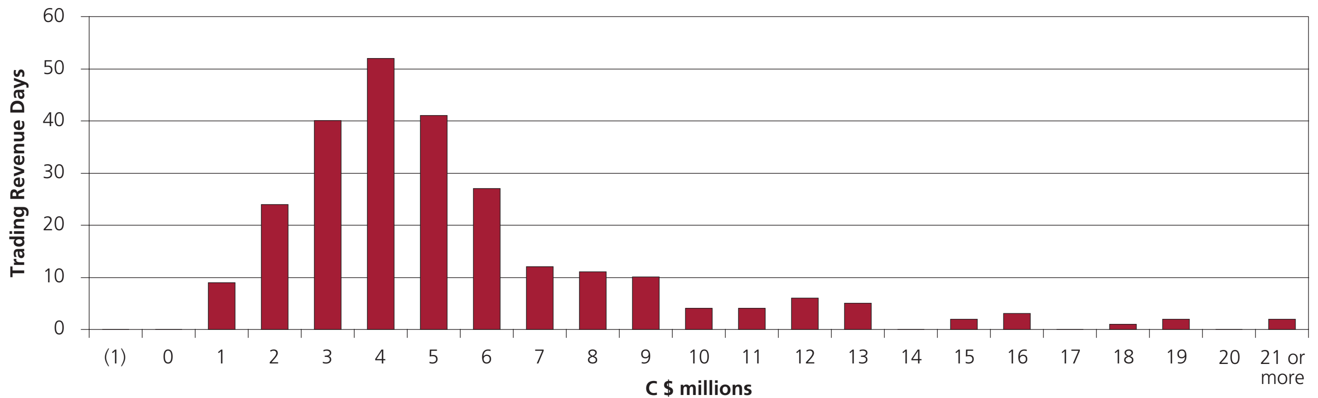
Trading revenue

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 100% of the days[(1)]. The largest gain of $20.8 million occurred on January 24, 2017. It was attributable to a large client transaction in our equity derivatives business. Average daily trading revenue (TEB) was $5.3 million during the year, and the average daily TEB was $1.2 million.

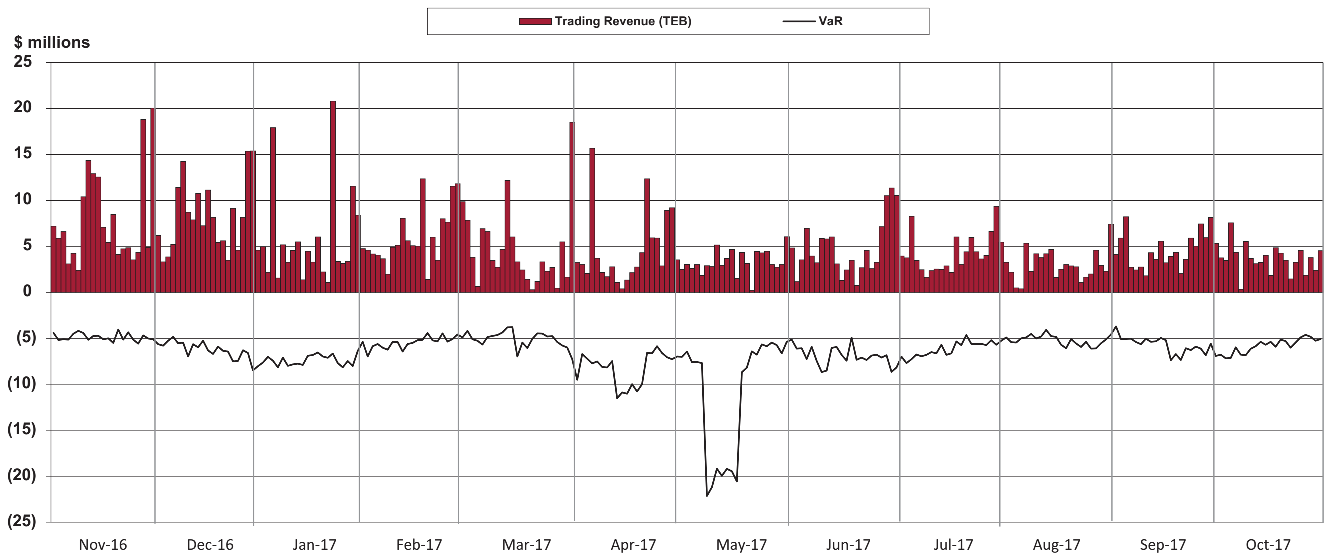
Frequency distribution of daily 2017 trading revenue (TEB)[(1)]

The histogram below presents the frequency distribution of daily trading revenue (TEB) for 2017.



Trading revenue (TEB)[(1)] *versus VaR*

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. The large increase in VaR in May 2017 was the result of a large transaction in our equity underwriting business.



(1) Excludes certain month-end transfer pricing and other miscellaneous adjustments.

Stress testing and scenario analysis

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

Our stress testing and scenario analyses measure the effect on portfolio values of a wide range of extreme moves in market risk factors. The methodology is a one-month stress test scenario and assumes that no actions are taken during the stress event to mitigate risk, reflecting the decreased liquidity that frequently accompanies market shocks.

Our scenario analysis approach simulates the impact on earnings of extreme market events up to a period of one month. Scenarios are developed using historical market data during periods of market disruption, or are based on the hypothetical occurrence of economic events, political events and natural disasters suggested and designed by economists, business leaders, and risk managers.

Among the historical scenarios are the 1994 period of U.S. Federal Reserve tightening, the 1998 Russian-led crisis, and the market events following the 2008 market crisis. The hypothetical scenarios include potential market crises originating in North America and Asia. In January 2017, we introduced a Eurozone bank crisis scenario, which considers a major European bank unexpectedly having capital problems with market expectations of a default, combined with political instability in Europe, while in September 2017, we introduced two scenarios based on escalating tensions in the Korean peninsula.

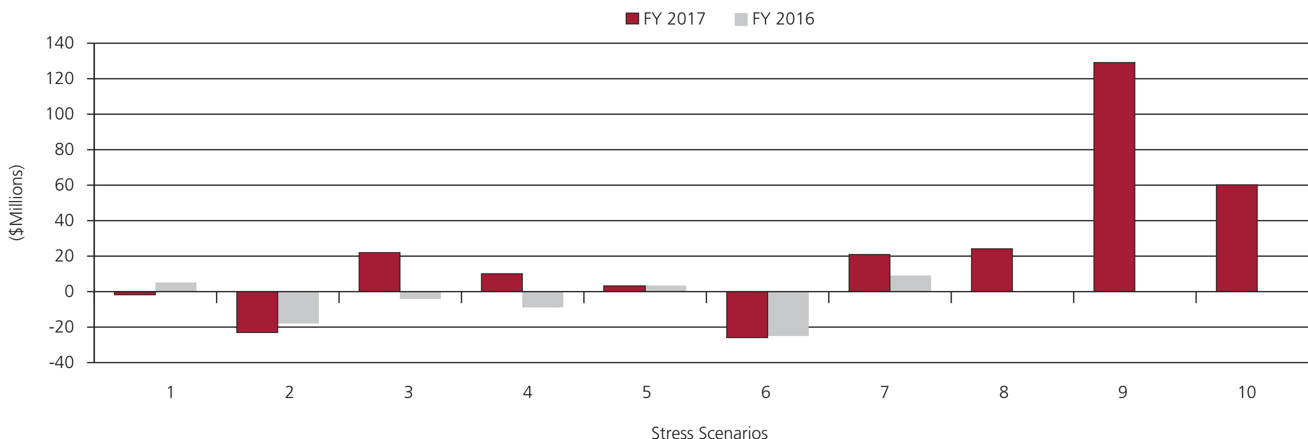
Below are our core stress test scenarios which we run daily to add insight into potential exposure levels under stress. Stress testing scenarios are periodically reviewed and amended as necessary to ensure they remain relevant.

Under stress test scenarios limit monitoring, limits are placed on the maximum acceptable loss for the aggregate portfolio, at the detailed portfolio level, and at specific asset class types.

Stress scenario list

1. Subprime crisis and Lehman collapse – 2008
2. U.S. Fed tightening – 1994
3. Russian debt crisis – 1998
4. U.S. sovereign debt default and downgrade
5. Chinese hard landing
6. Canada market crisis
7. U.S. protectionism
8. Eurozone bank crisis
9. Korean War – severe
10. Korean War – base

Average stress testing results for 2017 and 2016 for each of the 10 scenarios noted above from our trading positions are provided in the chart below:



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, 2017	Positive	Negative	Net
Maturity less than 1 year	$ 345	$ 471	$ (126)
Maturity 1 – 3 years	356	236	120
Maturity 4 – 5 years	134	131	3
Maturity in excess of 5 years	343	11	332
	$ 1,178	$ 849	$ 329

Non-trading activities

Interest rate risk

Non-trading interest rate risk, which includes structural interest rate risk, consists primarily of risk inherent in ALM activities and the activities of domestic and foreign subsidiaries. Interest rate risk 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. This optionality arises predominantly from the prepayment exposures of mortgage products, mortgage commitments and some guaranteed investment certificates products with early redemption features. A variety of cash instruments and derivatives, primarily interest rate swaps, futures and options, are used to manage these risks.

The Board has oversight of the management of non-trading market risk, sets the market risk appetite and annually approves the market risk limits. GALCO and its subcommittee, the Asset and 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 non-trading market risk policy provided by Capital Markets 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. The net income sensitivity is a measure of the impact of potential changes in interest rates on the projected 12-month after-tax net income of a portfolio of assets, liabilities and off-balance sheet positions in response to prescribed parallel interest rate movements with interest rates floored at zero.

Our total non-trading interest rate risk exposure, as at October 31, 2017, is included in Note 17 to the consolidated financial statements. On- and off-balance sheet assets and liabilities are generally reported based on the earlier of their contractual repricing or maturity date; however, our disclosure includes the assumed interest rate sensitivity of certain assets and liabilities (including core deposits and credit card balances), reflecting how we manage interest rate risk. The interest rate position reported in Note 17 presents our risk exposure only at a point in time. The exposure can change depending on client preference for products and terms, including mortgage prepayment or other options exercised, and the nature of our management of the various and diverse portfolios that comprise the consolidated interest rate risk position.

The following table shows the potential impact over the next 12 months, adjusted for structural assumptions (excluding shareholders' equity in the calculation of the present value of shareholders' equity), estimated prepayments and early withdrawals, of an immediate and sustained 100 and 200 basis point increase or decrease in interest rates.

2017 included the exposures from the balances of CIBC Bank USA.

Interest rate sensitivity – non-trading

$ millions, as at October 31			2017			2016
	CAD	**USD**	**Other**	CAD	USD	Other
100 basis point increase in interest rates						
Increase (decrease) in net income after-tax attributable to equity shareholders	**$ 119**	**$ 48**	**$ (11)**	$ 88	$ 11	$ 10
Increase (decrease) in present value of shareholders' equity	**(277)**	**(99)**	**(30)**	(176)	(79)	(6)
100 basis point decrease in interest rates						
Increase (decrease) in net income after-tax attributable to equity shareholders	**$ (209)**	**$ (57)**	**$ 11**	$ (153)	$ (14)	$ (12)
Increase (decrease) in present value of shareholders' equity	**184**	**15**	**30**	75	69	3
200 basis point increase in interest rates						
Increase (decrease) in net income after-tax attributable to equity shareholders	**$ 233**	**$ 74**	**$ (21)**	$ 145	$ 25	$ 24
Increase (decrease) in present value of shareholders' equity	**(512)**	**(223)**	**(59)**	(392)	(137)	(6)
200 basis point decrease in interest rates						
Increase (decrease) in net income after-tax attributable to equity shareholders	**$ (382)**	**$ (87)**	**$ 21**	$ (327)	$ (8)	$ (22)
Increase (decrease) in present value of shareholders' equity	**251**	**(124)**	**59**	(78)	90	8

Foreign exchange risk

Non-trading foreign exchange risk, also referred to as structural foreign exchange risk, arises primarily from our net investment in foreign operations. 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 in accordance with the policy approved by the RMC, while giving consideration to the impact on earnings and shareholders' equity.

Structural foreign exchange risk is managed by Treasury under the guidance of GALCO. Compliance with trading and non-trading market risk policy, as well as market risk limits, is monitored daily by Capital Markets Risk Management.

A 1% appreciation of the Canadian dollar would reduce our shareholders' equity as at October 31, 2017 by approximately $120 million (2016: $84 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. Thus, 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 a gain of $12 million (2016: $20 million) on an after-tax basis. This amount will be released from AOCI to offset the hedged currency fluctuations as the expenses are incurred.

Derivatives held for ALM purposes

Where derivatives are held for ALM purposes, and when transactions meet the criteria specified under IFRS, we apply hedge accounting for the risks being hedged, as discussed in Notes 12 and 13 to the consolidated financial statements. Derivative hedges that do not qualify for hedge accounting treatment are referred to as economic hedges and are recorded at fair value on the consolidated balance sheet with changes in fair value recognized in the consolidated statement of income.

Economic hedges for other than FVO financial instruments may lead to income volatility because the hedged items are recorded either on a cost or amortized cost basis or recorded at fair value on the consolidated balance sheet with changes in fair value recognized in the consolidated statement of comprehensive income. 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		Amortized cost	Fair value
2017	**AFS securities**	**$ 364**	**$ 469**
	Equity-accounted investments in associates [1]	**313**	**356**
		$ 677	**$ 825**
2016	AFS securities	$ 221	$ 374
	Equity-accounted investments in associates [1]	386	421
		$ 607	$ 795

(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, 2017, our consolidated defined benefit pension plans were in a net funded status surplus position of $134 million, compared with $22 million as at October 31, 2016. The change in the net funded status position of our pension plans is disclosed in Note 19 to the consolidated financial statements.

Changes in net funded position of our pension plans are driven by a number of risk factors. These include changes in the fair value of plan assets and/or changes in the actuarial value of the pension benefits promised within our defined benefit plans.

The MRCC has been delegated fiduciary responsibility from the Board for pension plans. Pension market risk arises primarily from movements in interest rates, credit spreads, and equity prices.

Our Canadian pension plans represent approximately 90% 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.

Treasury's Pension Investment Management department ensures that the governance, management and operational frameworks of our pension plans' investment strategies align with desired risk profiles, with independent oversight and effective challenge provided by Risk Management.

The use of derivatives is permitted within the CIBC Pension Plan, in accordance with the derivatives policy that was approved by the PBMC, and the MRCC of the Board, to manage risk at the discretion of the Pension Investment Committee, a subcommittee of the PBMC. Risk reduction and mitigation strategies may include hedging of interest rate, currency, credit spread and/or equity risks. The derivatives policy also permits the use of derivatives to enhance plan returns.

The CIBC Pension Plan manages its foreign currency exposure through an overlay strategy. The fair value of derivatives used for the purposes of currency overlay is disclosed in Note 19 to the consolidated financial statements.

Liquidity risk

Liquidity risk is the risk of having insufficient cash or its equivalent in a timely and cost-effective manner to meet financial obligations as they come due. Common sources of liquidity risk inherent in banking services include unanticipated withdrawals of deposits, the inability to replace maturing debt, credit and liquidity commitments, and additional pledging or other collateral requirements.

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 (CFP).

Liquidity risk is managed using the three lines of defence model, with the ongoing management of liquidity risk 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, including the measurement, monitoring and control of liquidity risk, as the second line of defence.

Internal Audit provides the third line of defence, with independent assessment of the design and operating effectiveness of liquidity risk management controls, processes and systems.

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 aligned with our operating regulatory requirements. The Liquidity Risk Management Committee, a subcommittee of GALCO, is responsible for supporting GALCO to ensure 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 for a minimum time period as measured by CIBC's Liquidity Horizon. CIBC subsidiaries possessing unique liquidity characteristics, due to distinct business or jurisdictional requirements, maintain local liquidity policies 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. Pledged asset limits ensure unencumbered liquid assets are available for liquidity purposes.

We maintain a detailed global CFP 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 and invocation, articulates implementation and escalation procedures, and is aligned to CIBC's risk appetite. In order to reflect CIBC's organizational complexity, regional and subsidiary CFPs 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 measures 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. Contractual and behavioural on- and off-balance sheet cash flows under normal and stressed conditions are modelled and used to determine liquidity levels against the prescribed management target.

Our liquidity measurement system provides liquidity risk exposure reports that include the calculation of the Liquidity Horizon and regulatory reporting such as the LCR 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 GALCO-approved management limits, which are more stringent than the limits established by the RMC.

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, and expected contingent liquidity utilization, as well as liquid asset marketability. Results from stress testing are also incorporated as input into the CFP review process.

Liquid and encumbered assets

Available liquid assets include cash, high quality marketable securities and other assets that can be used to access funding in a timely fashion. Encumbered 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.

Unencumbered assets from on- and off-balance sheet sources are summarized as follows:

$ millions, as at October 31					**2017** [1]	2016
	Gross liquid assets		Encumbered liquid assets [2]		Unencumbered liquid assets	
	CIBC owned assets	Third-party assets	CIBC owned assets	Third-party assets		
Cash and due from banks	**$ 14,152** [3]	**$ –**	**$ 521**	**$ –**	**$ 13,631**	$ 13,665
Securities	**92,889** [4]	**93,201** [5]	**32,809**	**64,961**	**88,320**	91,378
National Housing Act mortgage-backed securities	**50,347** [6]	**–**	**20,247**	**–**	**30,100**	26,223
Mortgages	**17,414** [7]	**–**	**17,414**	**–**	**–**	–
Credit cards	**3,048** [8]	**–**	**3,048**	**–**	**–**	–
Other assets	**4,606** [9]	**–**	**4,420**	**–**	**186**	586
	$ 182,456	**$ 93,201**	**$ 78,459**	**$ 64,961**	**$ 132,237**	$ 131,852

(1) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
(2) Excludes intraday pledges to the Bank of Canada related to the Large Value Transfer System as these are normally released at the end of the settlement cycle each day.
(3) Includes cash, non-interest-bearing deposits and interest-bearing deposits with contractual maturities of less than 30 days.
(4) Includes trading, AFS and FVO securities. Excludes securities in our structured credit run-off business, private debt and private equity securities of $530 million (2016: $944 million).
(5) Includes $5,035 million (2016: $5,433 million) of cash collateral received on securities borrowed, $40,383 million (2016: $28,377 million) of securities purchased under resale agreements, $46,753 million (2016: $38,657 million) of securities borrowed against securities lent, and $1,030 million (2016: $1,257 million) of securities received for derivative collateral.
(6) Includes securitized and transferred residential mortgages under the Canada Mortgage Bond Programme, and securitized mortgages that were not transferred to external parties. These are reported in Loans on our consolidated balance sheet.
(7) Includes mortgages in the Covered Bond Programme.
(8) Includes assets held in consolidated trusts supporting funding liabilities.
(9) Includes $4,420 million (2016: $6,022 million) of cash pledged for derivative collateral and $186 million (2016: $586 million) of gold and silver certificates.

The following table summarizes unencumbered liquid assets held by CIBC (parent) and significant subsidiaries:

$ millions, as at October 31	**2017**	2016
CIBC (parent)	**$ 92,846**	$ 96,027
CIBC World Markets Inc. [1]	**13,707**	18,387
Other subsidiaries [2]	**25,684**	17,438
	$ 132,237	$ 131,852

(1) Includes CIBC World Markets Inc. and CIBC World Markets Corp.
(2) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.

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 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 were comparable with the prior year, as an increase in National Housing Act mortgage-backed securities was offset by a decrease in securities.

Furthermore, CIBC maintains access eligibility to the Bank of Canada Emergency Lending Assistance (ELA) program and the 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. For additional details, see Note 22 to the consolidated financial statements.

The following table provides a summary of our total encumbered and unencumbered assets:

					Encumbered		Unencumbered	
$ millions, as at October 31		CIBC owned assets	Third-party assets	Total assets	Pledged as collateral	Other	Available as collateral	Other
2017 [1]	**Cash and deposits with banks**	**$ 14,152**	**$ –**	**$ 14,152**	**$ 6**	**$ 515**	**$ 13,631**	**$ –**
	Securities	**93,419**	**–**	**93,419**	**32,809**	**–**	**60,080**	**530**
	Securities borrowed or purchased under resale agreements	**–**	**45,418**	**45,418**	**31,291**	**–**	**14,127**	**–**
	Loans, net of allowance	**356,734**	**–**	**356,734**	**40,773**	**2**	**30,100**	**285,859**
	Other							
	Derivative instruments	**24,342**	**–**	**24,342**	**–**	**–**	**–**	**24,342**
	Customers' liability under acceptances	**8,824**	**–**	**8,824**	**–**	**–**	**–**	**8,824**
	Land, building and equipment	**1,783**	**–**	**1,783**	**–**	**–**	**–**	**1,783**
	Goodwill	**5,367**	**–**	**5,367**	**–**	**–**	**–**	**5,367**
	Software and other intangible assets	**1,978**	**–**	**1,978**	**–**	**–**	**–**	**1,978**
	Investments in equity-accounted associates and joint ventures	**715**	**–**	**715**	**–**	**–**	**–**	**715**
	Other assets	**12,532**	**–**	**12,532**	**4,420**	**–**	**186**	**7,926**
		$ 519,846	**$ 45,418**	**$ 565,264**	**$ 109,299**	**$ 517**	**$ 118,124**	**$ 337,324**
2016	Cash and deposits with banks	$ 14,165	$ –	$ 14,165	$ 11	$ 489	$ 13,665	$ –
	Securities	87,423	–	87,423	23,690	–	62,789	944
	Securities borrowed or purchased under resale agreements	–	33,810	33,810	22,514	–	11,296	–
	Loans, net of allowance	307,417	–	307,417	39,468	26	26,223	241,700
	Other							
	Derivative instruments	27,762	–	27,762	–	–	–	27,762
	Customers' liability under acceptances	12,364	–	12,364	–	–	–	12,364
	Land, building and equipment	1,898	–	1,898	–	–	–	1,898
	Goodwill	1,539	–	1,539	–	–	–	1,539
	Software and other intangible assets	1,410	–	1,410	–	–	–	1,410
	Investments in equity-accounted associates and joint ventures	766	–	766	–	–	–	766
	Other assets	12,803	–	12,803	6,022	–	586	6,195
		$ 467,547	$ 33,810	$ 501,357	$ 91,705	$ 515	$ 114,559	$ 294,578

(1) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.

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 separate regulatory capital and liquidity requirements, as 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) guidelines, CIBC reports the LCR to OSFI on a monthly basis. The ratio is calculated as follows:

$$\frac{\text{Total High Quality Liquid Assets (HQLA)}}{\text{Total net cash outflows over the next 30 calendar days}} \geq 100\%$$

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 non-HQLA marketable assets.

The LCR is disclosed using a standard OSFI-prescribed disclosure template, calculated based on the average of daily positions.

	$ millions, average of the three months ended October 31, 2017	Total unweighted value [1]	Total weighted value [2]
HQLA			
1	HQLA	**n/a**	**$ 98,603**
Cash outflows			
2	Retail deposits and deposits from small business customers, of which:	**$ 142,230**	**9,277**
3	Stable deposits	**70,658**	**2,120**
4	Less stable deposits	**71,572**	**7,157**
5	Unsecured wholesale funding, of which:	**123,875**	**63,069**
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	**44,738**	**10,783**
7	Non-operational deposits (all counterparties)	**60,401**	**33,550**
8	Unsecured debt	**18,736**	**18,736**
9	Secured wholesale funding	**n/a**	**4,574**
10	Additional requirements, of which:	**81,252**	**22,154**
11	Outflows related to derivative exposures and other collateral requirements	**11,382**	**8,153**
12	Outflows related to loss of funding on debt products	**2,669**	**2,669**
13	Credit and liquidity facilities	**67,201**	**11,332**
14	Other contractual funding obligations	**2,299**	**2,299**
15	Other contingent funding obligations	**254,432**	**4,450**
16	Total cash outflows	**n/a**	**105,823**
Cash inflows			
17	Secured lending (e.g. reverse repos)	**63,057**	**7,798**
18	Inflows from fully performing exposures	**15,420**	**7,201**
19	Other cash inflows	**8,487**	**8,487**
20	Total cash inflows	**$ 86,964**	**$ 23,486**
			Total adjusted value
21	Total HQLA	**n/a**	**$ 98,603**
22	Total net cash outflows	**n/a**	**$ 82,337**
23	LCR	**n/a**	**120 %**
	$ millions, average of the three months ended July 31, 2017		Total adjusted value
24	Total HQLA	n/a	$ 102,461
25	Total net cash outflows	n/a	$ 81,908
26	LCR	n/a	125 %

(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, 2017 decreased to 120% from 125% as at July 31, 2017, due to modest decreases in HQLA, which were the result of funding requirements associated with the acquisition of The PrivateBank. Multiple other factors that are part of normal business operations also contribute to the LCR.

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 environmental considerations 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's Treasury function, 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 the balance sheet with deposits primarily raised from personal and commercial banking channels. Personal deposits accounted for $159.3 billion as at October 31, 2017 (2016: $148.1 billion). 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 maturities at carrying values of CIBC's wholesale funding sources:

$ millions, as at October 31, 2017	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	**$ 2,491**	**$ 448**	**$ 132**	**$ –**	**$ 3,071**	**$ –**	**$ –**	**$ 3,071**
Certificates of deposit and commercial paper	**5,325**	**11,393**	**18,268**	**12,947**	**47,933**	**7,239**	**–**	**55,172**
Bearer deposit notes and bankers' acceptances	**1,165**	**1,629**	**2,475**	**58**	**5,327**	**–**	**–**	**5,327**
Asset-backed commercial paper	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Senior unsecured medium-term notes	**–**	**2,229**	**4,952**	**6,119**	**13,300**	**6,062**	**14,983**	**34,345**
Senior unsecured structured notes	**–**	**–**	**8**	**312**	**320**	**–**	**–**	**320**
Covered bonds/asset-backed securities								
Mortgage securitization	**–**	**570**	**1,312**	**1,546**	**3,428**	**4,911**	**12,167**	**20,506**
Covered bonds	**–**	**856**	**–**	**1,516**	**2,372**	**4,660**	**10,382**	**17,414**
Cards securitization	**–**	**–**	**–**	**967**	**967**	**1,290**	**791**	**3,048**
Subordinated liabilities	**–**	**–**	**–**	**38**	**38**	**–**	**3,171**	**3,209**
Other	**–**	**–**	**–**	**–**	**–**	**45**	**19**	**64**
	$ 8,981	**$ 17,125**	**$ 27,147**	**$ 23,503**	**$ 76,756**	**$ 24,207**	**$ 41,513**	**$ 142,476**
Of which:								
Secured	**$ –**	**$ 1,426**	**$ 1,312**	**$ 4,029**	**$ 6,767**	**$ 10,861**	**$ 23,340**	**$ 40,968**
Unsecured	**8,981**	**15,699**	**25,835**	**19,474**	**69,989**	**13,346**	**18,173**	**101,508**
	$ 8,981	**$ 17,125**	**$ 27,147**	**$ 23,503**	**$ 76,756**	**$ 24,207**	**$ 41,513**	**$ 142,476**
October 31, 2016	$ 12,701	$ 17,980	$ 26,950	$ 21,035	$ 78,666	$ 17,596	$ 39,727	$ 135,989

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

$ billions, as at October 31		**2017**		2016
CAD	**$ 53.2**	**37 %**	$ 60.4	44 %
USD	**72.6**	**51**	56.6	42
Other	**16.7**	**12**	19.0	14
	$ 142.5	**100 %**	$ 136.0	100 %

Our funding volumes increased relative to 2016 in response to CIBC's business and liquidity strategies. We do not anticipate any events, commitments or demands that will materially impact our ability to raise funds through deposits or wholesale funding.

Funding plan

Our three-year funding plan is updated at least quarterly, or in response to material changes in underlying assumptions. 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 and liquidity positioning. On May 10, 2017, Moody's downgraded the ratings of the big six Canadian banks by one notch, including CIBC. On October 27, 2017, Fitch affirmed CIBC's ratings, while revising the outlook to negative from stable. The negative outlook reflects Fitch's view that CIBC is the most exposed to a potential housing correction and the health of the Canadian consumer. We do not expect a material impact on our funding costs or ability to access funding as a result of these changes.

Our credit ratings are summarized in the following table:

	Short-term debt		Senior debt		Subordinated indebtedness		Subordinated indebtedness – NVCC (1)		Preferred shares – NVCC (1)		
As at October 31	**2017**	2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**	2016	**Outlook**
DBRS	**R-1(H)**	R-1(H)	**AA**	AA	**AA(L)**	AA(L)	**A(L)**	A(L)	**Pfd-2**	Pfd-2	**Negative** (2)
Fitch	**F1+**	F1+	**AA-**	AA-	**A+**	A+	**A+**	A+	**n/a**	n/a	**Negative**
Moody's	**P-1**	P-1	**A1**	Aa3	**Baa1**	A3	**Baa2**	Baa1	**Baa3**	Baa2	**Negative** (3)
S&P	**A-1**	A-1	**A+**	A+	**BBB+**	BBB+	**BBB**	BBB	**P-3(H)**	P-3(H)	**Stable**

(1) Comprises instruments which are treated as NVCC in accordance with OSFI's capital adequacy guidelines.
(2) Negative outlook applies to short-term debt, senior debt, and subordinated indebtedness ratings.
(3) Negative outlook only applies to senior debt rating.
n/a Not available.

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	**2017**	2016
One-notch downgrade	**$ –**	$ –
Two-notch downgrade	**0.1**	0.2
Three-notch downgrade	**0.3**	0.4

Other regulatory liquidity standards

In May 2014, OSFI published the final LAR guideline, which was driven by the BCBS' global liquidity requirements, and includes the LCR, net stable funding ratio (NSFR) and other additional liquidity monitoring tools. It is further supplemented by the OSFI-designed supervisory tool known as the NCCF metric. OSFI will use the LAR and associated metrics to assess individual banks' liquidity adequacy.

On October 31, 2014, the BCBS published its final NSFR guideline. In October 2017, OSFI provided updated draft NSFR guidance and is engaging industry participants to review its NSFR implementation plans and to clarify details of the NSFR and its application to the Canadian market.

Consistent with the requirements above, we submit LCR and NCCF reports to OSFI on a monthly basis and the NSFR report on a quarterly basis. We provide the LCR and NSFR reports to the BCBS twice annually.

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, 2017 [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	No specified maturity	Total
Assets										
Cash and non-interest-bearing deposits with banks	**$ 3,440**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ 3,440**
Interest-bearing deposits with banks	**10,712**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**10,712**
Securities	**3,862**	**3,544**	**2,770**	**4,059**	**1,608**	**7,197**	**19,407**	**19,480**	**31,492**	**93,419**
Cash collateral on securities borrowed	**5,035**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**5,035**
Securities purchased under resale agreements	**24,938**	**4,248**	**3,127**	**546**	**83**	**7,441**	**–**	**–**	**–**	**40,383**
Loans										
Residential mortgages	**1,559**	**3,069**	**7,101**	**12,727**	**11,144**	**43,675**	**121,384**	**6,214**	**398**	**207,271**
Personal	**662**	**571**	**966**	**937**	**752**	**201**	**845**	**2,143**	**33,860**	**40,937**
Credit card	**260**	**520**	**780**	**780**	**780**	**3,119**	**6,139**	**–**	**–**	**12,378**
Business and government	**8,750**	**3,091**	**2,927**	**4,348**	**3,620**	**13,375**	**31,729**	**15,469**	**14,457**	**97,766**
Allowance for credit losses	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**(1,618)**	**(1,618)**
Derivative instruments	**1,827**	**3,061**	**1,430**	**1,255**	**1,199**	**2,759**	**5,644**	**7,167**	**–**	**24,342**
Customers' liability under acceptances	**7,588**	**1,180**	**47**	**8**	**1**	**–**	**–**	**–**	**–**	**8,824**
Other assets	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**22,375**	**22,375**
	$ 68,633	**$ 19,284**	**$ 19,148**	**$ 24,660**	**$ 19,187**	**$ 77,767**	**$ 185,148**	**$ 50,473**	**$ 100,964**	**$ 565,264**
October 31, 2016	$ 55,954	$ 21,567	$ 17,950	$ 16,783	$ 16,550	$ 66,771	$ 164,778	$ 48,505	$ 92,499	$ 501,357
Liabilities										
Deposits [2]	**$ 19,850**	**$ 29,462**	**$ 39,576**	**$ 21,922**	**$ 22,671**	**$ 33,912**	**$ 44,996**	**$ 6,881**	**$ 220,436**	**$ 439,706**
Obligations related to securities sold short	**13,713**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**13,713**
Cash collateral on securities lent	**2,024**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**2,024**
Obligations related to securities sold under repurchase agreements	**26,415**	**1,504**	**52**	**–**	**–**	**–**	**–**	**–**	**–**	**27,971**
Derivative instruments	**1,851**	**2,764**	**1,237**	**1,307**	**1,230**	**2,897**	**4,840**	**7,145**	**–**	**23,271**
Acceptances	**7,592**	**1,180**	**47**	**8**	**1**	**–**	**–**	**–**	**–**	**8,828**
Other liabilities	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**15,305**	**15,305**
Subordinated indebtedness	**–**	**–**	**–**	**–**	**38**	**–**	**–**	**3,171**	**–**	**3,209**
Equity	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**31,237**	**31,237**
	$ 71,445	**$ 34,910**	**$ 40,912**	**$ 23,237**	**$ 23,940**	**$ 36,809**	**$ 49,836**	**$ 17,197**	**$ 266,978**	**$ 565,264**
October 31, 2016	$ 59,908	$ 33,289	$ 40,961	$ 21,100	$ 23,035	$ 31,847	$ 47,923	$ 21,033	$ 222,261	$ 501,357

(1) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
(2) Comprises $159.3 billion (2016: $148.1 billion) of personal deposits of which $149.5 billion (2016: $143.3 billion) are in Canada and $9.8 billion (2016: $4.8 billion) are in other countries; $266.6 billion (2016: $229.7 billion) of business and government deposits and secured borrowings of which $192.7 billion (2016: $171.9 billion) are in Canada and $73.9 billion (2016: $57.8 billion) are in other countries; and $13.8 billion (2016: $17.8 billion) of bank deposits of which $6.6 billion (2016: $6.8 billion) are in Canada and $7.2 billion (2016: $11.0 billion) are in other countries.

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, 2017 (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	No specified maturity (2)	Total
Securities lending (3)	**$ 36,541**	**$ 4,635**	**$ 5,577**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ 46,753**
Unutilized credit commitments	**770**	**5,897**	**1,710**	**3,385**	**2,358**	**13,943**	**36,030**	**1,889**	**143,182**	**209,164**
Backstop liquidity facilities	**–**	**8,711**	**1,239**	**1,026**	**90**	**116**	**–**	**13**	**–**	**11,195**
Standby and performance letters of credit	**1,682**	**2,519**	**2,131**	**2,623**	**1,629**	**913**	**1,249**	**18**	**–**	**12,764**
Documentary and commercial letters of credit	**25**	**103**	**67**	**8**	**6**	**4**	**1**	**–**	**–**	**214**
Other	**269**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**269**
	$ 39,287	**$ 21,865**	**$ 10,724**	**$ 7,042**	**$ 4,083**	**$ 14,976**	**$ 37,280**	**$ 1,920**	**$ 143,182**	**$ 280,359**
October 31, 2016	$ 28,902	$ 23,039	$ 9,515	$ 4,484	$ 3,483	$ 7,049	$ 35,402	$ 1,393	$ 133,514	$ 246,781

(1) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
(2) Includes $111.7 billion (2016: $105.0 billion) of personal, home equity and credit card lines, which are unconditionally cancellable at our discretion.
(3) Excludes securities lending of $2.0 billion (2016: $2.5 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, 2017 (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
Operating leases	**$ 40**	**$ 80**	**$ 120**	**$ 119**	**$ 118**	**$ 448**	**$ 1,107**	**$ 3,229**	**$ 5,261**
Purchase obligations (2)	**145**	**290**	**217**	**159**	**166**	**521**	**693**	**122**	**2,313**
Pension contributions (3)	**15**	**31**	**46**	**46**	**46**	**–**	**–**	**–**	**184**
Underwriting commitments	**424**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**424**
Investment commitments	**1**	**4**	**3**	**–**	**–**	**4**	**5**	**126**	**143**
	$ 625	**$ 405**	**$ 386**	**$ 324**	**$ 330**	**$ 973**	**$ 1,805**	**$ 3,477**	**$ 8,325**
October 31, 2016	$ 331	$ 325	$ 365	$ 396	$ 356	$ 1,080	$ 1,747	$ 1,532	$ 6,132

(1) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
(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 and acquisitions. It includes the potential financial loss due to the failure of organic growth initiatives or failure to respond appropriately to changes in the business environment. For additional details on acquisition risk, 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 losses arising from the uncertainty of the timing and size of insurance claims. 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, as well as each having 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. Frontline businesses form our first line of defence. Their primary responsibility is the day-to-day management of operational risk inherent in their products and activities.

The second line of defence includes Risk Management and other oversight functions, which are responsible for monitoring and providing independent oversight of operational risk matters in their respective risk types and for providing effective challenges to business lines' operational risk assessments and mitigation activities.

Internal Audit, our third line of defence, assesses and provides an independent opinion on the design and operating effectiveness of CIBC's management of operational risk and the strength of the internal control environment.

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 of the Board.

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 and change initiative risk assessments to form a holistic operational risk profile for the business lines. Under the three lines of defence model, GORM and relevant oversight functions and experts independently 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. See Note 23 to our consolidated financial statements for a description of our significant legal proceedings.

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

We use both the AMA, a risk-sensitive method prescribed by the BCBS, and the Standardized Method to quantify our operational risk exposure in the form of operational risk regulatory capital. Our AMA model determines operational risk capital using historical loss data, projected loss data from our loss scenario analysis and the assessment of internal control risks impacting our business environment. The standardized method is also used as agreed with local regulators. Our current AMA model, along with the standardized method, was approved for capital reporting commencing in fiscal 2016.

Under AMA, operational risk capital represents the "worst-case loss" within a 99.9% confidence level. The aggregate risk to CIBC is less than the sum of the individual parts, as the likelihood that all business groups across all regions experience a worst-case loss in every loss category in the same year is extremely low. To adjust for the fact that all risks are not 100% correlated, we incorporate a portfolio effect to ensure that the aggregated risk is representative of the total bank-wide risk. The process for determining correlations considers both internal and external historical correlations and takes into account the uncertainty surrounding correlation estimates.

Under Basel AMA, the recognition of insurance as a risk mitigant may be considered in the measure of operational risk used for regulatory minimum capital requirements. Although our current insurance policies are tailored to provide earnings protection from potential high-severity losses, we do not reflect mitigation through insurance or any other risk transfer mechanism in our AMA model.

Back-testing

To ensure the AMA model is performing effectively and maintaining predictability, we back-test capital calculation results each quarter. The back-testing exercise assesses the model's performance against internal loss data. The overall AMA methodology is also independently validated by the Model Validation group to ensure that the applied assumptions are reasonable. The validation exercise includes modelling the relevant internal loss data using alternative methods and comparing the results to the model. The model will be updated to address identified gaps, as appropriate.

Risk mitigation

Our primary tool for mitigating operational risk exposure is a robust internal control environment. The internal Control Framework outlines key principles, structure and processes underpinning CIBC's approach to managing risks through internal controls. Under the 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 functioning 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 risk

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

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 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 customers, investors, employees, counterparties or other stakeholders; (d) failure to take appropriate legal measures to protect our assets or security interests; or (e) vicarious misconduct by our employees or agents.

The RMC, together with the Reputation and Legal Risks Committee and GRC, provides oversight of the management of reputation and legal risks. The identification, consideration and prudent, proactive management of potential reputation and legal risks is a key responsibility of CIBC and all of our employees.

Our Global Reputation and Legal Risks Policy sets standards for safeguarding our reputation through pro-active identification, measurement and management of potential reputation and legal risks. The policy is supplemented by business procedures for identifying and escalating transactions to the Reputation and Legal Risks Committee that could pose material reputation risk and/or legal risk.

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 and compliance 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 Chief Compliance Officer and approved by the RMC of the Board, 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 reports regularly to the RMC of the Board.

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, that help protect the integrity of the capital markets, or that relate to money laundering and terrorist financing.

See the "Regulatory developments" section for further details.

Environmental risk

Environmental risk is the risk of financial loss or damage to reputation associated with environmental 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 and most recently updated and approved by the RMC in 2015, 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.

The policy is addressed by an integrated Corporate Environmental Management Program that is under the overall management of the Environmental Risk Management (ERM) group in Risk Management. Environmental evaluations are integrated into our credit and investment risk assessment processes, with environmental risk management standards and procedures in place for all sectors. In addition, environmental and social risk assessments in project finance, project-related corporate loans and related bridge loans are required in accordance with our commitment to the Equator Principles, a voluntary set of guidelines for financial institutions based on the screening criteria of the International Finance Corporation, which we adopted in 2003. We also conduct ongoing research and benchmarking on environmental issues such as climate change as they may pertain to responsible lending practices. We are also a participant in the Carbon Disclosure Project's climate change program, which promotes corporate disclosure to the investment community on greenhouse gas emissions and climate change management.

The ERM group 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. An executive-level Environmental Management Committee is in place to provide input on environmental strategy and oversight of CIBC's environmental initiatives.

Accounting and control matters

Critical accounting policies and estimates

A summary of significant accounting policies is presented in Note 1 to the consolidated financial statements. Certain accounting policies require us to make judgments and estimates, some of which may relate to matters that are uncertain. 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.

Valuation of financial instruments

Debt and equity trading securities, trading business and government loans, obligations related to securities sold short, derivative contracts, AFS securities and FVO financial instruments are carried at fair value. FVO financial instruments include certain debt securities, certain secured borrowings, structured deposits and business and government deposits. Retail mortgage interest rate commitments are also designated as FVO financial instruments.

Fair value is defined as 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. Independent validation of fair value is performed at least on a monthly basis. Valuation inputs are verified 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 the structured credit run-off business and total consolidated CIBC. For further details of the valuation of and sensitivity associated with Level 3 financial assets and liabilities, see Note 2 to the consolidated financial statements.

$ millions, as at October 31	**2017**			2016		
	Structured credit run-off business	**Total CIBC**	**Total CIBC** (1)	Structured credit run-off business	Total CIBC	Total CIBC (1)
Assets						
Trading securities and loans	**$ 3**	**$ 138**	**0.2 %**	$ 496	$ 536	0.9 %
AFS securities	**–**	**1,967**	**4.9**	3	2,296	6.2
FVO securities	**94**	**94**	**63.5**	94	94	36.9
Derivative instruments	**130**	**196**	**0.8**	140	195	0.7
	$ 227	**$ 2,395**	**1.8 %**	$ 733	$ 3,121	2.6 %
Liabilities						
Deposits and other liabilities (2)	**$ 6**	**$ 369**	**5.5 %**	$ 257	$ 506	13.9 %
Derivative instruments	**148**	**245**	**1.1**	197	274	1.0
	$ 154	**$ 614**	**1.4 %**	$ 454	$ 780	1.8 %

(1) Represents the percentage of Level 3 assets and liabilities over total assets and liabilities for each reported category that are carried on the consolidated balance sheet at fair value.
(2) Includes FVO deposits and bifurcated embedded derivatives.

Note 2 to the consolidated financial statements presents the valuation methods used to determine fair value showing separately those financial instruments that are carried at fair value on the consolidated balance sheet and those that are not.

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

Fair value adjustments

We apply judgment in establishing valuation adjustments that take into account various factors that may have an impact on the valuation of financial instruments that are carried at fair value on the consolidated balance sheet. Such factors include, but are not limited to, the bid-offer spread, illiquidity due to lack of market depth and other market risks, parameter uncertainty, model risk, credit risk, and future administration costs.

The establishment of fair value adjustments and the determination of the amount of write-downs involve estimates that are based on accounting processes and judgments by management. We evaluate the adequacy of the fair value adjustments and the amount of write-downs on an ongoing basis. The levels of fair value adjustments and the amount of the write-downs could change as events warrant and may not reflect ultimate realizable amounts.

The following table summarizes our valuation adjustments:

$ millions, as at October 31	2017	2016
Securities		
Market risk	$ 2	$ 2
Derivatives		
Market risk	111	85
Credit risk	66	112
Administration costs	5	5
Total valuation adjustments	$ 184	$ 204

Impairment of AFS securities

AFS securities include debt and equity securities.

AFS securities are measured at fair value, with the difference between the fair value and the amortized cost included in AOCI. Only equities that do not have a reliably measurable fair value are carried at cost. We have determined that all of our equity securities have reliable fair values.

AFS securities are subject to quarterly reviews to assess whether or not there is an impairment. The assessment of impairment depends on whether the instrument is debt or equity in nature. AFS debt securities are identified as impaired when there is objective observable evidence concerning the inability to collect the contractual principal or interest. Factors that are reviewed for impairment assessment include, but are not limited to, operating performance and future expectations, liquidity and capital adequacy, external credit ratings, deterioration in underlying asset quality, industry valuation levels for comparable entities, and any changes in market and economic outlook.

For AFS equity instruments, objective evidence of impairment exists if there has been a significant or prolonged decline in the fair value of the investment below its cost. In making the impairment assessment, we also consider whether there have been significant adverse changes in the technological, market, economic, or legal environments in which the issuer operates or if the issuer is experiencing significant financial difficulty.

Realized gains and losses on disposal and write-downs to reflect impairment in the value of AFS securities are recorded in the consolidated statement of income. Previously recognized impairment losses for debt securities (but not equity securities) are reversed if a subsequent increase in fair value can be objectively identified and is related to an event occurring after the impairment loss was recognized. Once an AFS equity security is impaired, all subsequent declines in fair value are charged directly to income.

Allowance for credit losses

We establish and maintain an allowance for credit losses that is considered the best estimate of probable credit-related losses existing in our portfolio of on- and off-balance sheet financial instruments, giving due regard to current conditions.

The allowance for credit losses consists of individual and collective components.

Individual allowances

The majority of our business and government loan portfolios are assessed on an individual loan basis. Individual allowances are established when impaired loans are identified within the individually assessed portfolios. A loan is classified as impaired when we are of the opinion that there is no longer reasonable assurance of the full and timely collection of principal and interest. The individual allowance is the amount required to reduce the carrying value of an impaired loan to its estimated realizable amount. This is determined by discounting the expected future cash flows at the effective interest rate inherent in the loan.

Individual allowances are not established for portfolios that are collectively assessed, including most retail portfolios.

Collective allowances

Consumer and certain small business allowances

Residential mortgages, credit card loans, personal loans, and certain small business loan portfolios consist of large numbers of homogeneous balances of relatively small amounts, for which we take a portfolio approach to establish the collective allowance. As it is not practical to review each individual loan, we utilize a formula basis, by reference to historical ratios of write-offs to current accounts and balances in arrears. For residential mortgages, personal loans and certain small business loans, this historical loss experience enables CIBC to determine appropriate PD and LGD parameters, which are used in the calculation of the portion of the collective allowance for current accounts. The PDs determined by this process that correspond to the risk levels in our retail portfolios are disclosed in "Exposures subject to AIRB approach" in the "Credit risk" section. For credit card loans, non-current residential mortgages, personal loans and certain small business loans, the historical loss experience enables CIBC to calculate flows to write off in our models that determine the collective allowance that pertain to these loans.

We also consider estimates of the time periods over which losses that are present would be identified and a provision taken, our view of current economic and portfolio trends, and evidence of credit quality improvements or deterioration. On a regular basis, the parameters that affect the allowance calculation are updated, based on our experience and the economic environment.

Business and government allowances

For groups of individually assessed loans for which no objective evidence of impairment has been identified on an individual basis, a collective allowance is provided for losses which we estimate are inherent in the portfolio at the reporting date, but not yet specifically identified from an individual assessment of the loan.

The methodology for determining the appropriate level of the collective allowance incorporates a number of factors, including the size of the portfolios, expected loss rates, and relative risk profiles. We also consider estimates of the time periods over which losses that are present would be identified and a provision taken, our view of current economic and portfolio trends, and evidence of credit quality improvements or deterioration. On a regular basis, the parameters that affect the collective allowance calculation are updated, based on our experience and the economic environment. Expected loss rates for business loan portfolios are based on the risk rating of each credit facility and on the PD factors associated with each risk rating, as well as estimates of LGD. The PD factors reflect our historical loss experience and are supplemented by data derived from defaults in the public debt markets. Our risk-rating method and categories are disclosed in "Exposures subject to AIRB approach" in the "Credit risk" section. Historical loss experience is adjusted based on observable data to reflect the effects of current conditions. LGD estimates are based on our experience over past years.

The collective allowance[(1)] of $1,213 million (2016: $1,201 million), which represents our best estimate of losses inherent but not specifically provided for in our loan portfolios, was selected from within the range based on a qualitative analysis of the economic environment and credit trends, as well as the risk profile of the loan portfolios. A uniform 10% increase in the PDs or loss severity across all portfolios would cause the collective allowance[(1)] to increase by approximately $121 million.

(1) 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.

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, Broadway Trust and Crisp 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. IAS 39 "Financial Instruments: Recognition and Measurement" 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.

In addition, we sell and derecognize commercial mortgages through a pass-through arrangement with a trust that securitizes these mortgages into ownership certificates held by various external investors. We continue to perform special servicing of the mortgages in exchange for a market-based fee and do not consolidate the trust. We also sell certain U.S. commercial mortgages to third parties that qualify for derecognition because we have transferred substantially all the risks and rewards of the mortgages and have no continuous involvement after the transfer.

Securitization of third-party assets

We also sponsor several SEs that purchase pools of third-party assets. We consider a number of factors in determining whether CIBC controls these SEs. We monitor the extent to which we support these SEs, through direct investment in the debt issued by the SEs and through the provision of liquidity protection to the other debtholders, to assess whether we should consolidate these entities.

IFRS 10 also requires that we reconsider our consolidation assessment if facts and circumstances relevant to the entities indicate that there are changes to one or more of the three elements of control described above. Factors that trigger reassessment include, but are not limited to, significant changes in ownership structure of the entities, changes in contractual or governance arrangements, provision of a liquidity facility beyond the original terms, transactions with the entities that were not contemplated originally and changes in the financing structure of the entities.

Specifically, in relation to our multi-seller conduits, we would reconsider our consolidation assessment if our level of interest in the ABCP issued by the conduits changes significantly, or in the rare event that the liquidity facility that we provide to the conduits is drawn or amended.

A significant increase in our holdings of the outstanding commercial paper issued by the conduits would become more likely in a scenario in which the market for bank-sponsored ABCP suffered a significant deterioration such that the conduits were unable to roll their ABCP.

For additional information on the securitizations of our own assets and third-party assets, see the "Off-balance sheet arrangements" section and Note 6 to the consolidated financial statements.

Asset impairment

Goodwill

As at October 31, 2017, we had goodwill of $5,367 million (2016: $1,539 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 give rise to a deficiency which would result in an impairment charge.

The recoverable amount of CIBC FirstCaribbean is based on a value in use calculation that is estimated using a five-year cash flow projection approved by management of CIBC FirstCaribbean and an estimate of the capital required to be maintained in the region to support ongoing operations.

We performed our annual impairment test as of August 1, 2017 based on a five-year forecast prepared by management of CIBC FirstCaribbean during the fourth quarter of 2017. The forecast for CIBC FirstCaribbean used in our 2017 annual impairment test reflects an expectation of continued productive loan growth during the forecast period.

As economic conditions in the Caribbean region remain challenging, we continue to closely monitor our investment. Reductions in the estimated recoverable amount of our CIBC FirstCaribbean CGU could result in additional goodwill impairment charges in future periods. As at October 31, 2017, the carrying amount of goodwill relating to CIBC FirstCaribbean was $405 million (US$314 million).

Other intangible assets and long-lived assets

As at October 31, 2017, we had other intangible assets with an indefinite life of $141 million (2016: $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 8 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. 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. 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 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 income tax assets should not be recognized. The factors used to assess the probability of realization are 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 net investments in foreign operations, 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 provision

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 within the range appears to be a better estimate, that amount is accrued. If no specific amount within the range of potential outcomes appears to be a better estimate than any other amount, the mid-point in the range is accrued. In some instances, however, it is not possible either to determine whether an obligation is probable or to reliably estimate the amount of loss, in which case no accrual can be made.

While there is inherent difficulty in predicting the outcome of legal proceedings, based on current knowledge and in consultation with legal counsel, we do not expect the outcome of these matters, individually or in aggregate, to have a material adverse effect on our consolidated financial statements. However, the outcome of these matters, individually or in aggregate, may be material to our operating results for a particular reporting period. We regularly assess the adequacy of CIBC's litigation accruals and make the necessary adjustments to incorporate new information as it becomes available.

The provisions disclosed in Note 23 to the consolidated financial statements include all of CIBC's accruals for legal matters as at October 31, 2017, including amounts related to the significant legal proceedings described in that note and to other legal matters.

CIBC considers losses to be reasonably possible when they are neither probable nor remote. It is reasonably possible that CIBC may incur losses in addition to the amounts recorded when the loss accrued is the mid-point of a range of reasonably possible losses, or the potential loss pertains to a matter in which an unfavourable outcome is reasonably possible but not probable.

CIBC believes the estimate of the aggregate range of reasonably possible losses, in excess of the amounts accrued, for its significant legal proceedings, where it is possible to make such an estimate, is from nil to approximately $1.2 billion as at October 31, 2017. 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, 2017, 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.

A description of significant ongoing matters to which CIBC is a party can be found in Note 23 to the consolidated financial statements.

Restructuring

During 2015, we recorded cumulative restructuring charges of $296 million in Corporate and Other. The charges primarily related to employee severance and included Program Clarity, a bank-wide priority focused on simplifying our bank. The charges also included restructuring costs related to CIBC FirstCaribbean, which included charges related to the sale by CIBC FirstCaribbean of its Belize banking operations.

In the fourth quarter of 2016, we recorded additional restructuring charges of $134 million as we continued to implement initiatives in support of Program Clarity.

As at October 31, 2017, the remaining provision relating to these restructuring charges was $149 million. While this amount represents our best estimate as at October 31, 2017 of the amount required to settle the obligation, uncertainty exists with respect to when the obligation will be settled and the amounts that will ultimately be paid, as this will largely depend upon individual facts and circumstances.

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 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.

Financial instruments

As a financial institution, our assets and liabilities primarily comprise financial instruments, which include deposits, securities, loans, derivatives, acceptances, repurchase agreements, subordinated indebtedness, and preferred shares.

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. For details on the accounting for these instruments, see Note 2 to the consolidated financial statements.

For significant assumptions made in determining the valuation of financial and other instruments, see the "Valuation of financial instruments" section above.

Accounting developments

Transition to IFRS 9

IFRS 9 "Financial Instruments" (IFRS 9) replaces IAS 39 and is effective for annual periods beginning on or after January 1, 2018, which for us would have been on November 1, 2018. Early application is permitted if an entity applies all the requirements of the standard. During 2015, OSFI issued a final advisory that requires D-SIBs to adopt IFRS 9 for their annual period beginning on November 1, 2017, one year earlier than required by the International Accounting Standards Board (IASB). As a D-SIB, we will publish our first interim consolidated financial statements under IFRS 9 for the quarter ended January 31, 2018, except for the "own credit" provisions of IFRS 9, which we voluntarily early adopted as of November 1, 2014. IFRS 9 is required to be applied on a retrospective basis, with certain exceptions. As permitted, we will not restate our prior period comparative consolidated financial statements when we adopt the requirements of the new standard. We will recognize an adjustment to our opening November 1, 2017 retained earnings and AOCI, to reflect the application of the new requirements at the adoption date. The application of IFRS 9 is expected to reduce our shareholders' equity by approximately $100 million on an after-tax basis as at November 1, 2017. The impact to our regulatory capital is not expected to be material.

The transition to IFRS 9 represents a significant initiative for CIBC, for which we have established a transition program that is supported by a formal governance structure with an enterprise view and a dedicated project team. The project's Steering Committee is co-chaired by senior stakeholders from our Risk Management and Finance groups, and comprises individuals from the impacted SBUs as well as other functional groups, such as Technology and Operations and Internal Audit. The Steering Committee is responsible for:

- Ensuring the strategic alignment of IFRS 9 with CIBC's overall strategies;
- Ensuring key milestones are met;
- Providing direction and guidance on a holistic basis; and
- Reviewing and resolving key issues and risks.

To assist the Steering Committee in meeting its responsibilities, our transition program structure has three work streams that correspond to the three sections of the new financial instruments standard: (1) Classification and measurement of financial instruments; (2) Impairment; and (3) Hedge accounting. Each work stream comprises stakeholders from the impacted SBUs and functional groups, who are subject matter experts in the relevant policies, processes or technologies that are expected to be impacted by the transition.

Classification and measurement

The IFRS 9 classification and measurement model requires that all debt instrument financial assets that do not meet a "solely payment of principal and interest" (SPPI) test, including those that contain embedded derivatives, be classified at initial recognition as fair value through profit or loss (FVTPL). The intent of the SPPI test is to ensure that debt instruments that contain non-basic lending features, such as conversion options and equity linked pay-outs, are measured at FVTPL. Subsequent measurement of instruments classified as FVTPL under IFRS 9 operates in a similar manner to trading under IAS 39.

For debt instrument financial assets that meet the SPPI test, classification at initial recognition will be determined based on the business model under which these instruments are managed. Debt instruments that are managed on a "held for trading" or "fair value" basis will be classified as FVTPL. Debt instruments that are managed on a "hold to collect and for sale" basis will be classified as fair value through other comprehensive income (FV-OCI) for debt. Debt instruments that are managed on a "hold to collect" basis will be classified as amortized cost. Subsequent measurement of instruments classified at FV-OCI and amortized cost classifications under IFRS 9 operate in a similar manner to AFS for debt securities and loans and receivables, respectively, under existing IAS 39, except for the impairment provisions which are discussed below.

For those debt instrument financial assets that would otherwise be classified as FV-OCI or amortized cost, an irrevocable designation can be made at initial recognition to instead measure the debt instrument at FVTPL under the FVO if doing so eliminates or significantly reduces an accounting mismatch and if certain OSFI requirements are met.

All equity instrument financial assets are required to be classified at initial recognition as FVTPL unless an irrevocable designation is made to classify the instrument as FV-OCI for equities. Unlike AFS for equity securities under IAS 39, the FV-OCI for equities category results in all realized and unrealized gains and losses being recognized in OCI with no recycling to profit and loss. Only dividends will continue to be recognized in profit and loss.

The classification and measurement of financial liabilities remain essentially unchanged from the current IAS 39 requirements, except that changes in fair value of FVO liabilities attributable to changes in own credit risk are to be presented in OCI, rather than profit and loss, which we early adopted as of November 1, 2014.

Derivatives will continue to be measured at FVTPL under IFRS 9.

See Note 32 to the consolidated financial statements for further details of the classification and measurement changes resulting from the adoption of IFRS 9.

Impairment

The new impairment guidance sets out an expected credit loss (ECL) model applicable to all debt instrument financial assets classified as amortized cost or FV-OCI. In addition, the ECL model applies to loan commitments and financial guarantees that are not measured at FVTPL.

Incurred Loss versus Expected Loss Methodology

The application of ECL will significantly change our credit loss methodology and models. ECL allowances represent credit losses that reflect an unbiased and probability-weighted amount which is determined by evaluating a range of possible outcomes, the time value of money and reasonable and supportable information about past events, current conditions and forecasts of future economic conditions. This compares to the present incurred loss model under IAS 39 that incorporates a single best estimate, the time value of money and information about past events and current conditions. The objective of the new impairment standard is to record lifetime losses on all financial instruments which have experienced a significant increase in credit risk (SICR) since their initial recognition. As a result, ECL allowances will be measured at amounts equal to either (i) 12-month ECL or (ii) lifetime ECL for those financial instruments which have experienced a SICR since initial recognition. This compares to the present incurred loss model which recognizes lifetime credit losses when there is objective evidence of impairment and also allowances for incurred but not identified credit losses. Because of the inclusion of relative credit deterioration criteria and consideration of forward looking information, the ECL model eliminates the threshold or trigger event required under the incurred loss model, and lifetime ECL are recognized earlier under IFRS 9.

Stage Migration and Significant Increase in Credit Risk

For non-impaired financial instruments:

- Stage 1 is comprised of all non-impaired financial instruments which have not experienced a SICR since initial recognition. Entities are required to recognize 12 months of ECL for stage 1 financial instruments. In assessing whether credit risk has increased significantly, entities are required to compare the risk of a default occurring on the financial instrument as at the reporting date, with the risk of a default occurring on the financial instrument as at the date of initial recognition.
- Stage 2 is comprised of all non-impaired financial instruments which have experienced a SICR since initial recognition. Entities are required to recognize lifetime ECL for stage 2 financial instruments. In subsequent reporting periods, if the credit risk of the financial instrument improves such that there is no longer a SICR since initial recognition, then entities shall revert to recognizing 12 months of ECL. In contrast to stage 1 and stage 2, inherent within the incurred loss methodology under IAS 39, allowances are provided for non-impaired financial instruments for credit losses that are incurred but not yet identified.

For impaired financial instruments:

- Financial instruments are classified as stage 3 when there is objective evidence of impairment as a result of one or more loss events that have occurred after initial recognition with a negative impact on the estimated future cash flows of a loan or a portfolio of loans. The ECL model requires that lifetime ECL be recognized for impaired financial instruments, which is similar to the current requirements under IAS 39 for impaired financial instruments.

For our business and government portfolios, the individually assessed allowances for impaired instruments recognized under IAS 39 will generally be replaced by stage 3 allowances under IFRS 9, while the collective allowances for non-impaired financial instruments will generally be replaced by either stage 1 or stage 2 allowances under IFRS 9. For our retail portfolios, the portion of our collective allowances that relate to impaired financial instruments under IAS 39 will generally be replaced by stage 3 allowances, while the non-impaired portion of our collective allowances will generally be replaced by either stage 1 or stage 2 allowances under IFRS 9.

Key Drivers of Expected Credit Loss

The following concepts are subject to a high level of judgment, will have a significant impact on the level of ECL allowances and will be the cause of increased volatility of allowances:

- Determining when a SICR of a financial asset has occurred,
- Measuring both 12-month and lifetime credit losses, and
- Incorporating forward-looking information through the use of multiple probability-weighted scenarios.

For the majority of our retail portfolios, we will determine SICR based on relative changes in the financial instrument's lifetime PD since its initial recognition. For the majority of our business and government portfolios and FV-OCI debt securities, we will determine SICR based on relative changes in internal risk ratings since initial recognition. In respect to the lifetime of a financial instrument, the maximum period to consider when measuring ECL shall be the maximum contractual period over which an entity is exposed to credit risk. For revolving facilities, such as credit cards, an entity shall measure ECL over the period that the entity is exposed to credit risk and the ECL would not be mitigated by credit risk management actions, even if that period extends beyond the maximum contractual period. The lifetime of a credit card account is the expected behavioural life.

The measurement of both 12-month and lifetime credit losses involves forecasting forward-looking macroeconomic factors for multiple scenarios and determining the probability weighting for the scenarios so that we can appropriately probability weight the expected losses we will recognize on our consolidated balance sheet. While this process will leverage existing forecasting processes and will be overseen by a governance committee consisting of key internal stakeholders from Economics, Risk Management, and Finance, it involves a significant amount of judgment. The incorporation of the forward-looking information into PDs, LGDs, and EADs for multiple scenarios for the purpose of calculating the ECLs under the different scenarios also involves significant judgment. In many cases, this process leverages our existing regulatory framework.

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 will be 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 considers 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 is captured
Other		ECL is discounted from the default date to the reporting date

Key Activities

Throughout 2017, we have been testing the application of the ECL methodology for our impacted portfolios through the application of an internal parallel run. This included testing the processes to forecast and probability weight the forward-looking factors used to calculate our ECLs and assessing the appropriateness of our SICR triggers. During the year, we also focused on updating all relevant internal controls and policies and we continued to educate key stakeholders. Throughout the transition program, our Audit Committee received regular program updates, including the results of our parallel ECL allowances.

Upon the adoption of IFRS 9, we plan to change from our current policy of attributing changes to our collective allowance for non-impaired financial instruments from Corporate and Other to a new IFRS 9 policy to attribute any changes in ECL, including stage 1 and stage 2 ECL changes, to our SBUs.

Regulatory Developments

Our implementation of IFRS 9 takes into account guidance issued by OSFI covering sound credit risk practices associated with the implementation and application of an expected credit loss accounting framework. We also continue to monitor regulatory developments related to the new ECL impairment requirements.

In March 2017, the BCBS issued *Standards, Regulatory treatment of accounting provisions – interim approach and transitional arrangements*, which addresses the transitional arrangement requirements and interim approach for the regulatory treatment of accounting provisions. The BCBS has outlined a number of high-level requirements that local regulatory authorities must comply with should the regulatory authority choose to adopt a transitional arrangement. The BCBS has decided to retain the current treatment of provisions under both the standardized and IRB approaches for credit risk for an interim period. Regulatory authorities in individual jurisdictions will be able to extend their existing approaches to categorize provisions as general or specific to provisions calculated under the applicable ECL accounting model. Beyond the interim period, the BCBS recommends that regulatory authorities in individual jurisdictions provide guidance, as appropriate, on how they intend to categorize ECL provisions as general or specific to ensure consistency within their jurisdiction.

In August 2017, OSFI issued for public consultation revisions to the Capital Adequacy Requirements Guideline for implementation in the first quarter of 2018, including guidance related to the treatment of IFRS 9 allowances in the regulatory capital framework. The proposed guideline retains the current regulatory treatment of accounting provisions, consistent with the BCBS guideline, and provides guidance on the classification of stage 1, 2 and 3 allowances under IFRS 9 in the regulatory framework.

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, pending the completion of the IASB's project on macro hedge accounting. As permitted, we have elected to not adopt the IFRS 9 hedge accounting requirements and instead will retain the IAS 39 hedge accounting requirements. However, we will adopt the new hedge accounting disclosure requirements under amendments to IFRS 7 for our annual period ending October 31, 2018.

Other accounting policy changes

For details on other future accounting policy changes, see Note 32 to the consolidated financial statements.

Regulatory developments

Automatic Exchange of Information – Organisation for Economic Co-operation and Development (OECD)

Under the initiative of the OECD, many countries, including Canada, have committed to automatic exchange of information relating to accounts held by tax residents of signatory countries, using a Common Reporting Standard (CRS). CIBC will meet all obligations imposed in respect of CRS, in accordance with local law, in all applicable jurisdictions in which it operates.

Review of sales practices

During the year, the Financial Consumer Agency of Canada and OSFI announced that they are conducting an industry-wide review of the retail banking sales practices of Canadian financial institutions, which is ongoing. CIBC will continue to monitor developments in this area.

For a discussion of other regulatory developments, see the "Taxes", "Capital resources", and "Management of risk" sections.

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); and 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' Auditors

The "Policy on the Scope of Services of the Shareholders' Auditors" sets out the parameters for the engagement of the shareholders' auditors 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' auditors and prohibits CIBC from engaging the shareholders' auditors for "prohibited" services. The Audit Committee is also accountable for the oversight of the work of the shareholders' auditors and for an annual assessment of the engagement team's qualifications, independence and performance. 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' auditors are disclosed in our Management Proxy Circular.

Controls and procedures

Disclosure controls and procedures

CIBC's management, with the participation of the President and Chief Executive Officer and the Chief Financial Officer, has evaluated the effectiveness of CIBC's disclosure controls and procedures as at October 31, 2017 (as defined in the rules of the SEC and the Canadian Securities Administrators). Based on that evaluation, the President and Chief Executive Officer and the Chief Financial Officer 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 Chief Executive Officer and the Chief Financial Officer 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 financial statements.

All internal control systems, no matter how well designed, have inherent limitations. 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, 2017, management assessed the effectiveness of CIBC's internal control over financial reporting and concluded that such internal control was effective and that there were no material weaknesses in CIBC's internal control over financial reporting that have been identified by management.

Ernst & Young LLP, the external auditors, have audited the consolidated financial statements of CIBC for the year ended October 31, 2017, and have also issued a report on internal control over financial reporting under standards of the Public Company Accounting Oversight Board (United States). This report is located on page 97 of this Annual Report.

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, 2017 that have materially affected, or are reasonably likely to materially affect, its internal control over financial reporting.

Supplementary annual financial information

Average balance sheet, net interest income and margin

$ millions, for the year ended October 31	Average balance			Interest			Average rate		
	2017	2016	2015	**2017**	2016	2015	**2017**	2016	2015
Domestic assets (1)									
Cash and deposits with banks	**$ 3,294**	$ 2,186	$ 2,369	**$ 31**	$ 19	$ 16	**0.94 %**	0.87 %	0.68 %
Securities Trading	**44,620**	42,563	43,061	**1,205**	1,273	1,248	**2.70**	2.99	2.90
AFS and HTM	**13,246**	13,510	6,231	**182**	167	98	**1.37**	1.24	1.57
FVO	**57**	60	58	**3**	3	4	**5.26**	5.00	6.90
Securities borrowed or purchased under resale agreements	**27,406**	20,231	26,361	**276**	209	241	**1.01**	1.03	0.91
Loans Residential mortgages	**194,350**	174,105	159,689	**4,698**	4,188	4,159	**2.42**	2.41	2.60
Personal and credit card	**49,901**	47,537	46,234	**3,378**	3,260	3,224	**6.77**	6.86	6.97
Business and government	**48,060**	40,812	36,343	**1,429**	1,346	1,244	**2.97**	3.30	3.42
Total loans	**292,311**	262,454	242,266	**9,505**	8,794	8,627	**3.25**	3.35	3.56
Other interest-bearing assets	**1,024**	1,067	578	**5**	8	10	**0.49**	0.75	1.73
Derivative instruments	**11,687**	14,326	14,504	**–**	–	–	**–**	–	–
Customers' liability under acceptances	**9,435**	12,720	10,256	**–**	–	–	**–**	–	–
Other non-interest-bearing assets	**14,185**	14,753	13,776	**–**	–	–	**–**	–	–
Total domestic assets	**417,265**	383,870	359,460	**11,207**	10,473	10,244	**2.69**	2.73	2.85
Foreign assets (1)(2)									
Cash and deposits with banks	**18,451**	30,745	23,473	**149**	137	60	**0.81**	0.45	0.26
Securities Trading	**10,518**	5,993	4,006	**161**	112	39	**1.53**	1.87	0.97
AFS and HTM	**23,653**	20,883	12,809	**333**	216	129	**1.41**	1.03	1.01
FVO	**94**	206	208	**6**	3	6	**6.38**	1.46	2.88
Securities borrowed or purchased under resale agreements	**19,228**	19,386	11,407	**219**	120	69	**1.14**	0.62	0.60
Loans Residential mortgages	**2,711**	2,426	2,324	**140**	131	132	**5.16**	5.40	5.68
Personal and credit card	**916**	761	739	**83**	74	70	**9.06**	9.72	9.47
Business and government	**32,719**	26,911	23,464	**1,295**	826	733	**3.96**	3.07	3.12
Total loans	**36,346**	30,098	26,527	**1,518**	1,031	935	**4.18**	3.43	3.52
Other interest-bearing assets	**137**	114	92	**–**	–	1	**–**	–	1.09
Derivative instruments	**12,646**	14,669	13,812	**–**	–	–	**–**	–	–
Other non-interest-bearing assets	**4,027**	3,176	3,530	**–**	–	–	**–**	–	–
Total foreign assets	**125,100**	125,270	95,864	**2,386**	1,619	1,239	**1.91**	1.29	1.29
Total assets	**$ 542,365**	$ 509,140	$ 455,324	**$ 13,593**	$ 12,092	$ 11,483	**2.51 %**	2.37 %	2.52 %
Domestic liabilities (1)									
Deposits Personal	**$ 143,640**	$ 134,225	$ 125,982	**$ 851**	$ 858	$ 1,032	**0.59 %**	0.64 %	0.82 %
Business and government	**129,851**	120,602	106,439	**1,008**	1,560	1,080	**0.78**	1.29	1.01
Bank	**2,256**	2,246	1,548	**13**	9	7	**0.58**	0.40	0.45
Secured borrowings	**38,642**	38,720	38,758	**613**	547	581	**1.59**	1.41	1.50
Total deposits	**314,389**	295,793	272,727	**2,485**	2,974	2,700	**0.79**	1.01	0.99
Derivative instruments	**11,960**	15,297	15,461	**–**	–	–	**–**	–	–
Acceptances	**9,436**	12,719	10,256	**–**	–	–	**–**	–	–
Obligations related to securities sold short	**13,400**	10,875	10,724	**224**	197	221	**1.67**	1.81	2.06
Obligations related to securities lent or sold under repurchase agreements	**9,178**	8,575	9,743	**130**	96	90	**1.42**	1.12	0.92
Other liabilities	**11,782**	10,494	9,459	**(3)**	3	10	**(0.03)**	0.03	0.11
Subordinated indebtedness	**3,088**	2,912	4,138	**138**	133	179	**4.47**	4.57	4.33
Total domestic liabilities	**373,233**	356,665	332,508	**2,974**	3,403	3,200	**0.80**	0.95	0.96
Foreign liabilities (1)(2)									
Deposits Personal	**10,182**	7,953	7,163	**66**	51	68	**0.65**	0.64	0.95
Business and government	**83,461**	81,554	63,798	**1,274**	121	190	**1.53**	0.15	0.30
Bank	**16,105**	13,771	10,519	**128**	69	31	**0.79**	0.50	0.29
Secured borrowings	**–**	–	115	**–**	–	1	**–**	–	0.87
Total deposits	**109,748**	103,278	81,595	**1,468**	241	290	**1.34**	0.23	0.36
Derivative instruments	**12,942**	15,662	14,723	**–**	–	–	**–**	–	–
Obligations related to securities sold short	**389**	351	721	**2**	2	9	**0.51**	0.57	1.25
Obligations related to securities lent or sold under repurchase agreements	**17,125**	8,554	3,469	**124**	31	20	**0.72**	0.36	0.58
Other liabilities	**1,810**	1,916	1,911	**44**	45	47	**2.43**	2.35	2.46
Subordinated indebtedness	**194**	235	262	**4**	4	2	**2.06**	1.70	0.76
Total foreign liabilities	**142,208**	129,996	102,681	**1,642**	323	368	**1.15**	0.25	0.36
Total liabilities	**515,441**	486,661	435,189	**4,616**	3,726	3,568	**0.90**	0.77	0.82
Shareholders' equity	**26,726**	22,275	19,951	**–**	–	–	**–**	–	–
Non-controlling interests	**198**	204	184	**–**	–	–	**–**	–	–
Total liabilities and equity	**$ 542,365**	$ 509,140	$ 455,324	**$ 4,616**	$ 3,726	$ 3,568	**0.85 %**	0.73 %	0.78 %
Net interest income and margin				**$ 8,977**	$ 8,366	$ 7,915	**1.66 %**	1.64 %	1.74 %
Additional disclosures: Non-interest-bearing deposit liabilities									
Domestic	**$ 45,691**	$ 40,843	$ 37,202						
Foreign (2)	**9,159**	5,605	4,844						

(1) Classification as domestic or foreign is based on domicile of debtor or customer.
(2) Includes the results of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.

Volume/rate analysis of changes in net interest income

$ millions		2017/2016			2016/2015		
		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		$ 10	$ 2	$ 12	$ (1)	$ 4	$ 3
Securities	Trading	62	(130)	(68)	(14)	39	25
	AFS and HTM	(3)	18	15	114	(45)	69
	FVO	–	–	–	–	(1)	(1)
Securities borrowed or purchased under resale agreements		74	(7)	67	(56)	24	(32)
Loans	Residential mortgages	487	23	510	375	(346)	29
	Personal and credit card	162	(44)	118	91	(55)	36
	Business and government	239	(156)	83	153	(51)	102
Total loans		888	(177)	711	619	(452)	167
Other interest-bearing assets		–	(3)	(3)	8	(10)	(2)
Change in domestic interest income		1,031	(297)	734	670	(441)	229
Foreign assets [1][2]							
Cash and deposits with banks		(55)	67	12	19	58	77
Securities	Trading	85	(36)	49	19	54	73
	AFS and HTM	29	88	117	81	6	87
	FVO	(2)	5	3	–	(3)	(3)
Securities borrowed or purchased under resale agreements		(1)	100	99	48	3	51
Loans	Residential mortgages	15	(6)	9	6	(7)	(1)
	Personal and credit card	15	(6)	9	2	2	4
	Business and government	178	291	469	108	(15)	93
Total loans		208	279	487	116	(20)	96
Other interest-bearing assets		–	–	–	–	(1)	(1)
Change in foreign interest income		264	503	767	283	97	380
Total change in interest income		$ 1,295	$ 206	$ 1,501	$ 953	$ (344)	$ 609
Domestic liabilities [1]							
Deposits	Personal	$ 60	$ (67)	$ (7)	$ 68	$ (242)	$ (174)
	Business and government	120	(672)	(552)	144	336	480
	Bank	–	4	4	3	(1)	2
	Secured borrowings	(1)	67	66	(1)	(33)	(34)
Total deposits		179	(668)	(489)	214	60	274
Obligations related to securities sold short		46	(19)	27	3	(27)	(24)
Obligations related to securities lent or sold under repurchase agreements		7	27	34	(11)	17	6
Other liabilities		–	(6)	(6)	1	(8)	(7)
Subordinated indebtedness		8	(3)	5	(53)	7	(46)
Change in domestic interest expense		240	(669)	(429)	154	49	203
Foreign liabilities [1][2]							
Deposits	Personal	14	1	15	7	(24)	(17)
	Business and government	3	1,150	1,153	53	(122)	(69)
	Bank	12	47	59	10	28	38
	Secured borrowings	–	–	–	(1)	–	(1)
Total deposits		29	1,198	1,227	69	(118)	(49)
Obligations related to securities sold short		–	–	–	(5)	(2)	(7)
Obligations related to securities lent or sold under repurchase agreements		31	62	93	29	(18)	11
Other liabilities		(2)	1	(1)	–	(2)	(2)
Subordinated indebtedness		(1)	1	–	–	2	2
Change in foreign interest expense		57	1,262	1,319	93	(138)	(45)
Total change in interest expense		$ 297	$ 593	$ 890	$ 247	$ (89)	$ 158
Change in total net interest income		$ 998	$ (387)	$ 611	$ 706	$ (255)	$ 451

(1) Classification as domestic or foreign is based on domicile of debtor or customer.
(2) Includes the results of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.

Analysis of net loans and acceptances

	Canada [1]					U.S. [1][2]				
$ millions, as at October 31	**2017**	2016	2015	2014	2013	**2017**	2016	2015	2014	2013
Residential mortgages	**$ 203,787**	$ 184,610	$ 166,616	$ 155,198	$ 148,664	**$ 902**	$ –	$ –	$ 1	$ 1
Student	**50**	73	110	151	210	**–**	–	–	–	–
Personal	**39,483**	36,896	35,412	34,342	33,257	**326**	56	51	94	93
Credit card	**11,805**	11,755	11,279	11,078	14,097	**35**	36	37	40	32
Total net consumer loans	**255,125**	233,334	213,417	200,769	196,228	**1,263**	92	88	135	126
Non-residential mortgages	**6,481**	6,734	7,120	6,947	6,979	**95**	103	333	240	236
Financial institutions	**5,403**	4,831	4,137	2,640	2,356	**3,248**	2,100	667	659	403
Retail and wholesale	**4,496**	4,044	3,667	3,515	3,086	**1,812**	290	310	257	158
Business services	**6,237**	5,312	5,011	4,728	4,191	**3,567**	1,215	814	418	284
Manufacturing – capital goods	**1,912**	1,663	1,505	1,308	1,081	**1,559**	128	181	221	189
Manufacturing – consumer goods	**3,019**	2,663	2,626	2,329	1,914	**702**	28	22	14	36
Real estate and construction	**13,293**	11,684	8,644	7,201	5,794	**13,761**	8,554	7,206	6,394	5,611
Agriculture	**5,558**	5,364	4,828	4,263	3,933	**107**	44	50	6	1
Oil and gas	**4,762**	4,532	4,138	3,633	2,969	**2,198**	1,951	1,469	1,276	988
Mining	**668**	722	761	602	383	**87**	242	305	266	223
Forest products	**464**	465	566	470	434	**209**	4	11	41	35
Hardware and software	**539**	267	280	339	468	**883**	165	167	118	98
Telecommunications and cable	**281**	444	510	514	413	**756**	30	44	26	26
Publishing, printing, and broadcasting	**291**	333	244	208	290	**117**	–	–	5	–
Transportation	**1,818**	1,630	1,449	1,033	870	**602**	288	183	221	247
Utilities	**1,927**	1,663	1,621	1,282	1,170	**1,445**	1,237	845	804	816
Education, health and social services	**2,937**	2,826	2,128	2,017	1,956	**3,099**	–	–	–	–
Governments	**869**	728	541	578	613	**7**	–	–	–	–
Others	**–**	–	–	–	–	**12**	17	69	165	210
Collective allowance allocated to business and government loans	**(195)**	(215)	(218)	(192)	(192)	**(83)**	(58)	(50)	(43)	(28)
Total net business and government loans, including acceptances	**60,760**	55,690	49,558	43,415	38,708	**34,183**	16,338	12,626	11,088	9,533
Total net loans and acceptances	**$ 315,885**	$ 289,024	$ 262,975	$ 244,184	$ 234,936	**$ 35,446**	$ 16,430	$ 12,714	$ 11,223	$ 9,659

(1) Classification by country is based on domicile of debtor or customer.
(2) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.

Analysis of net loans and acceptances (continued)

	Other [1]					Total				
$ millions, as at October 31	**2017**	2016	2015	2014	2013	**2017**	2016	2015	2014	2013
Residential mortgages	**$ 2,379**	$ 2,467	$ 2,406	$ 2,118	$ 2,113	**$ 207,068**	$ 187,077	$ 169,022	$ 157,317	$ 150,778
Student	**–**	–	–	1	1	**50**	73	110	152	211
Personal	**583**	519	476	410	429	**40,392**	37,471	35,939	34,846	33,779
Credit card	**152**	155	150	125	126	**11,992**	11,946	11,466	11,243	14,255
Total net consumer loans	**3,114**	3,141	3,032	2,654	2,669	**259,502**	236,567	216,537	203,558	199,023
Non-residential mortgages	**218**	232	245	228	239	**6,794**	7,069	7,698	7,415	7,454
Financial institutions	**841**	1,723	3,291	2,155	1,065	**9,492**	8,654	8,095	5,454	3,824
Retail and wholesale	**435**	561	548	499	333	**6,743**	4,895	4,525	4,271	3,577
Business services	**1,736**	1,266	1,370	1,098	772	**11,540**	7,793	7,195	6,244	5,247
Manufacturing – capital goods	**432**	234	293	248	202	**3,903**	2,025	1,979	1,777	1,472
Manufacturing – consumer goods	**111**	114	119	88	249	**3,832**	2,805	2,767	2,431	2,199
Real estate and construction	**1,325**	1,391	1,124	890	777	**28,379**	21,629	16,974	14,485	12,182
Agriculture	**22**	24	40	37	40	**5,687**	5,432	4,918	4,306	3,974
Oil and gas	**555**	268	324	321	71	**7,515**	6,751	5,931	5,230	4,028
Mining	**784**	928	446	384	537	**1,539**	1,892	1,512	1,252	1,143
Forest products	**–**	–	–	38	30	**673**	469	577	549	499
Hardware and software	**20**	–	12	14	22	**1,442**	432	459	471	588
Telecommunications and cable	**301**	359	388	162	234	**1,338**	833	942	702	673
Publishing, printing, and broadcasting	**89**	87	79	89	4	**497**	420	323	302	294
Transportation	**1,847**	1,326	899	803	893	**4,267**	3,244	2,531	2,057	2,010
Utilities	**779**	532	785	631	318	**4,151**	3,432	3,251	2,717	2,304
Education, health and social services	**29**	32	32	26	24	**6,065**	2,858	2,160	2,043	1,980
Governments	**1,662**	1,874	1,611	1,079	943	**2,538**	2,602	2,152	1,657	1,556
Others	**–**	300	711	1,431	2,403	**12**	317	780	1,596	2,613
Collective allowance allocated to business and government loans	**(73)**	(65)	(57)	(42)	(40)	**(351)**	(338)	(325)	(277)	(260)
Total net business and government loans, including acceptances	**11,113**	11,186	12,260	10,179	9,116	**106,056**	83,214	74,444	64,682	57,357
Total net loans and acceptances	**$ 14,227**	$ 14,327	$ 15,292	$ 12,833	$ 11,785	**$ 365,558**	$ 319,781	$ 290,981	$ 268,240	$ 256,380

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

Summary of allowance for credit losses

$ millions, as at or for the year ended October 31	**2017** (1)	2016	2015	2014	2013
Balance at beginning of year	**$ 1,813**	$ 1,762	$ 1,736	$ 1,758	$ 1,916
Provision for credit losses	**829**	1,051	771	937	1,121
Write-offs					
Domestic (2)					
Residential mortgages	**21**	13	14	19	15
Student	**–**	–	1	3	3
Personal and credit card	**869**	842	781	857	1,030
Other business and government	**51**	116	42	63	137
Foreign (2)					
Residential mortgages	**17**	21	18	8	9
Personal and credit card	**19**	18	16	16	9
Other business and government	**80**	143	132	92	245
Total write-offs	**1,057**	1,153	1,004	1,058	1,448
Recoveries					
Domestic (2)					
Personal and credit card	**168**	163	171	177	172
Other business and government	**15**	8	8	11	6
Foreign (2)					
Personal and credit card	**5**	6	5	2	3
Other business and government	**5**	6	2	2	3
Total recoveries	**193**	183	186	192	184
Net write-offs	**864**	970	818	866	1,264
Interest income on impaired loans	**(26)**	(29)	(23)	(30)	(37)
Foreign exchange and other	**(15)**	(1)	96	(63)	22
Balance at end of year	**$ 1,737**	$ 1,813	$ 1,762	$ 1,736	$ 1,758
Comprises:					
Loans	**$ 1,618**	$ 1,691	$ 1,670	$ 1,660	$ 1,698
Undrawn credit facilities	**119**	122	92	76	60
Ratio of net write-offs during the year to average loans outstanding during the year	**0.26 %**	0.33 %	0.30 %	0.35 %	0.52 %

(1) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
(2) Classification as domestic or foreign is based on domicile of debtor or customer.

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	**2017**	2016	2015	2014	2013	**2017**	2016	2015	2014	2013
Domestic (2)										
Residential mortgages	**$ 22**	$ 20	$ 21	$ 22	$ 24	**7.5 %**	8.0 %	9.3 %	10.2 %	11.4 %
Personal loans	**110**	105	99	96	105	**94.8**	85.4	91.7	80.0	77.8
Business and government	**43**	63	77	38	61	**41.7**	30.9	42.8	60.3	63.5
Total domestic	**175**	188	197	156	190	**34.2**	32.5	38.4	39.1	43.1
Foreign (2)(3)										
Residential mortgages	**123**	148	167	146	65	**55.7**	56.3	48.0	45.9	23.8
Personal loans	**31**	40	46	43	30	**56.4**	57.1	58.2	53.8	34.9
Business and government	**148**	196	236	299	262	**28.3**	26.2	49.3	46.9	35.1
Total foreign	**302**	384	449	488	357	**37.8**	35.6	49.6	47.1	32.3
Total allowance	**$ 477**	$ 572	$ 646	$ 644	$ 547	**36.4 %**	34.5 %	45.5 %	44.9 %	35.4 %

(1) Comprises individual allowance, and collective allowance related to personal, scored small business, and mortgage impaired loans that are greater than 90 days delinquent.
(2) Classification as domestic or foreign is based on domicile of debtor or customer.
(3) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.

Allowance on non-impaired loans as a percentage of net loans and acceptances

$ millions, as at October 31	Allowance for credit losses [1]					Allowance as a % of net loans and acceptances				
	2017	2016	2015	2014	2013	**2017**	2016	2015	2014	2013
Domestic [2]										
Residential mortgages	**$ 34**	$ 30	$ 26	$ 21	$ 63	**– %**	– %	– %	– %	– %
Personal loans	**345**	345	316	315	313	**0.9**	0.9	0.9	0.9	0.9
Credit cards	**383**	383	334	384	512	**3.2**	3.3	3.0	3.5	3.6
Business and government	**187**	205	208	183	179	**0.3**	0.4	0.4	0.4	0.5
Total domestic	**949**	963	884	903	1,067	**0.3**	0.3	0.3	0.4	0.5
Foreign [2][3]										
Residential mortgages	**24**	23	22	20	8	**0.7**	0.9	0.9	0.9	0.4
Personal loans	**9**	7	7	6	3	**1.0**	1.2	1.3	1.2	0.6
Credit cards	**3**	3	4	2	5	**1.6**	1.6	2.1	1.2	3.2
Business and government	**156**	123	107	85	68	**0.3**	0.4	0.4	0.4	0.4
Total foreign	**192**	156	140	113	84	**0.4**	0.5	0.5	0.5	0.4
Total allowance	**$ 1,141**	$ 1,119	$ 1,024	$ 1,016	$ 1,151	**0.3 %**	0.3 %	0.4 %	0.4 %	0.4 %

(1) Excludes allowance on undrawn credit facilities.
(2) Classification as domestic or foreign is based on domicile of debtor or customer.
(3) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.

Net loans and acceptances by geographic location[1]

$ millions, as at October 31	**2017**	2016	2015	2014	2013
Canada					
Atlantic provinces	**$ 14,194**	$ 14,006	$ 13,598	$ 13,307	$ 13,124
Quebec	**27,027**	25,471	23,093	21,802	21,257
Ontario	**157,987**	139,254	125,584	114,940	109,390
Prairie provinces	**13,746**	13,341	12,877	12,136	11,829
Alberta, Northwest Territories and Nunavut	**44,354**	43,308	41,197	38,859	37,953
British Columbia and Yukon	**59,479**	54,567	47,478	44,012	42,421
Collective allowance allocated to Canada [2]	**(902)**	(923)	(852)	(872)	(1,038)
Total Canada	**315,885**	289,024	262,975	244,184	234,936
U.S. [3]	**35,446**	16,430	12,714	11,223	9,659
Other countries	**14,227**	14,327	15,292	12,833	11,785
Total net loans and acceptances	**$ 365,558**	$ 319,781	$ 290,981	$ 268,240	$ 256,380

(1) Classification by country is based on domicile of debtor or customer.
(2) 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.
(3) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.

Net impaired loans

$ millions, as at October 31	Canada (1) 2017	2016	2015	2014	2013	U.S. (1)(2) 2017	2016	2015	2014	2013
Gross impaired loans										
Residential mortgages	**$ 292**	$ 251	$ 225	$ 216	$ 210	**$ 9**	$ –	$ –	$ –	$ –
Student	**2**	3	5	7	9	**–**	–	–	–	–
Personal	**114**	120	103	113	126	**2**	–	–	1	4
Total gross impaired consumer loans	**408**	374	333	336	345	**11**	–	–	1	4
Non-residential mortgages	**7**	4	4	4	1	**–**	–	–	–	–
Financial institutions	**–**	1	–	1	–	**8**	–	–	–	–
Retail, wholesale and business services	**38**	23	26	31	54	**52**	5	–	–	34
Manufacturing – consumer and capital goods	**6**	19	8	4	6	**1**	–	–	–	–
Real estate and construction	**33**	23	9	10	9	**137**	62	94	135	159
Agriculture	**9**	4	1	2	4	**–**	–	–	–	–
Resource-based industries	**2**	121	126	4	13	**114**	248	1	–	–
Telecommunications, media and technology	**3**	4	2	4	6	**2**	–	–	–	–
Transportation	**2**	1	1	1	1	**–**	–	–	–	38
Utilities	**–**	–	–	–	–	**–**	–	10	20	–
Other	**3**	4	3	2	2	**45**	–	–	–	–
Total gross impaired – business and government loans	**103**	204	180	63	96	**359**	315	105	155	231
Total gross impaired loans	**511**	578	513	399	441	**370**	315	105	156	235
Other past due loans (3)	**337**	362	337	342	378	**–**	–	–	–	–
Total gross impaired and other past due loans	**$ 848**	$ 940	$ 850	$ 741	$ 819	**$ 370**	$ 315	$ 105	$ 156	$ 235
Allowance for credit losses (4)										
Residential mortgages	**$ 22**	$ 20	$ 21	$ 22	$ 24	**$ –**	$ –	$ –	$ –	$ –
Student	**–**	–	–	–	–	**–**	–	–	–	–
Personal	**110**	105	99	96	105	**–**	–	–	1	1
Total allowance – consumer loans	**132**	125	120	118	129	**–**	–	–	1	1
Non-residential mortgages	**2**	2	1	1	–	**–**	–	–	–	–
Financial institutions	**–**	–	–	–	–	**–**	–	–	–	–
Retail, wholesale and business services	**18**	16	19	20	31	**16**	4	–	–	20
Manufacturing – consumer and capital goods	**5**	7	6	3	6	**–**	–	–	–	–
Real estate and construction	**9**	10	7	7	6	**41**	20	27	47	36
Agriculture	**–**	1	–	–	1	**–**	–	–	–	–
Resource-based industries	**2**	21	39	2	9	**8**	8	–	–	–
Telecommunications, media and technology	**2**	3	2	3	5	**–**	–	–	–	–
Transportation	**2**	1	1	1	1	**–**	–	–	–	2
Utilities	**–**	–	–	–	–	**–**	–	6	13	–
Other	**3**	2	2	1	2	**–**	–	–	–	–
Total allowance – business and government loans	**43**	63	77	38	61	**65**	32	33	60	58
Total allowance	**$ 175**	$ 188	$ 197	$ 156	$ 190	**$ 65**	$ 32	$ 33	$ 61	$ 59
Net impaired loans										
Residential mortgages	**$ 270**	$ 231	$ 204	$ 194	$ 186	**$ 9**	$ –	$ –	$ –	$ –
Student	**2**	3	5	7	9	**–**	–	–	–	–
Personal	**4**	15	4	17	21	**2**	–	–	–	3
Total net impaired consumer loans	**276**	249	213	218	216	**11**	–	–	–	3
Non-residential mortgages	**5**	2	3	3	1	**–**	–	–	–	–
Financial institutions	**–**	1	–	1	–	**8**	–	–	–	–
Retail, wholesale and business services	**20**	7	7	11	23	**36**	1	–	–	14
Manufacturing – consumer and capital goods	**1**	12	2	1	–	**1**	–	–	–	–
Real estate and construction	**24**	13	2	3	3	**96**	42	67	88	123
Agriculture	**9**	3	1	2	3	**–**	–	–	–	–
Resource-based industries	**–**	100	87	2	4	**106**	240	1	–	–
Telecommunications, media and technology	**1**	1	–	1	1	**2**	–	–	–	–
Transportation	**–**	–	–	–	–	**–**	–	–	–	36
Utilities	**–**	–	–	–	–	**–**	–	4	7	–
Other	**–**	2	1	1	–	**45**	–	–	–	–
Total net impaired – business and government loans	**60**	141	103	25	35	**294**	283	72	95	173
Total net impaired loans	**$ 336**	$ 390	$ 316	$ 243	$ 251	**$ 305**	$ 283	$ 72	$ 95	$ 176

(1) Classification by country is based on domicile of debtor or customer.
(2) Includes the balances of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.
(3) Represents loans where repayment of principal or payment of interest is contractually in arrears between 90 and 180 days.
(4) Comprises individual allowance, and collective allowance related to personal, scored small business, and mortgage impaired loans that are greater than 90 days delinquent.

Net impaired loans (continued)

$ millions, as at October 31	Other (1) 2017	2016	2015	2014	2013	Total 2017	2016	2015	2014	2013
Gross impaired loans										
Residential mortgages	**$ 212**	$ 263	$ 348	$ 318	$ 273	**$ 513**	$ 514	$ 573	$ 534	$ 483
Student	**–**	–	–	–	–	**2**	3	5	7	9
Personal	**53**	70	79	79	82	**169**	190	182	193	212
Total gross impaired consumer loans	**265**	333	427	397	355	**684**	707	760	734	704
Non-residential mortgages	**17**	17	34	60	85	**24**	21	38	64	86
Financial institutions	**2**	3	5	5	–	**10**	4	5	6	–
Retail, wholesale and business services	**57**	94	141	168	174	**147**	122	167	199	262
Manufacturing – consumer and capital goods	**5**	210	47	44	52	**12**	229	55	48	58
Real estate and construction	**78**	104	139	184	179	**248**	189	242	329	347
Agriculture	**1**	1	3	6	11	**10**	5	4	8	15
Resource-based industries	**–**	–	2	1	1	**116**	369	129	5	14
Telecommunications, media and technology	**–**	–	–	5	5	**5**	4	2	9	11
Transportation	**4**	2	2	8	7	**6**	3	3	9	46
Utilities	**–**	–	1	1	1	**–**	–	11	21	1
Other	**–**	1	–	–	1	**48**	5	3	2	3
Total gross impaired – business and government loans	**164**	432	374	482	516	**626**	951	659	700	843
Total gross impaired loans	**429**	765	801	879	871	**1,310**	1,658	1,419	1,434	1,547
Other past due loans (2)	**3**	3	3	8	7	**340**	365	340	350	385
Total gross impaired and other past due loans	**$ 432**	$ 768	$ 804	$ 887	$ 878	**$ 1,650**	$ 2,023	$ 1,759	$ 1,784	$ 1,932
Allowance for credit losses (3)										
Residential mortgages	**$ 123**	$ 148	$ 167	$ 146	$ 65	**$ 145**	$ 168	$ 188	$ 168	$ 89
Student	**–**	–	–	–	–	**–**	–	–	–	–
Personal	**31**	40	46	42	29	**141**	145	145	139	135
Total allowance – consumer loans	**154**	188	213	188	94	**286**	313	333	307	224
Non-residential mortgages	**9**	12	17	31	32	**11**	14	18	32	32
Financial institutions	**–**	2	3	3	–	**–**	2	3	3	–
Retail, wholesale and business services	**29**	48	65	67	60	**63**	68	84	87	111
Manufacturing – consumer and capital goods	**3**	45	43	42	41	**8**	52	49	45	47
Real estate and construction	**39**	54	68	91	62	**89**	84	102	145	104
Agriculture	**1**	1	3	4	5	**1**	2	3	4	6
Resource-based industries	**–**	–	1	–	–	**10**	29	40	2	9
Telecommunications, media and technology	**–**	–	–	–	1	**2**	3	2	3	6
Transportation	**2**	2	2	–	2	**4**	3	3	1	5
Utilities	**–**	–	1	1	1	**–**	–	7	14	1
Other	**–**	–	–	–	–	**3**	2	2	1	2
Total allowance – business and government loans	**83**	164	203	239	204	**191**	259	313	337	323
Total allowance	**$ 237**	$ 352	$ 416	$ 427	$ 298	**$ 477**	$ 572	$ 646	$ 644	$ 547
Net impaired loans										
Residential mortgages	**$ 89**	$ 115	$ 181	$ 172	$ 208	**$ 368**	$ 346	$ 385	$ 366	$ 394
Student	**–**	–	–	–	–	**2**	3	5	7	9
Personal	**22**	30	33	37	53	**28**	45	37	54	77
Total net impaired consumer loans	**111**	145	214	209	261	**398**	394	427	427	480
Non-residential mortgages	**8**	5	17	29	53	**13**	7	20	32	54
Financial institutions	**2**	1	2	2	–	**10**	2	2	3	–
Retail, wholesale and business services	**28**	46	76	101	114	**84**	54	83	112	151
Manufacturing – consumer and capital goods	**2**	165	4	2	11	**4**	177	6	3	11
Real estate and construction	**39**	50	71	93	117	**159**	105	140	184	243
Agriculture	**–**	–	–	2	6	**9**	3	1	4	9
Resource-based industries	**–**	–	1	1	1	**106**	340	89	3	5
Telecommunications, media and technology	**–**	–	–	5	4	**3**	1	–	6	5
Transportation	**2**	–	–	8	5	**2**	–	–	8	41
Utilities	**–**	–	–	–	–	**–**	–	4	7	–
Other	**–**	1	–	–	1	**45**	3	1	1	1
Total net impaired – business and government loans	**81**	268	171	243	312	**435**	692	346	363	520
Total net impaired loans	**$ 192**	$ 413	$ 385	$ 452	$ 573	**$ 833**	$ 1,086	$ 773	$ 790	$ 1,000

(1) Classification by country is based on domicile of debtor or customer.
(2) Represents loans where repayment of principal or payment of interest is contractually in arrears between 90 and 180 days.
(3) Comprises individual allowance, and collective allowance related to personal, scored small business, and mortgage impaired loans that are greater than 90 days delinquent.

Deposits

$ millions, for the year ended October 31	Average balance 2017	2016	2015	Interest 2017	2016	2015	Rate 2017	2016	2015
Deposits in domestic bank offices (1)									
Payable on demand									
Personal	**$ 10,567**	$ 9,965	$ 9,252	**$ 13**	$ 12	$ 14	**0.12 %**	0.12 %	0.15 %
Business and government	**41,607**	37,572	33,735	**228**	138	121	**0.55**	0.37	0.36
Bank	**4,419**	2,943	2,083	**1**	–	2	**0.02**	–	0.10
Payable after notice									
Personal	**95,035**	87,057	80,328	**429**	363	454	**0.45**	0.42	0.57
Business and government	**34,510**	28,873	25,128	**332**	240	243	**0.96**	0.83	0.97
Bank	**359**	174	97	**4**	2	1	**1.11**	1.15	1.03
Payable on a fixed date									
Personal	**41,688**	40,414	38,996	**434**	505	589	**1.04**	1.25	1.51
Business and government	**72,260**	58,618	50,604	**1,040**	845	749	**1.44**	1.44	1.48
Bank	**1,681**	1,816	937	**12**	10	5	**0.71**	0.55	0.53
Secured borrowings	**38,642**	38,720	38,758	**613**	547	581	**1.59**	1.41	1.50
Total domestic	**340,768**	306,152	279,918	**3,106**	2,662	2,759	**0.91**	0.87	0.99
Deposits in foreign bank offices (2)									
Payable on demand									
Personal	**1,120**	818	701	**1**	1	3	**0.09**	0.12	0.43
Business and government	**7,697**	4,261	3,801	**8**	3	4	**0.10**	0.07	0.11
Bank	**5**	3	6	**–**	–	–	**–**	–	–
Payable after notice									
Personal	**3,487**	2,551	2,369	**22**	20	33	**0.63**	0.78	1.39
Business and government	**2,857**	801	766	**18**	1	1	**0.63**	0.12	0.13
Payable on a fixed date									
Personal	**1,925**	1,373	1,499	**18**	8	7	**0.94**	0.58	0.47
Business and government	**54,381**	72,031	56,203	**656**	454	152	**1.21**	0.63	0.27
Bank	**11,897**	11,081	8,944	**124**	66	30	**1.04**	0.60	0.34
Secured borrowings	**–**	–	115	**–**	–	1	**–**	–	0.87
Total foreign	**83,369**	92,919	74,404	**847**	553	231	**1.02**	0.60	0.31
Total deposits	**$ 424,137**	$ 399,071	$ 354,322	**$ 3,953**	$ 3,215	$ 2,990	**0.93 %**	0.81 %	0.84 %

(1) Deposits by foreign depositors in our domestic bank offices amounted to $26.8 billion (2016: $10.6 billion; 2015: $7.4 billion).
(2) Includes the results of CIBC Bank USA following the completion of the acquisition on June 23, 2017. See "Significant events" for additional details.

Short-term borrowings

$ millions, as at or for the year ended October 31	2017	2016	2015
Amounts outstanding at end of year			
Obligations related to securities sold short	**$ 13,713**	$ 10,338	$ 9,806
Obligations related to securities lent or sold under repurchase agreements	**29,995**	14,212	10,343
Total short-term borrowings	**$ 43,708**	$ 24,550	$ 20,149
Obligations related to securities sold short			
Average balance	**$ 13,789**	$ 11,226	$ 11,445
Maximum month-end balance	**15,211**	13,029	13,248
Average interest rate	**1.64 %**	1.77 %	2.01 %
Obligations related to securities lent or sold under repurchase agreements			
Average balance	**$ 26,303**	$ 17,129	$ 13,212
Maximum month-end balance	**33,261**	24,513	14,766
Average interest rate	**0.97 %**	0.74 %	0.83 %

Fees paid to the shareholders' auditors

$ millions, for the year ended October 31	2017	2016	2015
Audit fees (1)	**$ 21.1**	$ 16.4	$ 15.9
Audit-related fees (2)	**2.6**	2.2	3.2
Tax fees (3)	**1.1**	0.3	0.4
All other fees (4)	**0.1**	–	0.3
Total	**$ 24.9**	$ 18.9	$ 19.8

(1) For the audit of CIBC's annual financial statements and services normally provided by the principal auditor in connection with CIBC's statutory and regulatory filings. Audit fees also include the audit of internal controls 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 financial statements, including various agreed upon procedures and translation of financial reports.
(3) For tax compliance services.
(4) Includes fees for non-audit services.