

# 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, 2016, 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. This MD&A is current as of November 30, 2016. Additional information relating to CIBC, including the Annual Information Form, is available on SEDAR at [www.sedar.com](http://www.sedar.com) and on the U.S. Securities and Exchange Commission's (SEC) website at [www.sec.gov](http://www.sec.gov). No information on CIBC's website ([www.cibc.com](http://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 172 to 177 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 2017", "Strategic business units overview – Retail and Business Banking", "Strategic business units overview – 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 2017 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 2017" 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 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; 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 or the possibility that the acquisition does not close when expected or at all because required regulatory, shareholder or other approvals are not received or other conditions to the closing are not satisfied on a timely basis 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 2016. Prior period amounts were reclassified accordingly. The changes impacted the results of our strategic business units (SBUs), but there was no impact on consolidated net income resulting from these reclassifications.

- In the corporate and investment banking and business banking lines of business within Capital Markets and Retail and Business Banking, respectively, our client segmentation was redefined in a manner that reinforced our client-focused strategy, and resulted in a greater degree of industry specialization and expertise, while providing enhanced client coverage. We transferred client accounts accordingly between these lines of business.
- 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.

In addition:

Within Capital Markets:

- Equity and debt underwriting revenue, previously shared between the global markets and corporate and investment banking lines of business, was transferred to be reported entirely within the corporate and investment banking line of business.

Within Wealth Management:

- The wealth advisory services business previously reported in the asset management line of business was transferred to the retail brokerage line of business.
- An "other" line of business was established to include the results of American Century Investments (ACI), previously reported in the asset management line of business. For further details of the sale of our minority investment in ACI, see the "Significant events" section.

## Overview

CIBC is a leading Canadian-based financial institution with a market capitalization of \$40 billion and a Basel III Common Equity Tier 1 (CET1) ratio of 11.3%. Through our three main businesses, Retail and Business Banking, 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 more than 43,000 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 strong, innovative, relationship-oriented bank. We are accelerating our transformation by concentrating on three strategic bank-wide priorities:

- **Client focus** – we are targeting to be #1 in client experience.
- **Innovation** – we have a long history of innovating for our clients and we are continuing to build on our leadership position.
- **Simplification** – we are simplifying our bank to make it easier to bank at CIBC and easier to get work done. This allows us to redeploy resources for reinvestment in our business for future growth and improved efficiency.

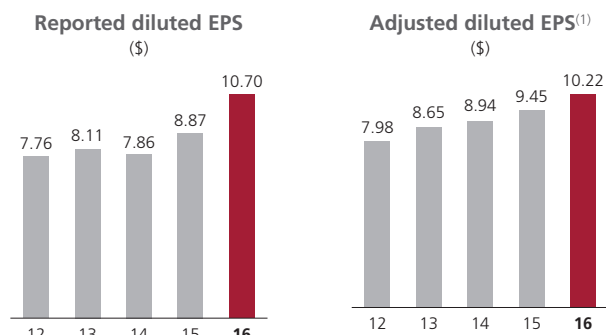
### Performance against objectives

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. We have set targets for each of these measures over the medium term, which we define as three to five years.

#### Earnings growth<sup>(1)</sup>

To assess our earnings growth, we monitor our earnings per share (EPS). For several years, CIBC has communicated an average annual EPS growth target of 5% to 10%. In 2016, we achieved our target, delivering reported and adjusted<sup>(1)</sup> diluted EPS growth of 21% and 8%, respectively.

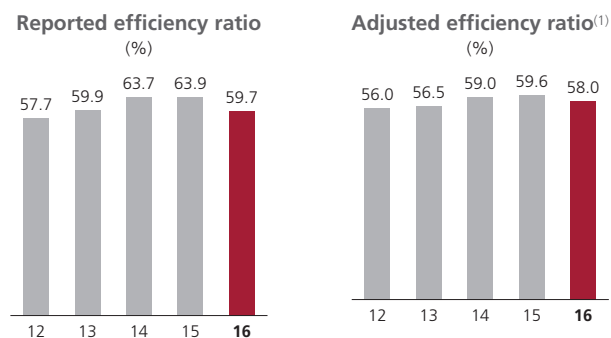
Going forward, our target is to deliver average annual EPS growth of at least 5%.



#### Efficiency ratio<sup>(1)</sup>

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 2016, CIBC's reported and adjusted<sup>(1)</sup> efficiency ratios improved to 59.7% and 58.0%, respectively, from 63.9% and 59.6% in 2015.

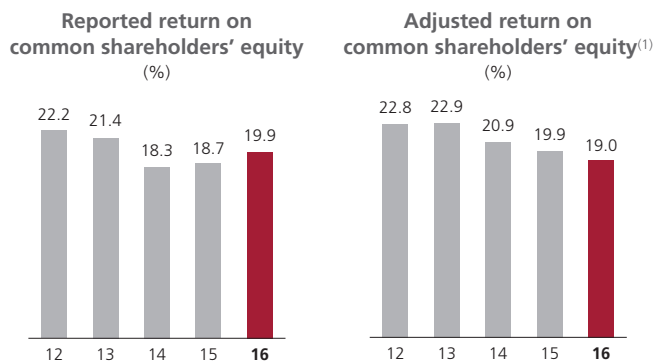
CIBC has set a medium-term target of achieving an efficiency ratio of 55% by 2019.



#### Return on common shareholders' equity<sup>(1)</sup>

ROE is another key measure of shareholder value. In 2016, CIBC's reported and adjusted<sup>(1)</sup> ROE were strong, at 19.9% and 19.0%, respectively, within our target range of 18% to 20%.

Going forward, our target is to maintain a strong ROE of at least 15%.



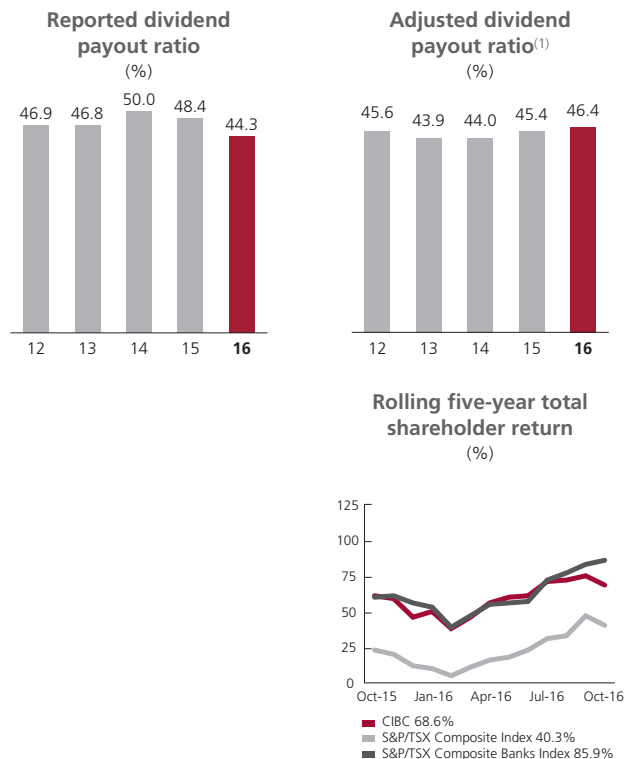
(1) For additional information, see the "Non-GAAP measures" section.

## 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:

- For many years, we have targeted and maintained an average dividend payout ratio of 40% to 50% of earnings to common shareholders. A year ago, we refined our target to deliver an adjusted dividend payout ratio near the top end of our target range. 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 2016, our reported and adjusted<sup>(1)</sup> dividend payout ratios were 44.3% and 46.4%, respectively.
- We also have an objective to deliver a TSR that exceeds the industry average, which we have defined as the S&P/TSX Composite Banks Index, over a rolling five-year period. For the five years ended October 31, 2016, CIBC delivered a TSR of 68.6%, which was below the Bank Index return over the same period of 85.9%.



## Balance sheet strength

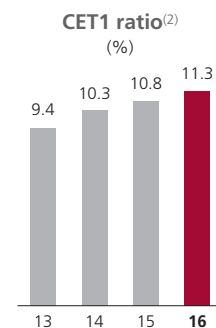
Maintaining a strong balance sheet is foundational to our long-term success. Our goal is to maintain strong capital ratios that comfortably exceed regulatory targets.

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 2016, our Basel III CET1 ratio on an all-in basis was 11.3%, 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.

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

(2) CET1 ratio was effective beginning in 2013.



## Economic and market environment

CIBC operated in an environment of modest economic growth in Canada and abroad in 2016. After climbing in the prior year, Canada's unemployment rate stabilized. Weakness in energy sector capital spending and flat total export volumes were offset by growth in housing and consumer spending, both supported by low interest rates. Household borrowing accelerated on growth in both mortgage and consumer credit, while business credit slowed as strong growth in bank lending was offset by declines in commercial paper and bankers' acceptances. Canadian capital markets saw firmer issuance activity in government and corporate bonds in Canada, and steady levels of equity issuance activity versus 2015.

# Financial performance overview

## Financial highlights

As at or for the year ended October 31

	2016	2015	2014	2013	2012
<b>Financial results</b> (\$ millions)					
Net interest income	\$ 8,366	\$ 7,915	\$ 7,459	\$ 7,453	\$ 7,326
Non-interest income	6,669	5,941	5,904	5,252	5,159
Total revenue	15,035	13,856	13,363	12,705	12,485
Provision for credit losses	1,051	771	937	1,121	1,291
Non-interest expenses	8,971	8,861	8,512	7,608	7,202
Income before income taxes	5,013	4,224	3,914	3,976	3,992
Income taxes	718	634	699	626	689
Net income	\$ 4,295	\$ 3,590	\$ 3,215	\$ 3,350	\$ 3,303
Net income (loss) attributable to non-controlling interests	20	14	(3)	(2)	9
Preferred shareholders	38	45	87	99	158
Common shareholders	4,237	3,531	3,131	3,253	3,136
Net income attributable to equity shareholders	\$ 4,275	\$ 3,576	\$ 3,218	\$ 3,352	\$ 3,294
<b>Financial measures</b>					
Reported efficiency ratio	59.7 %	63.9 %	63.7 %	59.9 %	57.7 %
Adjusted efficiency ratio <sup>(1)</sup>	58.0 %	59.6 %	59.0 %	56.5 %	56.0 %
Loan loss ratio <sup>(2)</sup>	0.31 %	0.27 %	0.38 %	0.44 %	0.53 %
Reported return on common shareholders' equity	19.9 %	18.7 %	18.3 %	21.4 %	22.2 %
Adjusted return on common shareholders' equity <sup>(1)</sup>	19.0 %	19.9 %	20.9 %	22.9 %	22.8 %
Net interest margin	1.64 %	1.74 %	1.81 %	1.85 %	1.84 %
Net interest margin on average interest-earning assets	1.88 %	2.00 %	2.05 %	2.12 %	2.15 %
Return on average assets	0.84 %	0.79 %	0.78 %	0.83 %	0.83 %
Return on average interest-earning assets	0.96 %	0.91 %	0.89 %	0.95 %	0.97 %
TSR	5.19 %	1.96 %	20.87 %	18.41 %	9.82 %
Reported effective tax rate	14.3 %	15.0 %	17.9 %	15.8 %	17.3 %
Adjusted effective tax rate <sup>(1)</sup>	16.6 %	15.5 %	15.4 %	16.5 %	18.0 %
<b>Common share information</b>					
Per share (\$)					
– basic earnings	\$ 10.72	\$ 8.89	\$ 7.87	\$ 8.11	\$ 7.77
– reported diluted earnings	10.70	8.87	7.86	8.11	7.76
– adjusted diluted earnings <sup>(1)</sup>	10.22	9.45	8.94	8.65	7.98
– dividends	4.75	4.30	3.94	3.80	3.64
– book value	56.59	51.25	44.30	40.36	35.83
Share price (\$)					
– high	104.46	107.16	107.01	88.70	78.56
– low	83.33	86.00	85.49	74.10	68.43
– closing	100.50	100.28	102.89	88.70	78.56
Shares outstanding (thousands)					
– weighted-average basic	395,389	397,213	397,620	400,880	403,685
– weighted-average diluted	395,919	397,832	398,420	401,261	404,145
– end of period	397,070	397,291	397,021	399,250	404,485
Market capitalization (\$ millions)	\$ 39,906	\$ 39,840	\$ 40,850	\$ 35,413	\$ 31,776
<b>Value measures</b>					
Dividend yield (based on closing share price)	4.7 %	4.3 %	3.8 %	4.3 %	4.6 %
Reported dividend payout ratio	44.3 %	48.4 %	50.0 %	46.8 %	46.9 %
Adjusted dividend payout ratio <sup>(1)</sup>	46.4 %	45.4 %	44.0 %	43.9 %	45.6 %
Market value to book value ratio	1.78	1.96	2.32	2.20	2.19
<b>On- and off-balance sheet information</b> (\$ millions)					
Cash, deposits with banks and securities	\$ 101,588	\$ 93,619	\$ 73,089	\$ 78,363	\$ 70,061
Loans and acceptances, net of allowance	319,781	290,981	268,240	256,380	252,732
Total assets	501,357	463,309	414,903	398,006	393,119
Deposits	395,647	366,657	325,393	315,164	300,344
Common shareholders' equity	22,472	20,360	17,588	16,113	14,491
Average assets	509,140	455,324	411,481	403,546	397,155
Average interest-earning assets	445,314	395,616	362,997	351,687	341,053
Average common shareholders' equity	21,275	18,857	17,067	15,167	14,116
Assets under administration (AUA) <sup>(3)(4)</sup>	2,041,887	1,846,142	1,703,360	1,499,885	1,445,870
Assets under management (AUM) <sup>(4)</sup>	183,715	170,465	151,913	105,123	89,223
<b>Balance sheet quality (All-in basis) and liquidity measures <sup>(5)</sup></b>					
Basel III – All-in basis					
Risk-weighted assets (RWA) (\$ millions)					
CET1 capital RWA	\$ 168,996	\$ 156,107	\$ 141,250	\$ 136,747	n/a
Tier 1 capital RWA	169,322	156,401	141,446	136,747	n/a
Total capital RWA	169,601	156,652	141,739	136,747	n/a
Capital ratios					
CET1 ratio	11.3 %	10.8 %	10.3 %	9.4 %	n/a
Tier 1 capital ratio	12.8 %	12.5 %	12.2 %	11.6 %	n/a
Total capital ratio	14.8 %	15.0 %	15.5 %	14.6 %	n/a
Basel II					
RWA (\$ millions)	n/a	n/a	n/a	n/a	\$ 115,229
Tier 1 capital ratio	n/a	n/a	n/a	n/a	13.8 %
Total capital ratio	n/a	n/a	n/a	n/a	17.3 %
Basel III leverage ratio					
Leverage ratio exposure (\$ millions)	\$ 545,480	\$ 502,552	n/a	n/a	n/a
Leverage ratio	4.0 %	3.9 %	n/a	n/a	n/a
Liquidity coverage ratio (LCR) <sup>(6)</sup>	124 %	119 %	n/a	n/a	n/a
<b>Other information</b>					
Full-time equivalent employees	43,213	44,201	44,424	43,039	42,595

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

(2) The ratio is calculated as the provision for credit losses on impaired loans to average loans and acceptances, net of allowance for credit losses.

(3) 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 \$1,640.2 billion (2015: \$1,465.7 billion).

(4) AUM amounts are included in the amounts reported under AUA.

(5) Capital measures for fiscal years 2013 to 2016 are based on Basel III whereas measures for 2012 are based on Basel II.

(6) Average for the three months ended October 31 for each respective year.

n/a Not applicable.

## 2016 Financial results

Reported net income for the year was \$4,295 million, compared with \$3,590 million in 2015.

Adjusted net income<sup>(1)</sup> for the year was \$4,104 million, compared with \$3,822 million in 2015.

Reported diluted EPS for the year was \$10.70, compared with \$8.87 in 2015.

Adjusted diluted EPS<sup>(1)</sup> for the year was \$10.22, compared with \$9.45 in 2015.

### 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 ACI (Wealth Management);
- \$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<sup>(2)</sup>;
- \$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 Retail and Business Banking, \$9 million after-tax in Wealth Management, and \$8 million after-tax in Corporate and Other);
- \$30 million income tax recovery due to the settlement of transfer pricing-related matters (Retail and 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.

### 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 (Retail and Business Banking);
- \$42 million (\$33 million after-tax) amortization of intangible assets (\$6 million after-tax in Retail and Business Banking, \$18 million after-tax in Wealth Management, and \$9 million after-tax in Corporate and Other);
- \$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.

## Net interest income and margin

\$ millions, for the year ended October 31

	2016	2015	2014
Average interest-earning assets	\$ 445,134	\$ 395,616	\$ 362,997
Net interest income	8,366	7,915	7,459
Net interest margin on average interest-earning assets	1.88 %	2.00 %	2.05 %

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.

Net interest margin on average interest-earning assets was down 12 basis points due to higher average interest-earning assets, primarily driven by growth across CIBC's businesses and higher short-term placements in treasury, partially offset by higher net interest income.

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

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

(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.

## Non-interest income

\$ millions, for the year ended October 31	2016	2015	2014
Underwriting and advisory fees	\$ 446	\$ 427	\$ 444
Deposit and payment fees	832	830	848
Credit fees	638	533	478
Card fees	470	449	414
Investment management and custodial fees <sup>(1)(2)</sup>	882	814	677
Mutual fund fees <sup>(2)</sup>	1,462	1,457	1,236
Insurance fees, net of claims	396	361	356
Commissions on securities transactions	342	385	408
Trading income (loss)	(88)	(139)	(176)
Available-for-sale (AFS) securities gains, net	73	138	201
Designated at fair value (FVO) gains (losses), net	17	(3)	(15)
Foreign exchange other than trading	367	92	43
Income from equity-accounted associates and joint ventures <sup>(1)</sup>	96	177	226
Other	736	420	764
	\$ 6,669	\$ 5,941	\$ 5,904

(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 \$728 million or 12% from 2015.

*Credit fees* were up \$105 million or 20%, primarily due to higher lending volumes in Retail and Business Banking and Capital Markets.

*Investment management and custodial fees* were up \$68 million or 8%, mainly due to AUM and AUA growth in our retail brokerage and Atlantic Trust Private Wealth Management (Atlantic Trust) businesses.

*Mutual fund fees* were comparable with the prior year, as an increase due to higher AUM in our asset management business, driven by net sales of long-term mutual funds and market appreciation, was partially offset by lower annual performance fees earned by Atlantic Trust, and lower mutual fund trailer fees in our retail brokerage business.

*Commissions on securities transactions* were down \$43 million or 11%, primarily due to lower commissions in our retail brokerage business.

*Trading loss* was down \$51 million or 37%. See the "Trading activities (TEB)" section which follows for further details.

*AFS securities gains, net*, were down \$65 million or 47%, primarily due to lower gains in our treasury and merchant banking portfolios, partially offset by a gain from the structured credit run-off business, shown as an item of note.

*Foreign exchange other than trading* was up \$275 million, largely driven by a portion of the gain on the sale of our minority investment in ACI, shown as an item of note, and higher revenue from economic hedging activities.

*Income from equity-accounted associates and joint ventures* was down \$81 million or 46%, as we ceased recognition of income relating to ACI following the announcement of the sale in December 2015.

*Other* was up \$316 million or 75%, as the current 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.

## Trading activities (TEB)

\$ millions, for the year ended October 31	2016	2015	2014
Trading income (loss) consists of:			
Net interest income <sup>(1)</sup>	\$ 1,444	\$ 1,259	\$ 1,049
Non-interest income	(88)	(139)	(176)
	\$ 1,356	\$ 1,120	\$ 873
Trading income (loss) by product line:			
Interest rates	\$ 255	\$ 109	\$ (22)
Foreign exchange	511	471	392
Equities	453	414	369
Commodities	106	78	48
Structured credit	14	—	35
Other	17	48	51
	\$ 1,356	\$ 1,120	\$ 873

(1) Includes taxable equivalent basis (TEB) adjustment of \$474 million (2015: \$482 million; 2014: \$421 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 up \$236 million or 21% from 2015, as the current year had higher trading income in interest rates, foreign exchange, equities, and commodities.

## Provision for credit losses

\$ millions, for the year ended October 31	2016	2015 <sup>(1)</sup>	2014
Retail and Business Banking	\$ 765	\$ 670	\$ 731
Wealth Management	—	(1)	—
Capital Markets	153	54	43
Corporate and Other	133	48	163
	<b>\$ 1,051</b>	<b>\$ 771</b>	<b>\$ 937</b>

(1) 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 up \$280 million or 36% from 2015.

In Retail and Business Banking, the provision was up primarily due to higher write-offs and bankruptcies in the card and the personal lending portfolios, and higher losses in the business banking 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, partially offset by lower losses in our U.S. real estate finance portfolio.

In Corporate and Other, the provision was up due to increases in the collective allowance, shown as items of note, primarily relating to deterioration in the commodities sector and other changes in economic conditions, partially offset by lower losses in FirstCaribbean International Bank Limited (CIBC FirstCaribbean).

## Non-interest expenses

\$ millions, for the year ended October 31	2016	2015	2014
Employee compensation and benefits			
Salaries	\$ 2,741	\$ 2,826	\$ 2,502
Performance-based compensation	1,580	1,568	1,483
Benefits	661	705	651
	<b>4,982</b>	<b>5,099</b>	<b>4,636</b>
Occupancy costs	804	782	736
Computer, software and office equipment	1,398	1,292	1,200
Communications	319	326	312
Advertising and business development	269	281	285
Professional fees	201	230	201
Business and capital taxes	68	68	59
Other	930	783	1,083
	<b>\$ 8,971</b>	<b>\$ 8,861</b>	<b>\$ 8,512</b>

Non-interest expenses increased by \$110 million or 1% from 2015.

*Employee compensation and benefits* decreased by \$117 million or 2%, as the prior year included higher restructuring charges primarily relating to employee severance, shown as items of note in both years.

*Computer, software and office equipment* increased by \$106 million or 8%, primarily due to higher spending on strategic initiatives.

*Other* increased by \$147 million or 19%, primarily due to legal provisions related to certain matters, shown as an item of note.

## Taxes

\$ millions, for the year ended October 31	2016	2015	2014
Income taxes	\$ 718	\$ 634	\$ 699
Indirect taxes <sup>(1)</sup>			
Goods and Services Tax (GST), Harmonized Sales Tax (HST) and sales taxes	361	342	330
Payroll taxes	239	239	216
Capital taxes	38	39	34
Property and business taxes	71	68	59
Total indirect taxes	<b>709</b>	<b>688</b>	<b>639</b>
Total taxes	<b>\$ 1,427</b>	<b>\$ 1,322</b>	<b>\$ 1,338</b>
Reported effective tax rate	<b>14.3 %</b>	15.0 %	17.9 %
Total taxes as a percentage of net income before deduction of total taxes	<b>24.9 %</b>	26.9 %	29.4 %

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

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

Total income and indirect taxes were up \$105 million from 2015.

Income tax expense was \$718 million, compared with \$634 million in 2015, primarily due to higher income in the current year. 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.

Indirect taxes were up \$21 million, mainly due to higher sales taxes.

In prior years, the Canada Revenue Agency 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 late 2017.

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 \$190 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 would eliminate the tax deductibility of Canadian inter-corporate dividends for Canadian corporations in certain circumstances. A revised draft of the rules was released on July 31, 2015. The rules became law effective as of November 1, 2015, with a set of transition rules that apply between November 1, 2015 and April 30, 2017.

In June 2016, the Canada Revenue Agency reassessed CIBC for 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". The circumstances of the dividends subject to the reassessment are similar to those prospectively addressed by the rules in the 2015 Canadian federal budget. CIBC is confident that its tax filing position was 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 2016. 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:

	2016 vs. 2015	2015 vs. 2014	2014 vs. 2013
\$ millions, for the year ended October 31			
Estimated increase (decrease) in:			
Total revenue	\$ 117	\$ 281	\$ 131
Provision for credit losses	8	7	17
Non-interest expenses	61	145	83
Income taxes	—	5	5
Net income	48	124	26
Impact on EPS:			
Basic	\$ 0.12	\$ 0.31	\$ 0.07
Diluted	0.12	0.31	0.07
Average USD appreciation (depreciation) relative to CAD	5.6 %	14.7 %	6.9 %

## Significant events

### Restructuring

In the fourth quarter of 2016, we recorded restructuring charges of \$134 million (\$98 million after-tax) in Corporate and Other. The charges primarily relate to employee severance and include Program Clarity, a bank-wide priority focused on simplifying our bank. Program Clarity will make it easier to bank at CIBC and easier to get work done, improve efficiency and enable reinvestment.

### Sale and lease back of certain retail properties

On November 15, 2016, we entered into a definitive agreement to sell and lease back 89 retail properties located mainly in Ontario and British Columbia. The closing of the agreement is expected to occur in the first quarter of 2017, and will result in the recognition of an after-tax gain of approximately \$247 million in our Retail and Business Banking SBU.

### Acquisition of PrivateBancorp, Inc.

On June 29, 2016, we announced that we had entered into a definitive agreement to acquire PrivateBancorp, Inc. (PrivateBancorp) and its subsidiary, The PrivateBank and Trust Company (PrivateBank). PrivateBank is a Chicago-based middle-market commercial bank with private banking and wealth management capabilities.

CIBC will pay US\$18.80 in cash and 0.3657 of a CIBC common share for each share of PrivateBancorp common stock. Based on the June 28, 2016 closing price of CIBC's common shares on the New York Stock Exchange (US\$77.11), the total transaction value is approximately US\$3.8 billion (C\$4.9 billion) or US\$47.00 of value per share of PrivateBancorp common stock at announcement. The transaction is expected to close in the first calendar quarter of 2017 and is subject to customary closing conditions, including regulatory approvals and the approval of PrivateBancorp's common shareholders.

### Sale of equity investment

We completed the sale of our minority investment in ACI to Nomura Holding America Inc. on May 19, 2016 for proceeds of US\$1,045 million. We recognized a gain, net of related transaction costs, of \$428 million (\$383 million after-tax), in our Wealth Management SBU as a result of the sale, shown as an item of note.

## Fourth quarter review

\$ millions, except per share amounts, for the three months ended

	2016				2015 <sup>(1)</sup>			
	Oct. 31	Jul. 31	Apr. 30	Jan. 31	Oct. 31	Jul. 31	Apr. 30	Jan. 31
Revenue								
Retail and Business Banking	\$ 2,290	\$ 2,225	\$ 2,150	\$ 2,190	\$ 2,176	\$ 2,118	\$ 2,029	\$ 2,083
Wealth Management	620	1,035	583	601	607	628	614	619
Capital Markets <sup>(2)</sup>	673	809	750	683	571	691	657	701
Corporate and Other <sup>(2)</sup>	98	67	148	113	129	83	94	56
Total revenue	\$ 3,681	\$ 4,136	\$ 3,631	\$ 3,587	\$ 3,483	\$ 3,520	\$ 3,394	\$ 3,459
Net interest income	\$ 2,110	\$ 2,113	\$ 2,037	\$ 2,106	\$ 2,043	\$ 2,021	\$ 1,895	\$ 1,956
Non-interest income	1,571	2,023	1,594	1,481	1,440	1,499	1,499	1,503
Total revenue	3,681	4,136	3,631	3,587	3,483	3,520	3,394	3,459
Provision for credit losses	222	243	324	262	198	189	197	187
Non-interest expenses	2,347	2,218	2,242	2,164	2,383	2,179	2,104	2,195
Income before income taxes	1,112	1,675	1,065	1,161	902	1,152	1,093	1,077
Income taxes	181	234	124	179	124	174	182	154
Net income	\$ 931	\$ 1,441	\$ 941	\$ 982	\$ 778	\$ 978	\$ 911	\$ 923
Net income attributable to:								
Non-controlling interests	\$ 4	\$ 6	\$ 5	\$ 5	\$ 2	\$ 5	\$ 4	\$ 3
Equity shareholders	927	1,435	936	977	776	973	907	920
EPS – basic	\$ 2.32	\$ 3.61	\$ 2.35	\$ 2.44	\$ 1.93	\$ 2.42	\$ 2.25	\$ 2.28
– diluted	\$ 2.32	\$ 3.61	\$ 2.35	\$ 2.43	\$ 1.93	\$ 2.42	\$ 2.25	\$ 2.28

(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 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 Q4/15

Net income for the quarter was \$931 million, up \$153 million or 20% from the fourth quarter of 2015.

Net interest income was up \$67 million or 3%, primarily due to volume growth across retail products, partially offset by lower treasury revenue.

Non-interest income was up \$131 million or 9%, due to higher interest rate and commodity trading income, higher credit fees, and higher investment management and custodial fees driven by higher average AUM and AUA.

Provision for credit losses was up \$24 million or 12%. In Retail and Business Banking, the provision was up due to higher write-offs in the card and personal lending portfolios, and higher losses in the business banking portfolio. In Capital Markets, the provision was down due to lower losses in the oil and gas sector. In Corporate and Other, the provision was comparable with the same quarter last year.

Non-interest expenses were down \$36 million or 2%, mainly due to lower restructuring charges primarily relating to employee severance, shown as items of note in both quarters, partially offset by higher spending on strategic initiatives.

Income tax expense was up \$57 million or 46%, primarily due to higher income.

## Compared with Q3/16

Net income for the quarter was \$931 million, down \$510 million or 35% from the prior quarter.

Net interest income was comparable with the prior quarter, as the volume growth across retail products was offset by lower treasury revenue.

Non-interest income was down \$452 million or 22%, primarily due to the gains related to ACI and the structured credit run-off business, shown as items of note in the prior quarter, and lower underwriting and advisory fees.

Provision for credit losses was down \$21 million or 9%. In Retail and Business Banking, the provision was up primarily due to higher losses in the business banking portfolio. In Capital Markets, the provision was down, as the prior quarter included losses in the exited European leveraged finance portfolio, shown as an item of note. In Corporate and Other, the provision was up due to higher losses in CIBC FirstCaribbean, and an increase in the collective allowance.

Non-interest expenses were up \$129 million or 6%, primarily due to the restructuring charges noted above, and higher spending on strategic initiatives, partially offset by lower performance-based compensation.

Income tax expense was down \$53 million or 23%, primarily due to lower income.

## Quarterly trend analysis

Our quarterly results are modestly affected by seasonal factors. The second quarter has fewer days as compared with the other quarters, generally leading to lower earnings. The summer months (July – third quarter and August – fourth quarter) typically experience lower levels of market activity, which affects our brokerage, investment management, and Capital Markets activities.

## Revenue

Retail and 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 2015 included the gain arising from accounting adjustments on credit card-related balance sheet amounts.

In 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. We ceased recognition of income from equity-accounted associates relating to ACI following the announcement of the sale in the first quarter of 2016.

Capital Markets revenue is influenced, to a large extent, by market conditions and activity in the equity derivatives business, which includes tax-exempt income. The third quarter of 2016 included a gain from the structured credit run-off business. The first quarter of 2015 included a gain on sale of an investment in our merchant banking portfolio.

Corporate and Other includes the offset related to the TEB component of tax-exempt income reported in Capital Markets revenue. The second quarter of 2016 included a gain on sale of a processing centre.

## 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 Retail and Business Banking, losses in the card and personal lending portfolios trended higher after the first quarter of 2016. In Capital Markets, losses in the oil and gas sector were elevated in the fourth quarter of 2015 and the first half of 2016. The third quarter of 2016 had higher losses in our exited European leveraged

finance portfolio. In Corporate and Other, the second and first quarters of 2016 included increases in the collective allowance, primarily relating to deterioration in the commodities sector and other changes in economic conditions.

### 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 2016 and the fourth and first quarters of 2015 included restructuring charges primarily relating to employee severance. The second quarter of 2016 included legal provisions in Corporate and Other related to certain matters.

### 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. 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, primarily due to the sale of our minority investment in ACI.

## Review of 2015 financial performance

\$ millions, for the year ended October 31		Retail and Business Banking	Wealth Management	Capital Markets <sup>(1)</sup>	Corporate and Other <sup>(1)</sup>	CIBC Total
2015 <sup>(2)</sup>	Net interest income	\$ 5,879	\$ 203	\$ 1,870	\$ (37)	\$ 7,915
	Non-interest income	2,080	2,722	740	399	5,941
	Intersegment revenue <sup>(3)</sup>	447	(457)	10	—	—
	Total revenue	8,406	2,468	2,620	362	13,856
	Provision for (reversal of) credit losses	670	(1)	54	48	771
	Non-interest expenses	4,309	1,784	1,332	1,436	8,861
	Income (loss) before income taxes	3,427	685	1,234	(1,122)	4,224
	Income taxes	897	167	277	(707)	634
	Net income (loss)	\$ 2,530	\$ 518	\$ 957	\$ (415)	\$ 3,590
	Net income (loss) attributable to:					
	Non-controlling interests	\$ —	\$ —	\$ —	\$ 14	\$ 14
	Equity shareholders	2,530	518	957	(429)	3,576
2014 <sup>(2)</sup>	Net interest income	\$ 5,587	\$ 196	\$ 1,540	\$ 136	\$ 7,459
	Non-interest income	2,239	2,408	849	408	5,904
	Intersegment revenue <sup>(3)</sup>	397	(404)	7	—	—
	Total revenue	8,223	2,200	2,396	544	13,363
	Provision for credit losses	731	—	43	163	937
	Non-interest expenses	4,219	1,582	1,225	1,486	8,512
	Income (loss) before income taxes	3,273	618	1,128	(1,105)	3,914
	Income taxes	814	148	259	(522)	699
	Net income (loss)	\$ 2,459	\$ 470	\$ 869	\$ (583)	\$ 3,215
	Net income (loss) attributable to:					
	Non-controlling interests	\$ —	\$ 2	\$ —	\$ (5)	\$ (3)
	Equity shareholders	2,459	468	869	(578)	3,218

(1) Capital Markets 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, 2015 and 2014.

### Overview

Net income for 2015 was \$3,590 million, compared with \$3,215 million in 2014. The increase in net income of \$375 million was due to higher revenue, a lower provision for credit losses and lower income taxes, partially offset by higher non-interest expenses.

### Revenue by segment

#### Retail and Business Banking

Revenue was up \$183 million or 2% from 2014, primarily due to volume growth, higher fees, and a gain arising from accounting adjustments on credit card-related balance sheet amounts, shown as an item of note. 2014 included a portion of the gain relating to the Aeroplan transactions with Aimia Canada Inc. (Aimia) and the Toronto-Dominion Bank (TD), shown as an item of note.

#### Wealth Management

Revenue was up \$268 million or 12% from 2014, primarily due to higher AUM, and the inclusion of a full year of Atlantic Trust results in 2015 versus ten months in 2014.

#### Capital Markets

Revenue was up \$224 million or 9% from 2014, as 2014 included a charge relating to the incorporation of funding valuation adjustments (FVA) into the valuation of our uncollateralized derivatives, shown as an item of note. 2015 included higher revenue from foreign exchange, equity derivatives, interest rate and commodities trading. 2014 included a gain on the sale of an equity investment in our exited European leveraged finance portfolio, shown as an item of note.

#### Corporate and Other

Revenue was down \$182 million or 33% from 2014, primarily due to lower treasury revenue and a higher TEB adjustment, partially offset by favourable foreign exchange rates. 2014 included a portion of the gain relating to the Aeroplan transactions with Aimia and TD, shown as an item of note.

**Consolidated CIBC****Net interest income**

Net interest income was up \$456 million or 6% from 2014, primarily due to volume growth across retail products, higher trading income, and a gain arising from accounting adjustments on credit card-related balance sheet amounts, shown as an item of note. These factors were partially offset by lower treasury revenue, and lower card revenue as a result of the Aeroplan transactions in 2014.

**Non-interest income**

Non-interest income was up \$37 million or 1% from 2014, primarily due to higher AUM in our asset management business, driven by net sales of long-term mutual funds and market appreciation, and AUM and AUA growth in other areas within our Wealth Management SBU. 2014 included the gains relating to the Aeroplan transactions and the sale of an equity investment in our exited European leveraged finance portfolio, both shown as items of note.

**Provision for credit losses**

Provision for credit losses was down \$166 million or 18% from 2014. In Retail and Business Banking, the provision was down as lower loan losses in the card portfolio reflected credit improvements, and the sold Aeroplan portfolio, while 2014 included a charge resulting from operational changes in the processing of write-offs, shown as an item of note. In Capital Markets, the provision was up mainly due to higher losses in the oil and gas sector, while 2014 included loan losses in our exited U.S. leveraged finance portfolio, shown as an item of note. In Corporate and Other, the provision was down as 2014 included loan losses relating to CIBC FirstCaribbean, partially offset by a reduction in the collective allowance, including lower estimated credit losses relating to the Alberta floods, both shown as items of note. Excluding items of note, 2015 still had lower losses in CIBC FirstCaribbean, partially offset by an increase in the collective allowance versus a reduction in 2014.

**Non-interest expenses**

Non-interest expenses increased by \$349 million or 4% from 2014, mainly due to restructuring charges primarily relating to employee severance, shown as an item of note, higher salaries, performance-based compensation and benefits, and higher spending on strategic initiatives. 2014 included a goodwill impairment charge relating to CIBC FirstCaribbean, shown as an item of note.

**Income taxes**

Income tax expense was \$634 million, compared with \$699 million in 2014. Income tax expense was lower, notwithstanding higher income in 2015, primarily due to no tax recovery being booked in 2014 in respect of the CIBC FirstCaribbean goodwill impairment charge and loan losses, and the impact of higher tax-exempt income in 2015.

**Outlook for calendar year 2017**

Global growth in gross domestic product in 2017 is expected to be marginally better than the moderate pace seen in 2016. Emerging markets should see some support from earlier interest rate cuts. The U.S. should improve to a roughly 2% growth rate, driven by consumer spending and housing, while Europe should be steady with growth in the 1.5% range, as diminished fiscal tightening should help offset the impact of political uncertainties. The U.S. Federal Reserve could raise rates gently over the course of the year, but the federal funds rate will remain very low by historical standards. Canada's economic growth rate should accelerate from 2016 while remaining below 2%. A diminished drag from declines in energy capital spending and additions to government infrastructure spending should counter a reduced growth contribution from housing. Canada's 2017 growth could be impacted if the U.S. pursues a protectionist policy that extends to Canadian exports. Short-term interest rates and the Canadian dollar are expected to be generally stable, but long-term interest rates could drift higher under the pull of higher U.S. treasury yields.

In Retail and Business Banking, we could see a more moderate expansion of consumer credit due to steps taken by the government to slow price appreciation in the housing market. Business credit demand should remain healthy, given very low interest rates and somewhat faster economic growth.

An improving environment for corporate profits and low interest rates should support equity-related business in Capital Markets and Wealth Management, and Capital Markets should see continued strength in the issuance of government debt tied to accelerating infrastructure spending.

Credit quality should remain healthy overall, with somewhat firmer oil prices diminishing risks in the energy sector.

## 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 results of our structured credit run-off business, 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, and any other item specified in the table on the following page 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.

### 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		2016	2015	2014	2013	2012
<b>Reported and adjusted diluted EPS</b>						
Reported net income attributable to common shareholders	A	\$ 4,237	\$ 3,531	\$ 3,131	\$ 3,253	\$ 3,136
After-tax impact of items of note <sup>(1)</sup>		(191)	232	442	219	88
After-tax impact of items of note on non-controlling interests		—	(2)	(10)	—	—
Adjusted net income attributable to common shareholders <sup>(2)</sup>	B	\$ 4,046	\$ 3,761	\$ 3,563	\$ 3,472	\$ 3,224
Diluted weighted-average common shares outstanding (thousands)	C	395,919	397,832	398,420	401,261	404,145
Reported diluted EPS (\$)	A/C	\$ 10.70	\$ 8.87	\$ 7.86	\$ 8.11	\$ 7.76
Adjusted diluted EPS (\$) <sup>(2)</sup>	B/C	10.22	9.45	8.94	8.65	7.98
<b>Reported and adjusted efficiency ratio</b>						
Reported total revenue	D	\$ 15,035	\$ 13,856	\$ 13,363	\$ 12,705	\$ 12,485
Pre-tax impact of items of note <sup>(1)</sup>		(505)	(40)	(276)	(30)	(9)
TEB		474	482	421	357	281
Adjusted total revenue <sup>(2)</sup>	E	\$ 15,004	\$ 14,298	\$ 13,508	\$ 13,032	\$ 12,757
Reported non-interest expenses	F	\$ 8,971	\$ 8,861	\$ 8,512	\$ 7,608	\$ 7,202
Pre-tax impact of items of note <sup>(1)</sup>		(262)	(338)	(539)	(249)	(63)
Adjusted non-interest expenses <sup>(2)</sup>	G	\$ 8,709	\$ 8,523	\$ 7,973	\$ 7,359	\$ 7,139
Reported efficiency ratio	F/D	59.7 %	63.9 %	63.7 %	59.9 %	57.7 %
Adjusted efficiency ratio <sup>(2)</sup>	G/E	58.0 %	59.6 %	59.0 %	56.5 %	56.0 %
<b>Reported and adjusted dividend payout ratio</b>						
Dividends paid to common shareholders	H	\$ 1,879	\$ 1,708	\$ 1,567	\$ 1,523	\$ 1,470
Reported dividend payout ratio	H/A	44.3 %	48.4 %	50.0 %	46.8 %	46.9 %
Adjusted dividend payout ratio <sup>(2)</sup>	H/B	46.4 %	45.4 %	44.0 %	43.9 %	45.6 %
<b>Reported and adjusted return on common shareholders' equity</b>						
Average common shareholders' equity	I	\$ 21,275	\$ 18,857	\$ 17,067	\$ 15,167	\$ 14,116
Reported return on common shareholders' equity	A/I	19.9 %	18.7 %	18.3 %	21.4 %	22.2 %
Adjusted return on common shareholders' equity <sup>(2)</sup>	B/I	19.0 %	19.9 %	20.9 %	22.9 %	22.8 %
<b>Reported and adjusted effective tax rate</b>						
Reported income before income taxes	J	\$ 5,013	\$ 4,224	\$ 3,914	\$ 3,976	\$ 3,992
Pre-tax impact of items of note <sup>(1)</sup>		(94)	298	408	298	107
Adjusted income before income taxes <sup>(2)</sup>	K	\$ 4,919	\$ 4,522	\$ 4,322	\$ 4,274	\$ 4,099
Reported income taxes	L	\$ 718	\$ 634	\$ 699	\$ 626	\$ 689
Tax impact of items of note <sup>(1)</sup>		97	66	(34)	79	49
Adjusted income taxes <sup>(2)</sup>	M	\$ 815	\$ 700	\$ 665	\$ 705	\$ 738
Reported effective tax rate	L/J	14.3 %	15.0 %	17.9 %	15.8 %	17.3 %
Adjusted effective tax rate <sup>(2)</sup>	M/K	16.6 %	15.5 %	15.4 %	16.5 %	18.0 %

\$ millions, for the year ended October 31		Retail and Business Banking	Wealth Management	Capital Markets	Corporate and Other	CIBC Total
2016	Reported net income (loss)	\$ 2,689	\$ 864	\$ 1,076	\$ (334)	\$ 4,295
	After-tax impact of items of note <sup>(1)</sup>	(25)	(374)	28	180	(191)
	Adjusted net income (loss) <sup>(2)</sup>	\$ 2,664	\$ 490	\$ 1,104	\$ (154)	\$ 4,104
2015 <sup>(3)</sup>	Reported net income (loss)	\$ 2,530	\$ 518	\$ 957	\$ (415)	\$ 3,590
	After-tax impact of items of note <sup>(1)</sup>	(28)	18	8	234	232
	Adjusted net income (loss) <sup>(2)</sup>	\$ 2,502	\$ 536	\$ 965	\$ (181)	\$ 3,822
2014 <sup>(3)</sup>	Reported net income (loss)	\$ 2,459	\$ 470	\$ 869	\$ (583)	\$ 3,215
	After-tax impact of items of note <sup>(1)</sup>	(64)	15	18	473	442
	Adjusted net income (loss) <sup>(2)</sup>	\$ 2,395	\$ 485	\$ 887	\$ (110)	\$ 3,657
2013	Reported net income (loss)	\$ 2,377	\$ 385	\$ 699	\$ (111)	\$ 3,350
	After-tax impact of items of note <sup>(1)</sup>	38	4	118	59	219
	Adjusted net income (loss) <sup>(2)</sup>	\$ 2,415	\$ 389	\$ 817	\$ (52)	\$ 3,569
2012	Reported net income	\$ 2,156	\$ 335	\$ 589	\$ 223	\$ 3,303
	After-tax impact of items of note <sup>(1)</sup>	8	(34)	67	17	58
	Adjusted net income <sup>(2)</sup>	\$ 2,164	\$ 301	\$ 656	\$ 240	\$ 3,361

(1) Reflects impact of items of note under "2016 Financial results" section and below.

(2) Non-GAAP measure.

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

## Impact of items of note in prior years

### 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 Retail and 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 Retail and Business Banking, \$15 million after-tax in 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<sup>(1)</sup>, 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 Retail and 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<sup>(1)</sup>, 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 (Retail and Business Banking);
- \$23 million (\$19 million after-tax) amortization of intangible assets<sup>(2)</sup> (\$5 million after-tax in Retail and Business Banking, \$4 million after-tax in 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 (Retail and 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.

### 2012

Net income was affected by the following items of note:

- \$57 million (\$32 million after-tax) loan losses in our exited U.S. leveraged finance portfolio (Capital Markets);
- \$37 million (\$35 million after-tax) gain relating to an equity-accounted investment (Wealth Management);
- \$33 million (\$24 million after-tax) loss relating to the change in valuation of collateralized derivatives to an overnight index swap (OIS) basis (\$23 million after-tax in Capital Markets and \$1 million after-tax in Corporate and Other);
- \$30 million (\$25 million after-tax) amortization of intangible assets (\$8 million after-tax in Retail and Business Banking, \$1 million after-tax in Wealth Management and \$16 million after-tax in Corporate and Other);
- \$28 million (\$16 million after-tax) hedge accounting loss on leveraged leases (Capital Markets);
- \$24 million (\$19 million after-tax) gain on sale of interests in entities in relation to the acquisition of TMX Group Inc. by Maple Group Acquisition Corporation, net of associated expenses (Capital Markets); and
- \$20 million (\$15 million after-tax) loss from the structured credit run-off business (Capital Markets).

The above items of note increased revenue by \$9 million, provision for credit losses by \$53 million and non-interest expenses by \$63 million, and decreased income taxes by \$49 million. In aggregate, these items of note decreased net income by \$58 million.

In addition, net income attributable to common shareholders was also affected by the following item of note:

- \$30 million premium paid on preferred share redemptions.

(1) 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.

(2) Beginning in the fourth quarter of 2013, also includes amortization of intangible assets for equity-accounted associates.

## Strategic business units overview

CIBC has three SBUs – Retail and Business Banking, Wealth Management, and Capital Markets. These SBUs are supported by the following functional groups – Technology and Operations, Finance (including Treasury), Administration, Risk Management, and Internal Audit, 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. Corporate and Other also includes our international banking operations comprising mainly CIBC FirstCaribbean, strategic investments in the CIBC Mellon joint ventures, and other income statement and balance sheet items not directly attributable to the business lines. CIBC's investment in The Bank of N.T. Butterfield & Son Limited was included in Corporate and Other results until it was sold on April 30, 2015.

External reporting changes were made in 2016, 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. 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.

To measure and report the results of operations of the lines of business within our Retail and Business Banking and Wealth Management SBUs, we use a Manufacturer/Customer Segment/Distributor Management Model. The model uses certain estimates and allocation methodologies in the preparation of segmented financial information. Under this model, internal payments for sales, renewals, trailer commissions and the recovery of distribution service costs are made among the lines of business and SBUs. 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. Revenue, expenses, and other balance sheet resources related to certain activities are fully allocated to the lines of business within the SBUs.

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.

### 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.

## Retail and Business Banking

Retail and Business Banking provides personal and business clients across Canada with financial advice, products and services through a strong team of advisors and relationship managers, in our banking centres or through remote channels such as mobile advisors, telephone, online or mobile banking.

### Our business strategy

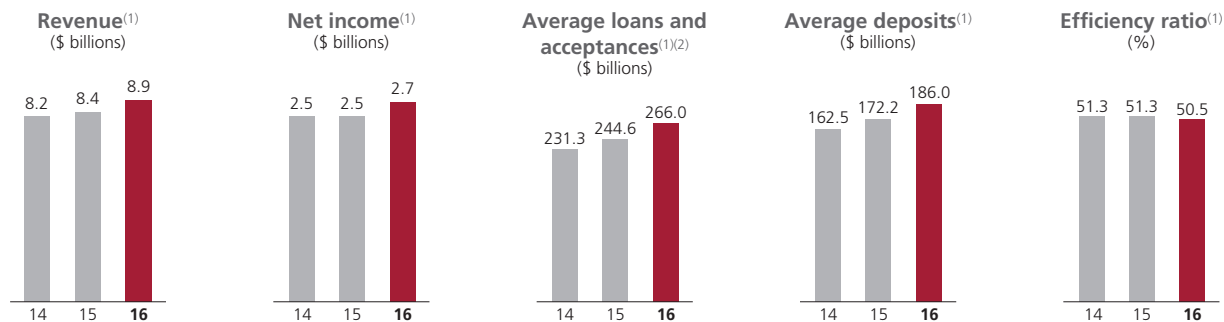
We are focused on being the number one Retail and Business Bank in Canada in client experience and profitable revenue growth. To deliver on our objectives, our efforts are aligned to CIBC's three strategic bank-wide priorities of client focus, innovation, and simplification.

### 2016 progress

In 2016, we made good progress on our strategy.

Enhancing the client experience	Accelerating profitable revenue growth
<ul style="list-style-type: none"> <li>Improved our Net Promoter Score in 2016 for the second consecutive year, and have led our peers in improvement over the last four years.</li> <li>Opened CIBC LiveLabs at MaRS, an innovation hub based in Toronto that allows us to work in partnership with business and technology teams to develop the next wave of banking innovations for our clients in a collaborative, cooperative lab environment.</li> <li>Continued to identify key moments in client relationships and adjust processes to be simpler and more client centric. For example, our collections processes were enhanced to include more proactive solutions for clients experiencing financial challenges to help them manage cash flow and get back on track financially.</li> <li>Earned the top score among the five largest Canadian banks for mobile banking for the third year in a row in Forrester Research's annual Mobile Banking benchmark study.</li> <li>Earned the top score among the five largest Canadian banks for online banking functionality for the second consecutive year in Forrester Research's Online Banking benchmark study.</li> <li>Ranked #1 for a second consecutive year by our advisors in <i>Investment Executive</i> magazine's annual Report Card on Banks and Credit Unions.</li> <li>Participated in a successful blockchain proof of concept, as part of our commitment to focus on innovative opportunities that may benefit clients in future years.</li> <li>Delivered Apple Pay to our clients the first day it was available in Canada, giving our clients the flexibility to pay with their Apple device at their favourite retailers.</li> <li>We were the first bank in Canada to bring Samsung Pay to our clients, providing them with another mobile payment option.</li> </ul>	<ul style="list-style-type: none"> <li>Continued to transform our physical banking centre network, adding iPads, Wi-Fi, and enhanced ATMs to a number of banking centre locations while creating a new, open concept that allows for more conversations about financial needs and goals with our clients.</li> <li>Continued to invest in advice by converting service roles to advice roles, while leveraging digital channels for more day-to-day banking transactions from clients across our network.</li> <li>Introduced the new CIBC Smart Account, a first-of-its-kind bank account with a flexible fee that is capped monthly, and that automatically adjusts with lower fees when clients' banking needs are less.</li> <li>Launched the innovative CIBC Smart Prepaid Visa Card, the first reloadable foreign currency prepaid card available through a major Canadian bank, delivering a more secure and convenient payment experience for clients while they are traveling.</li> <li>Introduced Digital Account Open, allowing clients to open a new CIBC bank account entirely from their mobile device – supporting growth for CIBC and delivering on the needs of "digital first" clients who prefer to transact and meet their financial needs through their mobile device or online.</li> <li>Launched the CIBC Hello Home app, developed at our CIBC LiveLabs innovation facility. The new app allows Canadians to apply for a mortgage end-to-end using only their mobile device, without needing to visit a banking centre.</li> <li>Brought "one-click lending" to market in partnership with fintech lenders – Borrowell, for personal banking, and Thinking Capital, for small businesses, enabling qualified existing clients to be approved for a loan instantly and receive funds within one day – significantly faster and simpler than the current process across the industry.</li> </ul>

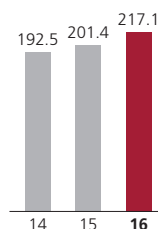
## 2016 financial review



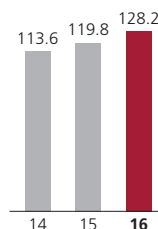
### Personal banking

- Total average loans and acceptances growth of 13% (excluding FirstLine mortgages)
- Total average deposits growth of 7%
- Leading mortgage market share growth
- Increased the number of Mobile Sales Advisors by 17% in the year
- 60% of our clients are now engaged with CIBC digitally, and growing
- Product use count of new clients 12 months after joining up 50% since 2013

### Average loans and acceptances<sup>(2)</sup> (\$ billions)



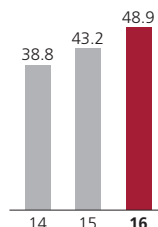
### Average deposits (\$ billions)



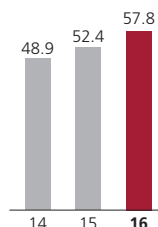
### Business banking

- Total average loans and acceptances growth of 13%
- Total average deposit growth of 10%
- Leading market share growth in both business deposits and business loans

### Average loans and acceptances<sup>(1)</sup> (\$ billions)



### Average deposits<sup>(1)</sup> (\$ billions)



(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 2017

We are building a strong, innovative, relationship-oriented bank. To accelerate our transformation, we will deliver on our objective to be the best retail and business bank in Canada by maintaining a focus on:

- Improving 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 grow and prosper through deeper relationships and advice

**Results<sup>(1)</sup>**

\$ millions, for the year ended October 31	2016	2015 <sup>(2)</sup>	2014 <sup>(2)</sup>
Revenue			
Personal banking	\$ 7,066	\$ 6,693	\$ 6,305
Business banking	1,726	1,623	1,531
Other	63	90	387
Total revenue	8,855	8,406	8,223
Provision for credit losses	765	670	731
Non-interest expenses	4,472	4,309	4,219
Income before income taxes	3,618	3,427	3,273
Income taxes	929	897	814
Net income	\$ 2,689	\$ 2,530	\$ 2,459
Net income attributable to: Equity shareholders (a)	\$ 2,689	\$ 2,530	\$ 2,459
Efficiency ratio	50.5 %	51.3 %	51.3 %
Return on equity <sup>(3)</sup>	51.0 %	55.6 %	62.6 %
Charge for economic capital <sup>(3)</sup> (b)	\$ (513)	\$ (547)	\$ (485)
Economic profit <sup>(3)</sup> (a+b)	\$ 2,176	\$ 1,983	\$ 1,974
Average assets (\$ billions)	\$ 265.8	\$ 243.8	\$ 230.5
Average loans and acceptances (\$ billions)	\$ 266.0	\$ 244.6	\$ 231.3
Average deposits (\$ billions)	\$ 186.0	\$ 172.2	\$ 162.5
Full-time equivalent employees	20,280	21,532	21,862

(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 \$159 million or 6% from 2015, primarily due to higher revenue, partially offset by higher non-interest expenses, and a higher provision for credit losses.

**Revenue**

Revenue was up \$449 million or 5% from 2015.

*Personal banking* revenue was up \$373 million or 6%, primarily due to volume growth, favourable pricing, higher fees, and an additional day in the current year. The prior year included a gain arising from accounting adjustments on credit card-related balance sheet amounts, shown as an item of note.

*Business banking* revenue was up \$103 million or 6%, primarily due to volume growth, and higher fees, partially offset by narrower spreads.

*Other* revenue was down \$27 million or 30%, mainly due to lower revenue from our exited FirstLine mortgage broker business.

**Provision for credit losses**

Provision for credit losses was up \$95 million or 14% from 2015, primarily due to higher write-offs and bankruptcies in the card and personal lending portfolios, and higher losses in the business banking portfolio.

**Non-interest expenses**

Non-interest expenses were up \$163 million or 4% from 2015, primarily due to higher spending on strategic initiatives, including innovation to further our retail transformation.

**Income taxes**

Income taxes were up \$32 million or 4% from 2015, primarily due to higher income, partially offset by an income tax recovery from the settlement of transfer pricing-related matters, shown as an item of note.

**Average assets**

Average assets were up \$22 billion or 9% from 2015 due to growth across all products.

## Wealth Management

Wealth Management provides integrated advice and investment solutions to meet the needs of institutional, retail, and high net worth clients. Our asset management, retail brokerage and private wealth management businesses combine to create an integrated offer, delivered through approximately 1,600 advisors across Canada and the U.S. The results of ACI are included in the Other business line. For further details regarding the sale of our minority investment in ACI, see the "Significant events" section.

### Our business strategy

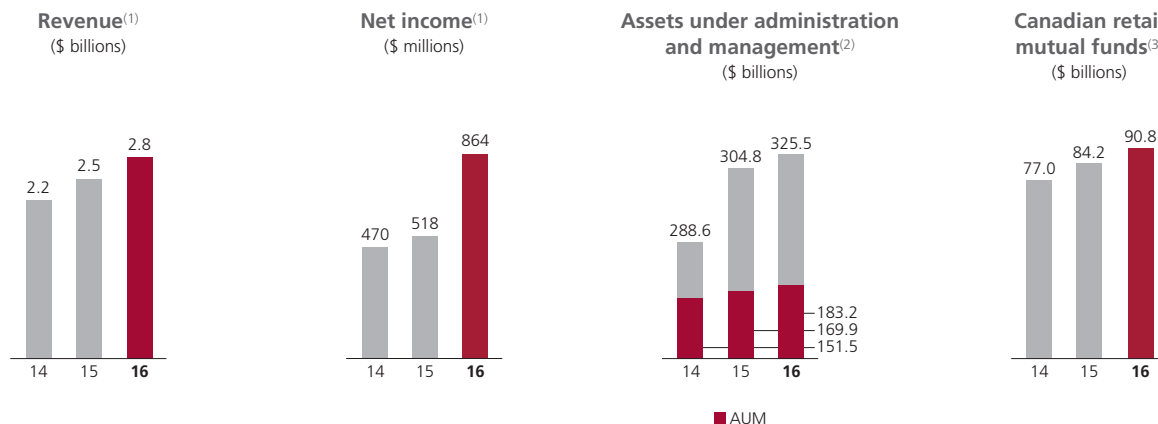
Our growth strategy is aligned to CIBC's three strategic bank-wide priorities of client focus, innovation and simplification. We are focused on enhancing the client experience, driving asset growth, and simplifying and optimizing our business platform.

### 2016 progress

We made good progress in 2016 on our strategy.

Enhance the client experience	Drive asset growth	Simplify and optimize our business platform
<ul style="list-style-type: none"> <li>Both CIBC Wood Gundy, our full service brokerage, and CIBC Investor's Edge, our self-directed brokerage, made solid progress in the most recent J.D. Power Canadian Investor Satisfaction Surveys.</li> <li>Enhanced internal client referral framework to serve our clients' banking and investment needs.</li> </ul>	<ul style="list-style-type: none"> <li>Strong net flows of \$11 billion driven by all of our Wealth Management businesses.</li> <li>Expanded CIBC Personal Portfolio Services (PPS) offer with three new Income Generation Portfolios.</li> <li>Launched the Renaissance Private Investment Program for high net worth clients, and other products.</li> <li>Solid asset growth across all lines of business.</li> </ul>	<ul style="list-style-type: none"> <li>Brought our Canadian private wealth management and Wood Gundy businesses together, aligning our high net worth advisor businesses under one platform.</li> <li>Launched e-statements for CIBC PPS and CIBC Mutual Fund accounts, further simplifying investment statement management for clients.</li> <li>Expanded Delaware Trust services in Atlantic Trust.</li> </ul>

### 2016 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) AUM amounts are included in the amounts reported under AUA.

(3) Included in AUM.

### Retail brokerage

- Strong growth in both AUM and AUA, up 17% and 7%, respectively
- Strong *Investment Executive 2016 Brokerage Report Card* results, achieving the second highest average rating by investment advisors among the Big 6 bank-owned brokerage firms
- Launched new CIBC Mobile Wealth app

### Asset management

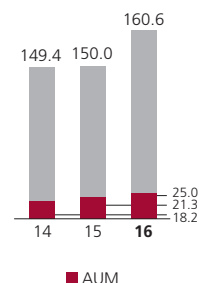
- 6% growth in AUM
- Launched several new products to deliver superior results for our clients
- Realignment of trailing commissions and management fees for a simpler and more consistent pricing approach for clients

### Private wealth management

- 7% growth in both AUM and AUA
- Achieved record net flows in our Canadian private wealth management business
- Achieved above industry average Net Promoter Score in CIBC Private Banking

### Assets under administration and management<sup>(1)</sup>

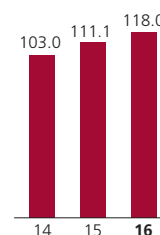
(\$ billions)



■ AUM

### Assets under administration and management<sup>(1)</sup>

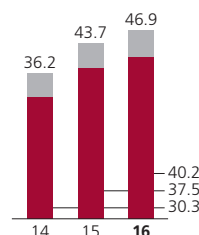
(\$ billions)



■ AUM

### Assets under administration and management<sup>(1)</sup>

(\$ billions)



■ AUM

(1) AUM amounts are included in the amounts reported under AUA.

### Our focus for 2017

We are building a strong, innovative, relationship-oriented bank. To build on our momentum and accelerate our transformation, we will continue to align our focus in 2017 to CIBC's three strategic bank-wide priorities. We will do this by:

- Enhancing the client experience
- Driving asset growth through advice and an integrated offer for clients to meet their broader wealth management needs
- Simplifying and optimizing our business platform to make it easier to invest with our bank

## Results<sup>(1)</sup>

\$ millions, for the year ended October 31

	2016	2015 <sup>(2)</sup>	2014 <sup>(2)</sup>
Revenue			
Retail brokerage	\$ 1,269	\$ 1,282	\$ 1,232
Asset management	746	707	601
Private wealth management	381	379	275
Other	443	100	92
Total revenue	2,839	2,468	2,200
Provision for (reversal of) credit losses	–	(1)	–
Non-interest expenses	1,753	1,784	1,582
Income before income taxes	1,086	685	618
Income taxes	222	167	148
Net income	\$ 864	\$ 518	\$ 470
Net income attributable to:			
Non-controlling interests	\$ –	\$ –	\$ 2
Equity shareholders (a)	864	518	468
Efficiency ratio	61.7 %	72.3 %	71.9 %
Return on equity <sup>(3)</sup>	43.5 %	22.4 %	22.3 %
Charge for economic capital <sup>(3)</sup> (b)	\$ (193)	\$ (276)	\$ (256)
Economic profit <sup>(3)</sup> (a+b)	\$ 671	\$ 242	\$ 212
Average assets (\$ billions)	\$ 4.5	\$ 4.8	\$ 4.4
Average loans (\$ billions)	\$ 2.1	\$ 2.1	\$ 1.9
Average deposits (\$ billions)	\$ 9.8	\$ 9.0	\$ 8.5
AUA (\$ billions)	\$ 325.5	\$ 304.8	\$ 288.6
AUM (\$ billions)	\$ 183.2	\$ 169.9	\$ 151.5
Full-time equivalent employees	4,295	4,350	4,169

(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 \$346 million or 67% from 2015, mainly due to the gain, net of transaction costs, on the sale of our minority investment in ACI, shown as an item of note.

## Revenue

Revenue was up \$371 million or 15% from 2015.

*Retail brokerage* revenue was down \$13 million or 1%, primarily due to lower commission revenue as a result of a decline in transaction volume, partially offset by higher investment management and custodial fees, driven by higher average AUM and AUA.

*Asset management* revenue was up \$39 million or 6%, primarily due to higher average AUM, driven by net sales of long-term mutual funds and market appreciation, and mark-to-market gains on seed capital investments in recently launched mutual funds and institutional pools.

*Private wealth management* revenue was up \$2 million or 1%, primarily due to higher average AUM, including the favourable impact of foreign exchange rates, and volume growth in loans and deposits. This was partially offset by lower annual performance fees earned by Atlantic Trust.

*Other* revenue was up \$343 million due to the gain on sale of ACI noted above, partially offset by lower ACI revenue following the announcement of the sale.

## Non-interest expenses

Non-interest expenses were down \$31 million or 2% from 2015, primarily due to lower performance-based compensation.

## Income taxes

Income taxes were up \$55 million or 33% from 2015, primarily due to the gain on sale of ACI noted above.

## Assets under administration

AUA were up \$21 billion or 7% from 2015, from market appreciation and strong net flows. AUM amounts are included in the amounts reported under AUA.

## Capital Markets

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

### Our business strategy

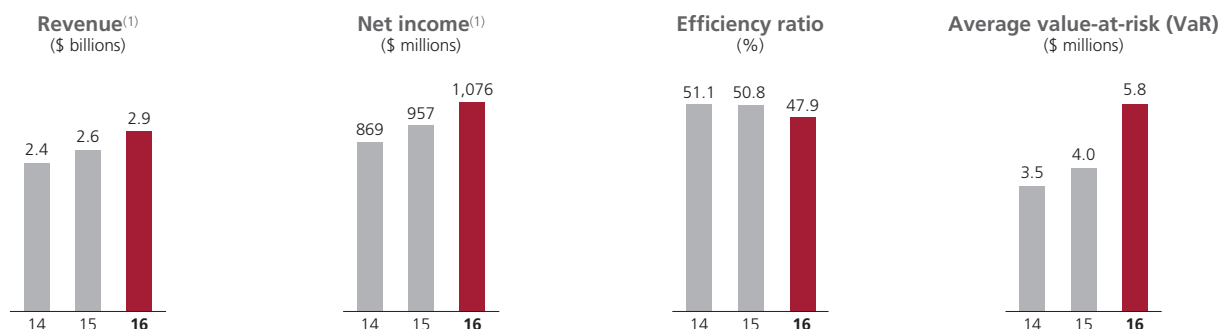
Our goal is to be the leading Capital Markets franchise in Canada and the lead relationship bank for our key clients globally by delivering best-in-class insight, advice, execution and innovation.

### 2016 progress

We made solid progress in 2016 on our strategy.

Strengthen and expand leadership positions in Canada	Build a North American platform and expand coverage in key sectors globally	Deliver innovation to clients across CIBC
<ul style="list-style-type: none"> <li>Continued to hold leadership positions in syndicated loans, debt and equity underwriting, advisory services, equity trading, commodities and foreign exchange.</li> <li>Launched specialized new advisory teams to add value for clients in the areas of technology and innovation, private capital, and corporate finance solutions.</li> <li>Continued to strengthen our platform by further aligning our talent and expertise to today's dominant economic and market sectors.</li> </ul>	<ul style="list-style-type: none"> <li>Expanded our product capabilities and invested in talent to help meet client needs at home and abroad.</li> <li>Helped our clients navigate market movements and volatility through proactive advice and trading solutions.</li> <li>Continued to strengthen U.S. coverage and execution capabilities, with a focus on the energy, infrastructure and power and utilities sectors.</li> </ul>	<ul style="list-style-type: none"> <li>Introduced CIBC Air Canada AC Conversion Visa Prepaid Card, a first-of-its-kind in Canada, allowing travellers to purchase and store up to 10 currencies on a single card that can be used at retailers around the globe.</li> <li>Enhanced the no-fee CIBC Global Money Transfer service by adding it to CIBC's mobile banking app, and by increasing the number of countries to which clients can send money, including the U.S.</li> <li>Launched new training workshops for over 200 client CFOs and finance professionals to enhance their understanding of public capital markets.</li> </ul>

### 2016 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.

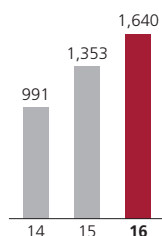
As a leading capital markets franchise in Canada and banking partner to clients in core Canadian industries in the rest of the world, Capital Markets acted as:

- Financial advisor to Suncor Energy Inc. on its \$7 billion acquisition of Canadian Oil Sands Limited, as well as joint bookrunner on Suncor's \$2.9 billion bought common share offering, one of the largest-ever equity bought deals in Canada;
- Financial advisor, financing co-underwriter and lead agent on related foreign exchange to Lowe's Companies Inc. on its \$3.2 billion acquisition of RONA Inc.;
- Financial advisor, lead left bookrunner on \$525 million of subscription receipts, sole lead arranger, underwriter and bookrunner on \$1.8 billion of credit facilities and sole foreign exchange provider supporting Stantec's acquisition of MWH Global Inc.;
- Exclusive financial advisor, administrative agent and joint bookrunner on \$925 million in credit facilities supporting Cheung Kong Infrastructure Holdings Limited's and Power Assets Holdings Limited's acquisition of a 65% interest in midstream assets from Husky Energy Inc.;
- Lead financial advisor and financing co-underwriter, joint bookrunner and co-lead arranger to Shaw Communications Inc. on its \$1.6 billion acquisition of Wind Mobile Corp.;
- Exclusive financial advisor to InnVest REIT on the sale of the company to Bluesky Hotels and Resorts for \$2.1 billion;
- Lead bookrunner on a \$460 million Initial Public Offering for Aritzia Inc.;
- Exclusive financial advisor to Baybridge Seniors Housing Inc. on its \$1 billion acquisition of Amica Mature Lifestyles Inc.;
- Lead left bookrunner on a \$1 billion convertible debenture offering and administrative agent and joint lead arranger on a US\$1.6 billion bridge facility for Algonquin Power & Utilities Corp. in support of its acquisition of Empire District Electric Company; and
- Joint bookrunner on Enbridge Inc.'s \$2.3 billion bought common share offering.

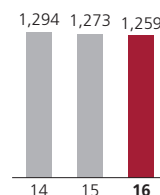
## Capital markets awards and recognition

- Canada Derivatives House Of The Year – 2016 *GlobalCapital Americas Derivatives Awards*
- The leader in Canadian Equity Trading – #1 in volume, value and number of trades – *TSX and ATS Market Share report 2009 – present (as provided by IRESS Market Technology as at October 31, 2016)*
- In 2016, CIBC economics and equity research analysts held Top 3 rankings in several sectors as recognized by *Brendan Wood International and Thomson Reuters*. Research sectors included – *Economics, Agriculture, Auto Components, Banks and Diversified Financials, Chemicals & Fertilizers, Energy Equipment Services, Insurance, REITS & Hospitalitys, Telecom and Utilities*
- 2016 Canadian Hedge Fund Award for Top Canadian Prime Broker – *Alternative IQ*
- The leading IPO underwriter in Canada – *Bloomberg as at September 30, 2016*
- North American M&A Deal of the Year: Indiana Toll Road Acquisition 2016 – *IJGlobal Americas Deals of the Year Awards*
- Ranked #1 for number of deals led in Canadian Loan Syndication *Thomson Reuters and Bloomberg Lead Arranger League Tables*, January-September 2016

Revenue – Global markets<sup>(1)</sup>  
(\$ millions)



Revenue – Corporate and investment banking<sup>(1)</sup>  
(\$ 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 2017

We are building a strong, innovative, relationship-oriented bank. To build on our position of strength and accelerate our transformation, we will continue to align our focus in 2017 to CIBC's three strategic bank-wide priorities of client focus, innovation and simplification. We will do this by:

- Strengthening and expanding leadership positions in Canada
- Building a North American platform and expanding coverage in key sectors globally
- Delivering innovation to clients across CIBC

## Results<sup>(1)</sup>

\$ millions, for the year ended October 31

	2016	2015 <sup>(2)</sup>	2014 <sup>(2)</sup>
Revenue			
Global markets	\$ 1,640	\$ 1,353	\$ 991
Corporate and investment banking	1,259	1,273	1,294
Other	16	(6)	111
Total revenue <sup>(3)</sup>	2,915	2,620	2,396
Provision for credit losses	153	54	43
Non-interest expenses	1,398	1,332	1,225
Income before income taxes	1,364	1,234	1,128
Income taxes <sup>(3)</sup>	288	277	259
Net income	\$ 1,076	\$ 957	\$ 869
Net income attributable to:			
Equity shareholders (a)	\$ 1,076	\$ 957	\$ 869
Efficiency ratio	47.9 %	50.8 %	51.1 %
Return on equity <sup>(4)</sup>	30.6 %	35.8 %	37.1 %
Charge for economic capital <sup>(4)</sup> (b)	\$ (341)	\$ (320)	\$ (288)
Economic profit <sup>(4)</sup> (a+b)	\$ 735	\$ 637	\$ 581
Average assets (\$ billions)	\$ 162.8	\$ 141.8	\$ 121.9
Full-time equivalent employees	1,324	1,342	1,306

(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 \$474 million (2015: \$482 million; 2014: \$421 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 \$119 million or 12% from 2015, primarily due to higher revenue, partially offset by a higher provision for credit losses, and higher non-interest expenses.

## Revenue

Revenue was up \$295 million or 11% from 2015.

*Global markets* revenue was up \$287 million or 21%, primarily due to higher interest rate and foreign exchange trading revenue, and higher revenue from global markets financing activity.

*Corporate and investment banking* revenue was down \$14 million or 1%, primarily due to lower investment portfolio gains, as the prior year included a gain on sale of an investment in our merchant banking portfolio, shown as an item of note, and lower revenue from U.S. real estate finance. This decrease was partially offset by higher corporate banking revenue and higher equity issuance activity.

*Other* revenue was up \$22 million, primarily due to a gain on the sale of an AFS equity investment in our structured credit run-off business, partially offset by higher mark-to-market losses on corporate loan hedges.

## Provision for credit losses

Provision for credit losses was up \$99 million from 2015, 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, partially offset by lower losses in our U.S. real estate finance portfolio.

## Non-interest expenses

Non-interest expenses were up \$66 million or 5% from 2015, primarily due to higher employee-related costs and higher spending on strategic initiatives.

## Income taxes

Income taxes were up \$11 million or 4% from 2015, primarily due to higher income.

## Average assets

Average assets were up \$21 billion or 15% from 2015, primarily due to higher global markets financing activity, higher interest rate trading inventory, and higher loan balances in corporate banking and U.S. real estate finance.

## Structured credit run-off business

The results of the structured credit run-off business are included in the Capital Markets SBU.

## Results

\$ millions, for the year ended October 31

	2016	2015	2014
Net interest expense	\$ (30)	\$ (17)	\$ (30)
Non-interest income (loss)	49	(2)	19
Total revenue (loss)	19	(19)	(11)
Non-interest expenses	16	10	4
Income (loss) before income taxes	3	(29)	(15)
Income taxes	1	(8)	(4)
Net income (loss)	\$ 2	\$ (21)	\$ (11)

Net income for the year was \$2 million (US\$2 million), compared with a net loss of \$21 million (US\$17 million) in 2015, primarily due to a gain on the sale of an AFS equity investment.

## Position summary

The following table summarizes our positions within the structured credit run-off business:

US\$ millions, as at October 31, 2016	Investment and loans <sup>(1)</sup>				Written credit derivatives, liquidity and credit facilities		Credit protection purchased from			
	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 of written credit derivatives	Financial guarantors	Fair value net of credit valuation adjustment (CVA)	Other counterparties	Fair value net of CVA
USRMM – CDO	\$ –	\$ –	\$ –	\$ –	\$ 136	\$ 103	\$ –	\$ –	\$ 136	\$ 103
CLO	225	–	223	223	72	–	279	2	–	–
Corporate debt	–	–	–	–	3,312	–	–	–	3,312	–
Other	386	252	13	13	175	17	3	–	–	–
Unmatched	–	–	–	–	–	–	–	–	373	–
	\$ 611	\$ 252	\$ 236	\$ 236	\$ 3,695	\$ 120	\$ 282	\$ 2	\$ 3,821	\$ 103
October 31, 2015	\$ 1,057	\$ 305	\$ 597	\$ 596	\$ 4,259	\$ 148	\$ 947	\$ 9	\$ 3,947	\$ 119

(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\$5 million (2015: US\$22 million).

## USRMM – collateralized debt obligation (CDO)

Our USRMM position consists of a written credit derivative, which amounted to US\$136 million. This position was hedged through protection purchased from a large U.S.-based diversified multinational insurance and financial services company with which we have market-standard collateral arrangements.

### Collateralized loan obligation (CLO)

CLO positions consist of first priority tranches of CLOs backed by diversified pools of primarily U.S. (64%) and European-based (33%) senior secured leveraged loans. As at October 31, 2016, 100% of the total notional amount of the CLO tranches was rated Aaa by Moody's Investors Service, Inc. (Moody's). As at October 31, 2016, approximately 24% of the underlying collateral was rated equivalent to BB- or higher, 52% was rated between the equivalent of B+ and B-, 12% was rated equivalent to CCC+ or lower, with the remainder unrated. The CLO positions have a weighted-average life of 1.4 years and average subordination of 71%.

### Corporate debt

Corporate debt exposure consists of a large matched super senior derivative, where CIBC has purchased and sold credit protection on the same reference portfolio. The reference portfolio consists of highly diversified, predominantly investment grade corporate credit. Claims on these contracts do not occur until cumulative credit default losses from the reference portfolio exceed 30% during the remaining 2-month term of the contract.

### Other

Our significant positions in the Investments and loans section within Other, as at October 31, 2016, include:

- Variable rate Class A-1/A-2 notes classified as trading securities with a notional value of US\$176 million and a fair value of US\$175 million, tracking notes classified as AFS with a notional value of US\$4 million and a fair value of US\$2 million, and loans with a notional value of US\$50 million and fair value and carrying value of nil. These notes were originally received in exchange for our non-bank sponsored asset-backed commercial paper (ABCP) in January 2009, upon the ratification of the Montreal Accord restructuring;
- US\$90 million notional value of CDOs consisting of trust preferred securities (TruPs) 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\$70 million; and
- US\$14 million notional value of an asset-backed security (ABS) classified as a loan, with fair value of US\$13 million and carrying value of US\$13 million.

Our significant positions in the written credit derivatives, liquidity and credit facilities section within Other include US\$154 million notional value of written credit derivatives with a fair value of US\$17 million, on inflation-linked notes and TruPs, as at October 31, 2016.

### Unmatched

The underlying in our unmatched position is a reference portfolio of corporate debt.

### Credit protection purchased from financial guarantors and other counterparties

The following table presents the notional amounts and fair values of credit protection purchased from financial guarantors and other counterparties by counterparty credit quality, based on external credit ratings (Standard & Poor's Ratings Services (S&P) and/or Moody's), and the underlying referenced assets.

US\$ millions, as at October 31, 2016	Notional amounts of referenced assets						Credit protection purchased from financial guarantors and other counterparties		
	CLO	Corporate debt	USRMM – CDO	Other	Unmatched	Total notional	Fair value before CVA	CVA	Fair value net of CVA
Financial guarantors <sup>(1)</sup>									
Investment grade	\$ 208	\$ –	\$ –	\$ 3	\$ –	\$ 211	\$ 2	\$ –	\$ 2
Unrated	71	–	–	–	–	71	–	–	–
	279	–	–	3	–	282	2	–	2
Other counterparties <sup>(1)</sup>									
Investment grade	–	–	136	–	–	136	103	–	103
Unrated	–	3,312	–	–	373	3,685	–	–	–
	\$ –	\$ 3,312	\$ 136	\$ –	\$ 373	\$ 3,821	\$ 103	\$ –	\$ 103
<b>Total</b>	<b>\$ 279</b>	<b>\$ 3,312</b>	<b>\$ 136</b>	<b>\$ 3</b>	<b>\$ 373</b>	<b>\$ 4,103</b>	<b>\$ 105</b>	<b>\$ –</b>	<b>\$ 105</b>
October 31, 2015	\$ 937	\$ 3,397	\$ 168	\$ 10	\$ 382	\$ 4,894	\$ 130	\$ (2)	\$ 128

(1) In cases where more than one credit rating agency provides ratings and those ratings differ, we use the lowest rating.

The unrated other counterparty is a Canadian conduit. The conduit is in compliance with collateral posting arrangements and has posted collateral exceeding current market exposure. The fair value of the collateral as at October 31, 2016 was US\$224 million relative to nil net exposure.

## Corporate and Other

Corporate and Other includes the following functional groups – Technology and Operations, Finance (including Treasury), Administration, Risk Management, and Internal Audit, as well as other support groups. The expenses of these functional and support groups are generally allocated to the business lines within the SBUs. Corporate and Other also includes our international banking operations comprising mainly CIBC FirstCaribbean, strategic investments in the CIBC Mellon joint ventures, and other income statement and balance sheet items not directly attributable to the business lines. CIBC's investment in The Bank of N.T. Butterfield & Son Limited was included in Corporate and Other results until it was sold on April 30, 2015.

## Results<sup>(1)</sup>

\$ millions, for the year ended October 31	2016	2015 <sup>(2)</sup>	2014 <sup>(2)</sup>
Revenue			
International banking	\$ 722	\$ 678	\$ 600
Other	(296)	(316)	(56)
Total revenue <sup>(3)</sup>	426	362	544
Provision for credit losses	133	48	163
Non-interest expenses	1,348	1,436	1,486
Loss before income taxes	(1,055)	(1,122)	(1,105)
Income taxes <sup>(3)</sup>	(721)	(707)	(522)
Net loss	\$ (334)	\$ (415)	\$ (583)
Net income (loss) attributable to:			
Non-controlling interests	\$ 20	\$ 14	\$ (5)
Equity shareholders	(354)	(429)	(578)
Full-time equivalent employees	17,314	16,977	17,087

(1) For additional segmented information, see Note 28 to the consolidated financial statements.

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

(3) TEB adjusted. See footnote 3 in the "Capital Markets" section for additional details.

## Financial overview

Net loss was \$334 million compared with a net loss of \$415 million in 2015, primarily due to lower non-interest expenses and higher revenue, partially offset by a higher provision for credit losses.

## Revenue

Revenue was up \$64 million or 18% from 2015.

*International banking* revenue was up \$44 million or 6% from 2015, primarily due to the favourable impact of foreign exchange rates.

*Other* revenue was up \$20 million or 6% from 2015, primarily due to a gain on sale of a processing centre, shown as an item of note, and a lower TEB adjustment, partially offset by lower Treasury revenue.

## Provision for credit losses

Provision for credit losses was up \$85 million, due to increases in the collective allowance, shown as items of note, primarily relating to deterioration in the commodities sector and other changes in economic conditions, partially offset by lower losses in CIBC FirstCaribbean.

## Non-interest expenses

Non-interest expenses were down \$88 million or 6% from 2015, as the prior year included higher restructuring charges primarily relating to employee severance, shown as items of note in both years. The current year also included legal provisions relating to certain matters, shown as an item of note.

## Income taxes

Income tax benefit was up \$14 million, mainly due to an income tax recovery arising from a change in our expected utilization of certain tax loss carryforwards and to the impact of changes in the proportion of income subject to varying rates of tax in different jurisdictions.

## Financial condition

### Review of condensed consolidated balance sheet

\$ millions, as at October 31	2016	2015
<b>Assets</b>		
Cash and deposits with banks	\$ 14,165	\$ 18,637
Securities		
Trading	49,915	46,181
AFS	37,253	28,534
FVO	255	267
	87,423	74,982
Securities borrowed or purchased under resale agreements	33,810	33,334
Loans and acceptances		
Residential mortgages	187,298	169,258
Personal	38,041	36,517
Credit card	12,332	11,804
Business and government	83,801	75,072
Allowance for credit losses	(1,691)	(1,670)
	319,781	290,981
Derivative instruments	27,762	26,342
Other assets	18,416	19,033
	\$ 501,357	\$ 463,309
<b>Liabilities and equity</b>		
Deposits		
Personal	\$ 148,081	\$ 137,378
Business and government	190,240	178,850
Bank	17,842	10,785
Secured borrowings	39,484	39,644
	395,647	366,657
Obligations related to securities lent or sold short or under repurchase agreements	24,550	20,149
Derivative instruments	28,807	29,057
Acceptances	12,395	9,796
Other liabilities	12,919	12,223
Subordinated indebtedness	3,366	3,874
Equity	23,673	21,553
	\$ 501,357	\$ 463,309

#### Assets

Total assets as at October 31, 2016 were up \$38.0 billion or 8% from 2015, of which approximately \$2 billion was the result of appreciation of the U.S. dollar.

Cash and deposits with banks decreased by \$4.5 billion or 24%, mainly due to lower short-term placements in Treasury.

Securities increased by \$12.4 billion or 17%, primarily due to an increase in Canadian government and corporate debt AFS securities as a result of Treasury-related activities, and higher trading equity securities in Capital Markets. 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 \$476 million or 1%, mainly due to normal business activity.

Net loans and acceptances increased by \$28.8 billion or 10% due to increases in residential mortgages and business and government loans and acceptances. Further details on the composition of loans and acceptances are provided in the "Supplementary annual financial information" section and Note 5 to the consolidated financial statements.

Derivative instruments increased by \$1.4 billion or 5%, largely driven by an increase in foreign exchange derivatives valuation, partially offset by a decrease in interest rate derivatives valuation.

Other assets decreased by \$617 million or 3%, primarily due to the sale of ACI during the current year, partially offset by an increase in collateral pledged for derivatives.

## Liabilities

Total liabilities as at October 31, 2016 were up \$35.9 billion or 8% from 2015, of which approximately \$2 billion was the result of appreciation of the U.S. dollar.

Deposits increased by \$29.0 billion or 8%, primarily due to domestic retail volume growth, higher corporate banking deposits and increased funding in Treasury. 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 \$4.4 billion or 22%, primarily due to client-driven activities.

Derivative instruments decreased by \$250 million or 1%, largely driven by a decrease in other commodities and interest rate derivatives valuation, partially offset by an increase in foreign exchange derivatives valuation.

Acceptances increased by \$2.6 billion or 27%, driven by growth in corporate and commercial banking.

Other liabilities increased by \$696 million or 6%, primarily due to an increase in accrued liabilities, defined benefit pension liabilities, broker payables, and collateral received for derivatives.

Subordinated indebtedness decreased by \$508 million or 13%, primarily due to a redemption, partially offset by an issuance during the current year. See the "Capital management and planning" section for further details.

## Equity

Equity as at October 31, 2016 was up \$2.1 billion or 10% from 2015, primarily due to 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

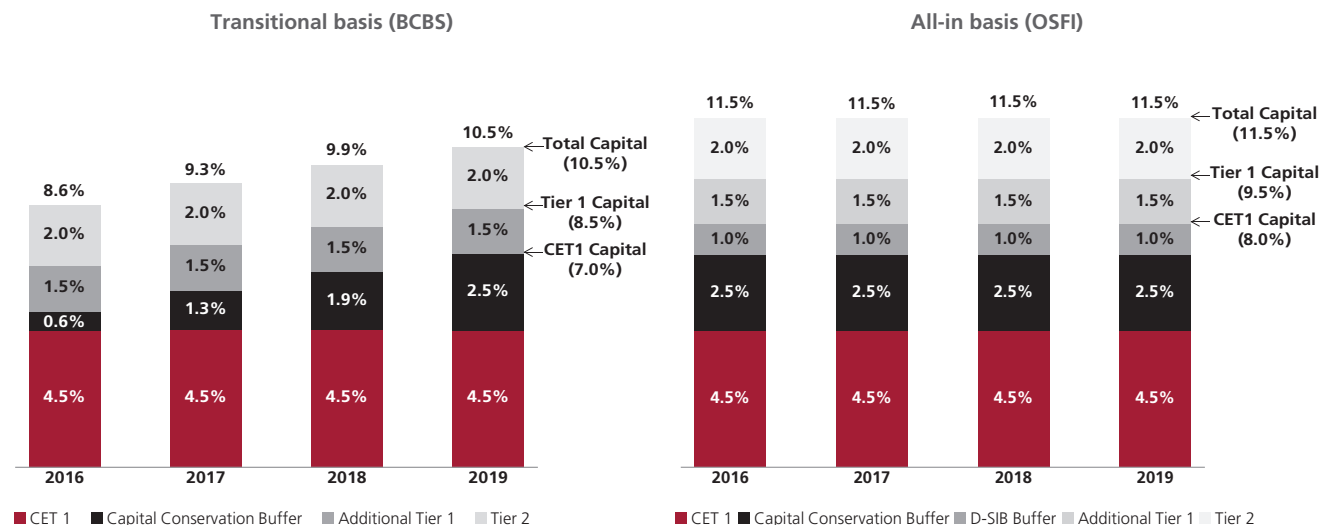
Our regulatory capital requirements are determined in accordance with guidelines issued by OSFI, which are based upon the risk-based capital standards developed by the Basel Committee on Banking Supervision (BCBS).

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.

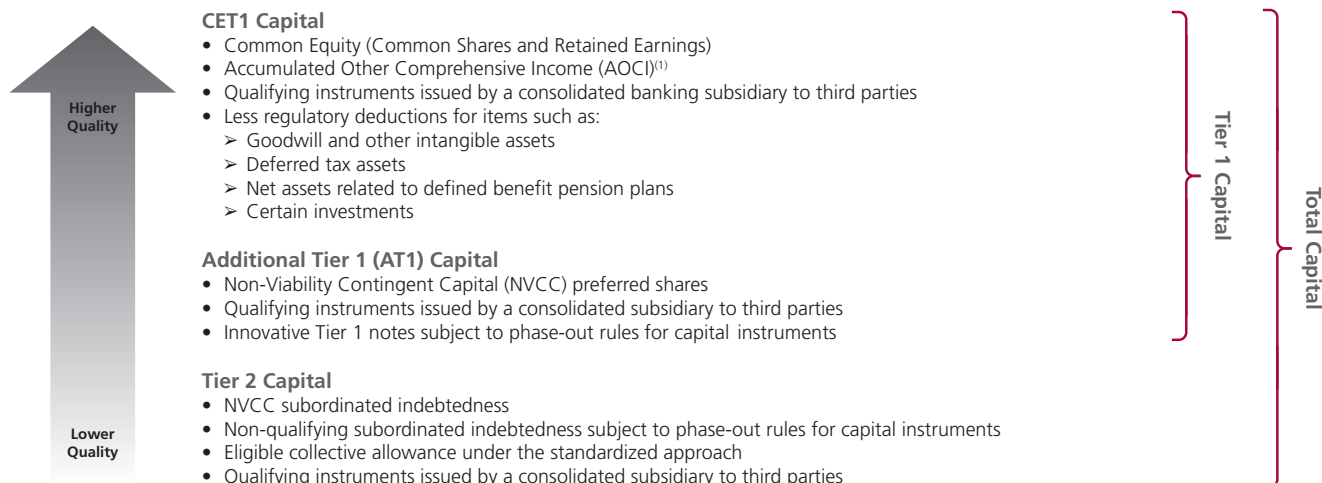
Additionally, CIBC, along with the Bank of Montreal, the Bank of Nova Scotia, the National Bank of Canada, the Royal Bank of Canada, and the Toronto-Dominion Bank, have been designated by OSFI as domestic systemically important banks (D-SIBs) in Canada, and they are subject to a 1% CET1 surcharge commencing January 1, 2016. This results in current minimum targets for CET1, Tier 1 and Total capital ratios of 8%, 9.5%, and 11.5%, respectively. These targets may be higher for certain institutions at OSFI's discretion.

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.

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



The tiers of regulatory capital indicate increasing quality/permanence and the ability to absorb losses. The major components of our regulatory capital are summarized as follows:



(1) Excluding AOCI relating to cash flow hedges and changes to 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	<p>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.</p> <p>Basel provides two approaches for calculating credit risk capital requirements for securitization positions in the banking book – standardized and internal ratings-based (IRB) approaches.</p>	<p>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.</p> <p>We use the IRB approach for securitization exposures, which comprises several calculation approaches (Ratings-Based, Supervisory Formula, Internal Assessment Approach).</p> <p>Some portfolios deemed immaterial remain on the standardized approach.</p>
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 the 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. The capital floor has not impacted CIBC's capital ratios for the periods presented in the tables that follow.

## 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	2016	2015
<b>Common Equity Tier 1 (CET1) capital: instruments and reserves</b>		
Directly issued qualifying common share capital plus related stock surplus	\$ 8,096	\$ 7,889
Retained earnings	13,584	11,433
AOCI (and other reserves)	790	1,038
Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	113	94
<b>CET1 capital before regulatory adjustments</b>	<b>22,583</b>	<b>20,454</b>
<b>CET1 capital: regulatory adjustments</b>		
Prudential valuation adjustments	69	50
Goodwill (net of related tax liabilities)	1,461	1,824
Other intangibles other than mortgage-servicing rights (net of related tax liabilities)	1,258	1,080
Deferred tax assets excluding those arising from temporary differences (net of related tax liabilities)	70	62
Defined benefit pension fund net assets (net of related tax liabilities)	156	385
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	421	224
<b>Total regulatory adjustments to CET1</b>	<b>3,435</b>	<b>3,625</b>
<b>CET1 capital</b>	<b>19,148</b>	<b>16,829</b>
<b>Additional Tier 1 (AT1) capital: instruments</b>		
Directly issued qualifying AT1 instruments plus related stock surplus <sup>(1)</sup>	1,000	1,000
Directly issued capital instruments subject to phase out from AT1 <sup>(2)</sup>	1,504	1,679
Additional Tier 1, Instruments issued by subsidiaries and held by third parties (amount allowed in AT1)	14	12
<b>AT1 capital before regulatory adjustments</b>	<b>2,518</b>	<b>2,691</b>
<b>AT1 capital: regulatory adjustments</b>		
Other deductions from Tier 1 capital as determined by OSFI	–	–
<b>Total regulatory adjustments to AT1 capital</b>	<b>–</b>	<b>–</b>
<b>AT1 capital</b>	<b>2,518</b>	<b>2,691</b>
<b>Tier 1 capital (T1= CET1 + AT1)</b>	<b>21,666</b>	<b>19,520</b>
<b>Tier 2 capital: instruments and provisions</b>		
Directly issued qualifying Tier 2 instruments plus related stock surplus <sup>(3)</sup>	2,001	1,000
Directly issued capital instruments subject to phase out from Tier 2	1,323	2,828
Tier 2 instruments issued by subsidiaries and held by third parties (amount allowed in Tier 2)	19	16
Collective allowances	74	70
<b>Tier 2 capital before regulatory adjustments</b>	<b>3,417</b>	<b>3,914</b>
<b>Total regulatory adjustments to Tier 2 capital</b>	<b>–</b>	<b>–</b>
<b>Tier 2 capital (T2)</b>	<b>3,417</b>	<b>3,914</b>
<b>Total capital (TC= T1 + T2)</b>	<b>\$ 25,083</b>	<b>\$ 23,434</b>
<b>CET1 capital RWA <sup>(4)</sup></b>	<b>\$ 168,996</b>	<b>\$ 156,107</b>
<b>Tier 1 capital RWA <sup>(4)</sup></b>	<b>169,322</b>	<b>156,401</b>
<b>Total capital RWA <sup>(4)</sup></b>	<b>169,601</b>	<b>156,652</b>
<b>Capital ratios <sup>(4)</sup></b>		
CET1 ratio	11.3 %	10.8 %
Tier 1 capital ratio	12.8 %	12.5 %
Total capital ratio	14.8 %	15.0 %

(1) Comprises non-cumulative Class A Preferred Shares Series 39, 41 and 43, 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 due June 30, 2108 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) 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.

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

\$ millions, as at October 31	2016	2015
CET1 capital	\$ 20,751	\$ 19,147
Tier 1 capital	22,596	20,671
Total capital	25,949	24,538
RWA	173,902	163,867
CET1 ratio	11.9 %	11.7 %
Tier 1 ratio	13.0 %	12.6 %
Total capital ratio	14.9 %	15.0 %

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

\$ millions, as at October 31

	2016		2015	
	RWA (All-in basis)	Minimum total capital required <sup>(1)</sup>	RWA (All-in basis)	Minimum total capital required <sup>(1)</sup>
<b>Credit risk</b>				
Standardized approach				
Corporate	\$ 3,645	\$ 292	\$ 3,614	\$ 289
Sovereign	780	62	753	60
Banks	521	42	327	26
Real estate secured personal lending	2,181	174	2,213	177
Other retail	667	53	649	52
Trading book	123	10	10	1
	7,917	633	7,566	605
AIIRB approach				
Corporate	64,856	5,188	58,917	4,713
Sovereign <sup>(2)</sup>	2,185	175	2,081	166
Banks	3,526	282	4,088	327
Real estate secured personal lending	12,115	969	10,477	838
Qualifying revolving retail	17,512	1,401	16,106	1,288
Other retail	7,813	625	7,272	582
Equity	705	56	725	58
Trading book	3,576	286	2,930	234
Securitization	2,218	177	2,011	161
Adjustment for scaling factor	6,860	549	6,266	501
	121,366	9,708	110,873	8,868
Other credit RWA	10,815	865	12,381	990
<b>Total credit risk (before adjustment for CVA phase-in) <sup>(3)</sup></b>	<b>140,098</b>	<b>11,206</b>	<b>130,820</b>	<b>10,463</b>
<b>Market risk (Internal Models and IRB Approach)</b>				
VaR	881	70	719	58
Stressed VaR	1,623	130	2,051	164
Incremental risk charge	1,624	130	1,606	128
Securitization and other	47	4	32	3
<b>Total market risk</b>	<b>4,175</b>	<b>334</b>	<b>4,408</b>	<b>353</b>
<b>Operational risk</b>	<b>21,746</b>	<b>1,740</b>	<b>18,194</b>	<b>1,456</b>
<b>Total RWA before adjustment for CVA phase-in</b>	<b>\$ 166,019</b>	<b>\$ 13,280</b>	<b>\$ 153,422</b>	<b>\$ 12,272</b>
<b>CVA adjustment <sup>(3)</sup></b>				
CET1 RWA	\$ 2,977	\$ 238	\$ 2,685	\$ 215
Tier 1 RWA	3,303	264	2,979	238
Total RWA	3,582	287	3,230	258
<b>Total RWA after adjustment for CVA phase-in <sup>(3)</sup></b>				
CET1 capital RWA	\$ 168,996	\$ 13,518	\$ 156,107	\$ 12,487
Tier 1 capital RWA	169,322	13,544	156,401	12,510
Total capital RWA	169,601	13,567	156,652	12,530

(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) Includes residential mortgages insured by Canada Mortgage and Housing Corporation (CMHC), an agency of the Government of Canada, and government guaranteed student loans.

(3) As a result of the option that CIBC chose for calculating the CVA capital charge, the calculation of CET1, Tier 1 and Total capital ratios are based on different RWAs. The charge will be phased-in during 2014 to 2019 and relates to bilateral over-the-counter (OTC) derivatives included in the credit risk RWA.

### CET1 ratio (All-in basis)

The CET1 ratio at October 31, 2016 increased 0.5% from October 31, 2015. CET1 capital increased sufficiently to counteract the impact of an increase in RWAs. The increase in CET1 capital was the result of internal capital generation (net income less dividends and share repurchases), as well as a decrease in regulatory capital deductions. CET1 capital RWAs increased \$12.9 billion from October 31, 2015, primarily due to increased exposures, portfolio migration, capital model updates, and net foreign exchange movement, partially offset by the sale of ACI.

We hold regulatory capital against the underlying exposures associated with our credit card securitization trust, CARDS II Trust, as we have provided non-contractual support to the trust. Applying this treatment resulted in a reduction of our 2016 Basel III CET1, Tier 1 and Total capital ratios by approximately 0.08%, 0.08% and 0.08%, respectively (2015: 0.12%, 0.13% and 0.14%, respectively).

## Movement in regulatory capital and CET1 capital RWAs

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

\$ millions, for the year ended October 31	2016	2015
Balance at beginning of year	\$ 23,434	\$ 21,989
Issue of common shares	109	30
Issue of preferred shares	–	600
Issue of subordinated indebtedness	1,000	–
Purchase of common shares for cancellation	(61)	(2)
Redemption of preferred shares	–	(631)
Net income attributable to equity shareholders	4,275	3,576
Preferred and common share dividends	(1,917)	(1,753)
Premium on purchase of common shares for cancellation	(209)	(9)
Shares issued in lieu of cash dividends	164	–
Change in AOCI balances included in regulatory capital		
Net foreign currency translation adjustments	79	722
Net change in AFS securities	67	(164)
Net change in cash flow hedges	1	(4)
Net change in post-employment defined benefit plans	(390)	374
Change in shortfall of allowance to expected losses	(162)	(93)
Goodwill and other intangible assets	185	(415)
Redemption of subordinated indebtedness <sup>(1)</sup>	(1,500)	(447)
Other, including change in regulatory adjustments	8	(339)
Balance at end of year	\$ 25,083	\$ 23,434

(1) Due to the application of the cap on inclusion of non-qualifying capital instruments, \$653 million of the \$1.1 billion of subordinated debentures redeemed in April 2015 did not impact regulatory capital.

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	2016		2015	
	Credit risk	Of which counterparty credit risk <sup>(1)</sup>	Credit risk	Of which counterparty credit risk <sup>(1)</sup>
Balance at beginning of year	\$ 133,505	\$ 7,898	\$ 119,884	\$ 5,068
Book size <sup>(2)</sup>	13,456	1,402	7,892	1,010
Book quality <sup>(3)</sup>	1,779	(408)	1,667	158
Model updates <sup>(4)</sup>	(1,600)	–	(524)	–
Methodology and policy <sup>(5)</sup>	–	–	292	292
Acquisitions and disposals	(1,712)	–	–	–
Foreign exchange movements	565	44	4,507	347
Other	(2,918)	(75)	(213)	1,023
Balance at end of year <sup>(6)</sup>	\$ 143,075	\$ 8,861	\$ 133,505	\$ 7,898

### Market risk

\$ millions, for the year ended October 31	2016	2015
Balance at beginning of year	\$ 4,408	\$ 4,046
Movement in risk levels <sup>(7)</sup>	(268)	444
Model updates <sup>(4)</sup>	(46)	364
Methodology and policy <sup>(5)</sup>	5	–
Acquisitions and disposals	–	–
Foreign exchange movements	76	(446)
Other	–	–
Balance at end of year	\$ 4,175	\$ 4,408

### Operational risk

\$ millions, for the year ended October 31	2016	2015
Balance at beginning of year	\$ 18,194	\$ 17,320
Movement in risk levels <sup>(8)</sup>	1,154	874
Methodology and policy <sup>(5)</sup>	2,398	–
Acquisitions and disposals	–	–
Balance at end of year	\$ 21,746	\$ 18,194

(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 \$2,977 million (2015: \$2,685 million) of CET1 CVA RWAs relating to bilateral OTC derivatives.

(7) Relates to changes in open positions and market data.

(8) Relates to changes in loss experience and business environment and internal control factors.

## Movement in CET1 capital RWAs

### *Credit risk*

The increase in credit risk RWAs mainly reflect the organic growth in our retail and capital markets portfolios throughout the year. The increase due to book quality reflects the impact of various downgrades experienced during the year. Model updates include refinements and normal course updates to our underlying AIRB models and parameters, such as, PD, LGD and EAD. Acquisitions and disposals reflect the sale of ACI.

### *Market risk*

The overall decrease in market risk RWAs is primarily driven by the movement in risk levels, which includes changes in open positions and the market rates affecting these positions.

### *Operational risk*

The movement in risk level under the AMA 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 has published a number of proposals for changes to the existing risk-based capital requirements, and continues to do so with the objective of clarifying and increasing the capital requirements for certain business activities. Since the start of the fiscal year, the BCBS publications have included the proposals discussed below.

In October 2016, the BCBS published the final standard for the regulatory capital treatment of banks' investment in instruments that comprise total loss-absorbing capacity (TLAC) of global systemically important banks (G-SIBs). Under the new standard, internationally active banks must deduct holdings of TLAC instruments from their Tier 2 capital subject to certain threshold conditions provided. The standard aims to reduce the risk of contagion within the financial system should a G-SIB enter resolution. The implementation date is set for January 2019.

In September 2016, OSFI published a draft of revisions to the Capital Adequacy Requirements Guideline for public consultation. The changes will be effective in the first quarter of 2017. Incorporated in the draft are revisions to effect the following:

- Details of the domestic implementation of the Basel III countercyclical buffer. The purpose of this buffer is to build capital reserves early in the credit cycle as protection against potential future losses associated with the build-up of system-wide risk arising from excess aggregate credit growth;
- Application of the BCBS equity investment in funds rules to ensure adequate capital is held against these investments by looking through to the underlying assets of the fund in order to more properly reflect the risk of the investment in the fund; and
- Revisions to the treatment of insured residential mortgages as first set out in OSFI's December 2015 letter to the industry, which is discussed below.

OSFI published a letter in December 2015, followed by a consultative paper in April 2016, with proposals to update capital requirements for residential mortgage loans in response to evolving risks, such as risks associated with elevated house prices in certain markets, and increasing levels of household debt. Final guidelines have not yet been published, but the banks and OSFI have consulted extensively. The key change is a risk sensitive floor for LGD that will be tied to increases in local property prices over the previous three years and/or to house prices that are high relative to borrower income. This guideline will apply to banks using internal models to determine RWA, with implementation by November 1, 2016 for reporting beginning in the first quarter of 2017. Only new mortgage originations and mortgages that are renewed or refinanced will be subject to the new rules on a go-forward basis. However, an increase in RWA is expected, due to the increase in house prices in several key markets over the last three years.

In July 2016, the BCBS published revisions to the securitization framework, with an effective date of January 2018, which aim to strengthen the capital standards for securitization exposures.

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, which are effective for the first quarter of 2018, 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 proposed changes aim 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.

CIBC will continue to monitor and prepare for developments in these areas.

## 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:

- On-balance sheet assets less Tier 1 capital regulatory adjustments;
- Derivative exposures;
- Securities financing transaction exposures; and
- 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 Basel III leverage ratios that meet or exceed 3%. The minimum may be higher for certain institutions at OSFI's discretion.

\$ millions, as at October 31

		2016	2015
<b>Transitional basis</b>			
Tier 1 capital	A	\$ 22,596	\$ 20,671
Leverage ratio exposure	B	546,136	503,504
Leverage ratio	A/B	4.1 %	4.1 %
<b>All-in basis</b>			
Tier 1 capital	C	\$ 21,666	\$ 19,520
Leverage ratio exposure	D	545,480	502,552
Leverage ratio	C/D	4.0 %	3.9 %

### Leverage ratio (All-in basis)

The leverage ratio at October 31, 2016 increased by 0.1% from October 31, 2015, due to an increase in Tier 1 capital, which was partially offset by an increase in the leverage ratio exposure. The increase in Tier 1 capital was mainly driven by internal capital generation, as well as a decrease in regulatory capital deductions. The increase in the leverage ratio exposure was primarily driven by an increase in on-balance sheet assets.

### 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 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 expected to be January 1, 2018.

### Revised Pillar 3 disclosure requirements

In January 2015, the BCBS issued "Revised Pillar 3 disclosure requirements", which set out the first phase of a two-phase project by the BCBS to replace existing Pillar 3 disclosure requirements for credit (including counterparty credit), market, operational, interest rate and securitization risks. Pillar 3 aims to promote market discipline through regulatory disclosure requirements, in order to improve comparability and consistency of disclosures and increase transparency and confidence about a bank's exposure to risk and the overall adequacy of its regulatory capital.

In January 2016, OSFI issued a draft guideline confirming its expectations for domestic implementation of the BCBS Pillar 3 first phase requirements. In August 2016, OSFI confirmed that implementation is required beginning in the fourth quarter of 2018.

In March 2016, the BCBS released "Pillar 3 disclosure requirements – consolidated and enhanced framework", a consultative document establishing the second phase of the project. The proposals in this document include enhancements to the January 2015 requirements, the introduction of several new disclosure requirements, and the incorporation into Pillar 3 of other proposed disclosure requirements arising from ongoing reforms to the regulatory framework.

CIBC continues to monitor the requirements and prepare for developments in this area.

### Taxpayer Protection and Bank Recapitalization Regime

The Department of Finance published a consultation paper on August 1, 2014 on the Taxpayer Protection and Bank Recapitalization (bail-in) regime. The overarching policy objective is to preserve financial stability while protecting taxpayers in the event of a large bank (D-SIB) failure, and is consistent with the objectives of the Financial Stability Board's rules for 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. Bail-in debt includes long-term senior unsecured debt that is tradable and transferable, and has an original term to maturity of over 400 days. Consumer deposits are excluded. The rules would not be applied retroactively to liabilities outstanding as of the implementation date.

The Federal Budget released on March 22, 2016 confirmed the Government's intention to introduce framework legislation for the bail-in regime. A Budget Implementation Bill (Bill C-15) was released on April 20, 2016 and has received Royal Assent. It included amendments to existing legislation, such as the Canada Deposit Insurance Corporation (CDIC) and Bank Acts, to enable appropriate statutory powers to enact the forthcoming law. Highlights from Bill C-15 include:

- Specified eligible shares and liabilities of D-SIBs may only be converted into common shares;
- The CDIC will set the terms and conditions of a conversion, including its timing; and
- OSFI shall establish the amount of the higher loss absorbency requirement for D-SIBs.

Additional details on implementation, scope, and timing are expected to follow through regulations and by-laws.

### 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, established by the Board, is reviewed and approved biennially 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 the unconsolidated capital adequacy of regulated entities, in alignment with 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 needs to be monitored continually and rebalanced as needed as retained earnings grow, term instruments mature or are redeemed, share options are exercised, and the environment changes. Furthermore, the amount of capital required may change in relation to CIBC's business growth, risk appetite, and business and regulatory environment. 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 2016:

### *Normal course issuer bid*

Our normal course issuer bid (NCIB) expired on September 17, 2016. We purchased and cancelled 3,081,300 common shares under this bid at an average price of \$87.50 for a total amount of \$270 million during the year ended October 31, 2016. See Note 15 to the consolidated financial statements for additional information.

On January 5, 2016, we announced that the Ontario Securities Commission had issued an issuer bid exemption order (the Order) permitting CIBC to make private agreement purchases of up to 2,666,667 of CIBC's common shares from an arm's length third-party seller. The Toronto Stock Exchange also accepted an amended NCIB notice permitting CIBC to make purchases of common shares by way of private agreement under the Order. Any such purchases would be at a discount to the prevailing market price and were required to occur prior to March 29, 2016. Pursuant to the Order, 1,400,000 common shares were purchased and cancelled under a private agreement at an average price of \$86.94 for a total amount of \$122 million on January 8, 2016.

### *Shareholder Investment Plan*

Effective with the October 28, 2016 dividend, CIBC has elected to issue shares from Treasury to fulfill the requirements of the plan. Pursuant to the plan, we issued 1,662,972 common shares for consideration of \$164 million for the year ended October 31, 2016.

### *Dividends*

On November 30, 2016, the Board approved an increase in our quarterly common share dividend from \$1.21 per share to \$1.24 per share for the quarter ending January 31, 2017.

Our quarterly common share dividend was increased from \$1.18 per share to \$1.21 per share for the quarter ended July 31, 2016, from \$1.15 per share to \$1.18 per share for the quarter ended April 30, 2016, and from \$1.12 per share to \$1.15 per share for the quarter ended January 31, 2016.

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.

### *Subordinated indebtedness*

On August 3, 2016, we purchased and cancelled \$21 million (US\$16 million) of our Floating Rate Debenture Notes Due 2084.

On January 26, 2016, we issued \$1.0 billion principal amount of 3.42% Debentures (subordinated indebtedness). The Debentures bear interest at a fixed rate of 3.42% per annum (paid semi-annually) until January 26, 2021, and at the three-month bankers' acceptance rate plus 2.57% thereafter (paid quarterly) until maturity on January 26, 2026. The Debentures include an NVCC provision, necessary for the Debentures to qualify as Tier 2 regulatory capital under Basel III. As such, the Debentures are automatically converted into common shares upon the occurrence of the Trigger Event.

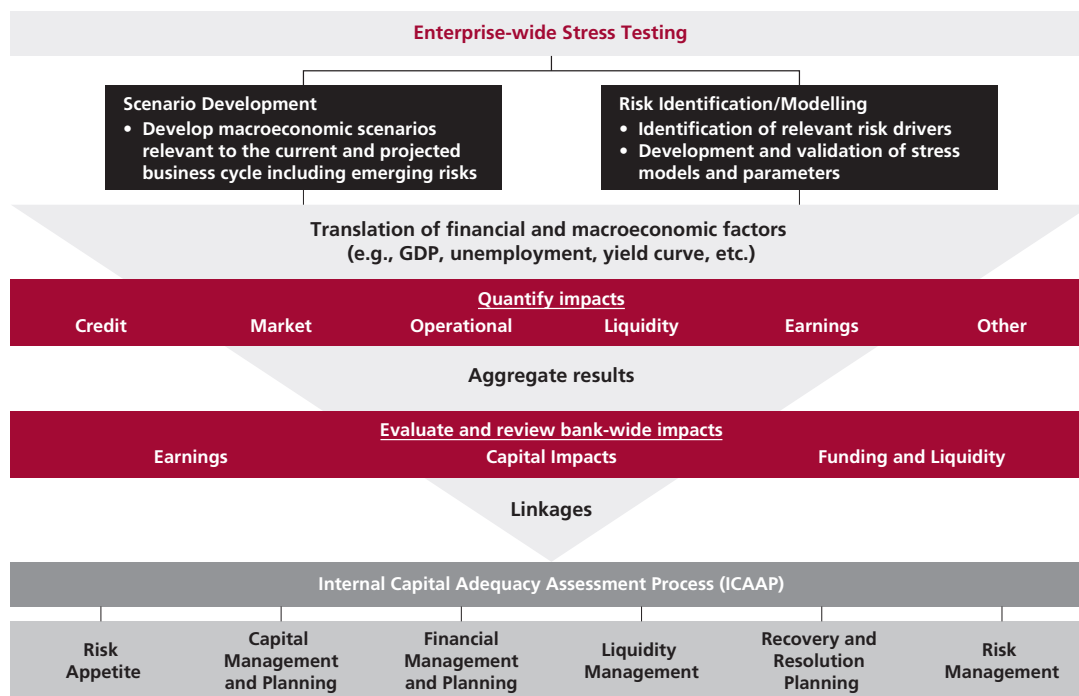
On November 2, 2015, we redeemed all \$1.5 billion of our 3.15% Debentures (subordinated indebtedness) due November 2, 2020. In accordance with their terms, the Debentures were redeemed at 100% of their principal amount, plus accrued and unpaid interest thereon.

## 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 25, 2016	Shares outstanding		Minimum conversion price per common share	Maximum number of common shares issuable on conversion/exercise
	Number of shares	Amount		
<b>Common shares</b> <sup>(1)</sup>	397,261,241	\$ 8,045		
<b>Preferred shares</b> <sup>(2)(3)</sup>				
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
<b>Subordinated indebtedness</b> <sup>(3)(4)</sup>				
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
<b>Stock options outstanding</b>				3,990,034
<b>Total</b>		\$ 3,000		803,990,034

(1) Net of treasury shares.

(2) Upon the occurrence of a Trigger Event, each share is convertible into a number of common shares, determined by dividing the par value of \$25.00 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.

(3) The maximum number of common shares issuable on conversion excludes the impact of declared but unpaid dividends and accrued interest.

(4) Upon the occurrence of a Trigger Event, the 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", as described in the capital adequacy guidelines, would result in conversion of all of the outstanding NVCC instruments described above, which would represent a dilution impact of 67% based on the number of CIBC common shares outstanding as at October 31, 2016.

#### **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.

## **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 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 \$36 million in 2016 (2015: \$27 million). All fees earned in respect of activities with the conduits are on a market basis.

As at October 31, 2016, the amount funded for the various asset types in our multi-seller conduits amounted to \$5.4 billion (2015: \$4.0 billion). The estimated weighted-average life of these assets was 1.5 years (2015: 1.2 years). Our holdings of commercial paper issued by our non-consolidated sponsored multi-seller conduits that offer commercial paper to external investors were \$10 million (2015: \$59 million). Our committed backstop liquidity facilities to these conduits were \$7.2 billion (2015: \$4.9 billion). We also provided credit facilities of \$40 million (2015: \$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 (2015: \$105 million). As at October 31, 2016, we funded \$103 million (2015: \$94 million) through the issuance of bankers' acceptances and prime loans.

We engage one or more of the four major rating agencies, Moody's, DBRS Limited (DBRS), S&P, and Fitch Ratings, Inc. (Fitch), to opine on the credit ratings of 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.

	2016			2015		
	Investments and loans <sup>(1)</sup>	Liquidity, credit facilities and commitments	Written credit derivatives <sup>(2)</sup>	Investments and loans <sup>(1)</sup>	Liquidity, credit facilities and commitments	Written credit derivatives <sup>(2)</sup>
Single-seller and multi-seller conduits	\$ 113	\$ 5,500 <sup>(3)</sup>	\$ –	\$ 153	\$ 3,972 <sup>(3)</sup>	\$ –
Third-party structured vehicles – continuing	4,647	1,398	–	3,490	985	–
Pass-through investment structures	395	–	–	605	–	–
Commercial mortgage securitization trust	7	–	–	13	–	–
CIBC Capital Trust	6	75	–	7	75	–
CIBC-managed investment funds	33	–	–	–	–	–
CIBC-structured CDO vehicles	10	28	–	9	27	23
Third-party structured vehicles – run-off	900	–	319	1,449	57	827

(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. \$0.5 billion (2015: \$1.0 billion) of the exposures related to CIBC-structured vehicles and third-party 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 \$174 million (2015: \$214 million). Notional of \$0.3 billion (2015: \$0.8 billion) was hedged with credit derivatives protection from third parties. The fair value of these hedges net of CVA was \$139 million (2015: \$159 million). An additional notional of \$36 million (2015: \$52 million) was hedged through a limited recourse note. Accumulated fair value losses were nil (2015: \$1 million) on unhedged written credit derivatives.

(3) Excludes an additional \$1.8 billion (2015: \$0.9 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 \$10 million (2015: \$59 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. Since 2008, we have ceased activities in the following areas:

- Credit derivative contracts with clients to enable them to create synthetic exposures to meet their needs; and
- Intermediation trades that assume credit risks of clients through credit derivatives, and in turn offset these risks by entering into credit derivative contracts with third-party financial institutions.

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 standby and performance letters of credit and credit derivatives protection sold, as discussed in Notes 22 and 12 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. These disclosures have been shaded and form an integral part of the consolidated financial statements.

<b>40 Risk overview</b>	<b>51 Risk measurement</b>	<b>67 Liquidity risk</b>
41 Risk governance structure	52 Exposure to credit risk	67 Governance and management
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43 Risk appetite statement	58 Exposure to certain countries and regions	67 Risk measurement
44 Risk policies and limits	60 Selected exposures in certain selected activities	68 Liquid and encumbered assets
44 Risk identification and measurement	60 Settlement risk	70 Funding
46 Stress testing		72 Contractual obligations
46 Risk treatment/mitigation		
<b>46 Top and emerging risks</b>	<b>61 Market risk</b>	<b>73 Other risks</b>
	61 Governance and management	73 Strategic risk
<b>48 Risks arising from business activities</b>	61 Policies	73 Insurance risk
	61 Process and control	74 Operational risk
<b>49 Credit risk</b>	61 Risk measurement	75 Technology, information and cyber security risk
49 Governance and management	62 Trading activities	75 Reputation and legal risk
49 Policies	65 Non-trading activities	75 Regulatory compliance risk
50 Process and control	66 Pension risk	75 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:

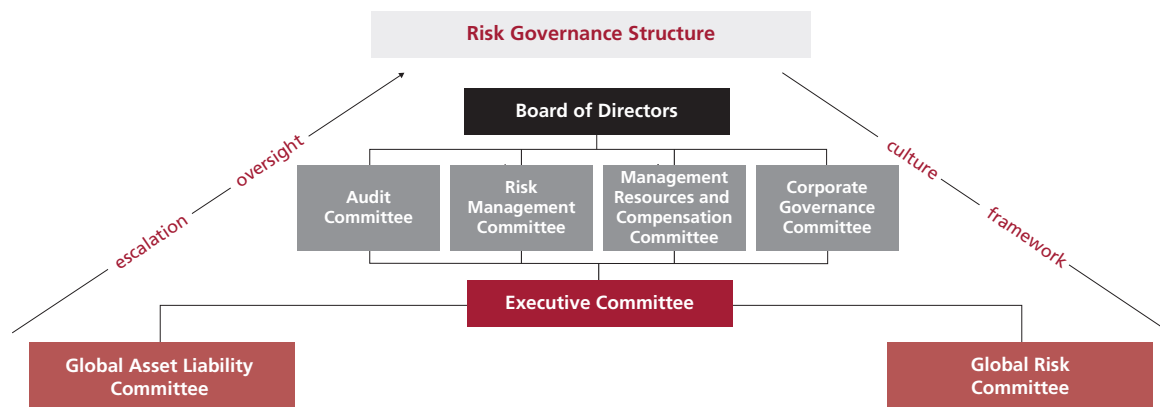
- CIBC's lines of business and functional and support groups are responsible for all risks associated with their activities – this is the first line of defence;
- As the second line of defence, CIBC's Risk Management, including Compliance, and other oversight functions, are responsible for independent oversight of the enterprise-wide risks inherent in CIBC's business activities; and
- 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 adequacy and the 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, including organization effectiveness, succession planning and compensation, and the alignment of compensation with CIBC's strategy of consistent and sustainable performance, its risk appetite and control framework.

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

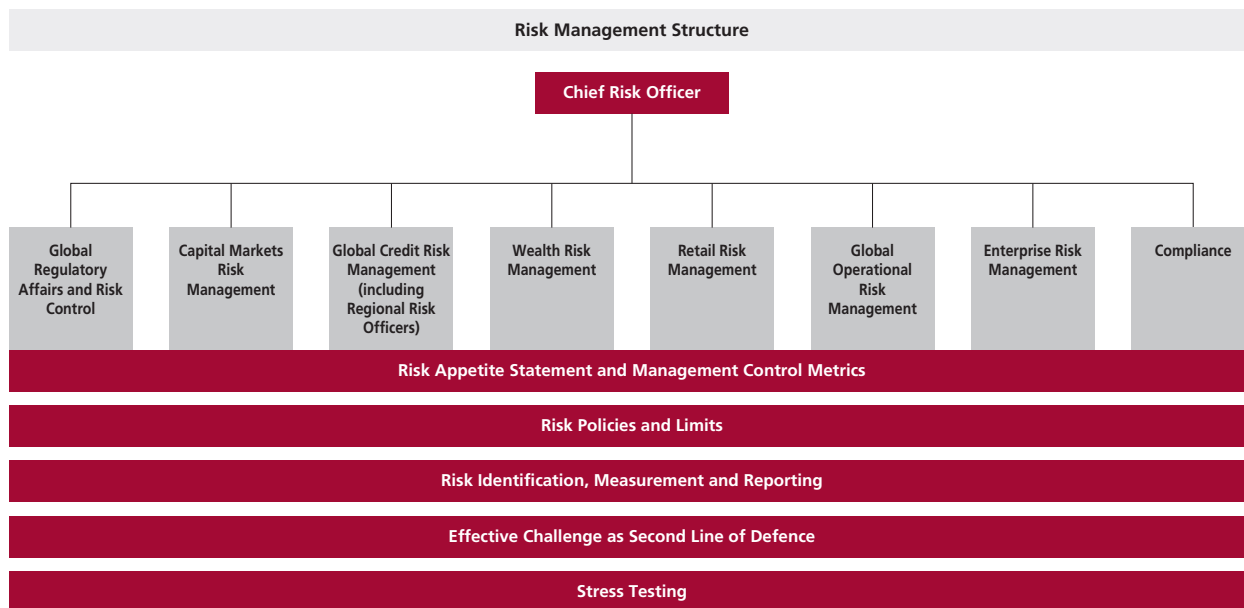
**Executive Committee (ExCo):** The ExCo, led by the CEO and including the executives reporting directly to the CEO, is responsible for setting business strategy and for monitoring, evaluating and managing risks across CIBC. The ExCo is supported by the following committees:

- **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 and liquidity 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 infrastructure 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:

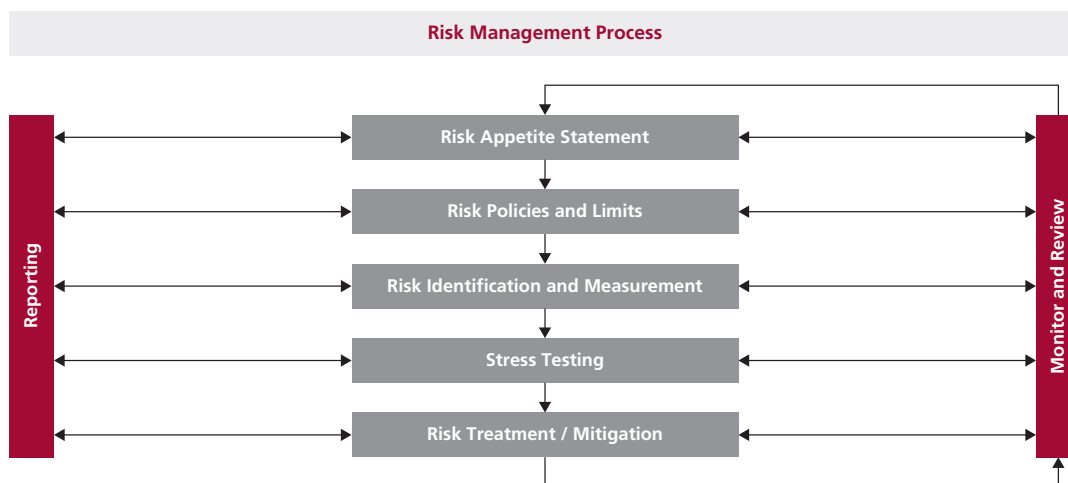
- Developing CIBC's risk appetite and associated management control metrics;
- Setting risk strategy to manage risks in alignment with our risk appetite and business strategy;
- Establishing and communicating risk policies, procedures and limits to control risks in alignment with risk strategy;
- Measuring, 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 eight key groups within Risk Management, independent of the originating businesses, contribute to our management of risk:

- *Global Regulatory Affairs and Risk Control* – This team provides expertise in risk, controls and regulatory reporting, and oversees regulatory interactions across CIBC to ensure coordinated communication and the effective development of and adherence to action plans.
- *Capital Markets Risk Management* – This unit 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 unit includes our regional CROs, and is responsible for the adjudication and oversight of credit risks associated with our commercial and wholesale activities globally, management of the risks in our investment portfolios, as well as management of special loan portfolios.
- *Wealth Risk Management* – This unit is responsible for the independent governance and oversight of the wealth management business/activities in CIBC globally.
- *Retail Risk Management* – This unit oversees the management of credit risk in the retail lines of business (residential mortgages, credit cards, personal loans and lines of credit, small business loans).
- *Global Operational Risk Management* – This team 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.
- *Enterprise Risk Management* – This unit is responsible for enterprise-wide analysis, including enterprise-wide stress testing and reporting, risk policy and governance, risk systems and models, as well as economic capital methodologies.
- *Compliance* – This unit provides timely and proactive advice and independent oversight of CIBC's compliance with applicable regulatory and anti-money laundering requirements.

## 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 through a due diligence process to ensure that the risk exposure is within our risk appetite; these decisions require approval from the ExCo and/or the Board before implementation. 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, 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 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 consolidated CIBC, Retail and Business Banking, Wealth Management and Capital Markets with respect to adherence to risk appetite. 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 rating and compensation process. The Committee 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:

- Establishing the compensation governance process;
- Reviewing an assessment of CIBC's business performance against CIBC's risk appetite, control environment, and the underlying risks associated with business performance;

- Approving and recommending for Board approval incentive compensation funding and allocations, based on an assessment of business performance and risk;
- Evaluating any discretionary adjustments that may be recommended by the CEO to better align pay and performance;
- Approving individual compensation for employees with compensation above a certain threshold;
- Approving and recommending for Board approval individual compensation for the ExCo and other key officers, including any discretionary adjustments to business multipliers and/or individual compensation recommendations; and
- Approving and recommending for Board approval new material incentive compensation plans or changes to existing material plans.

### 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.

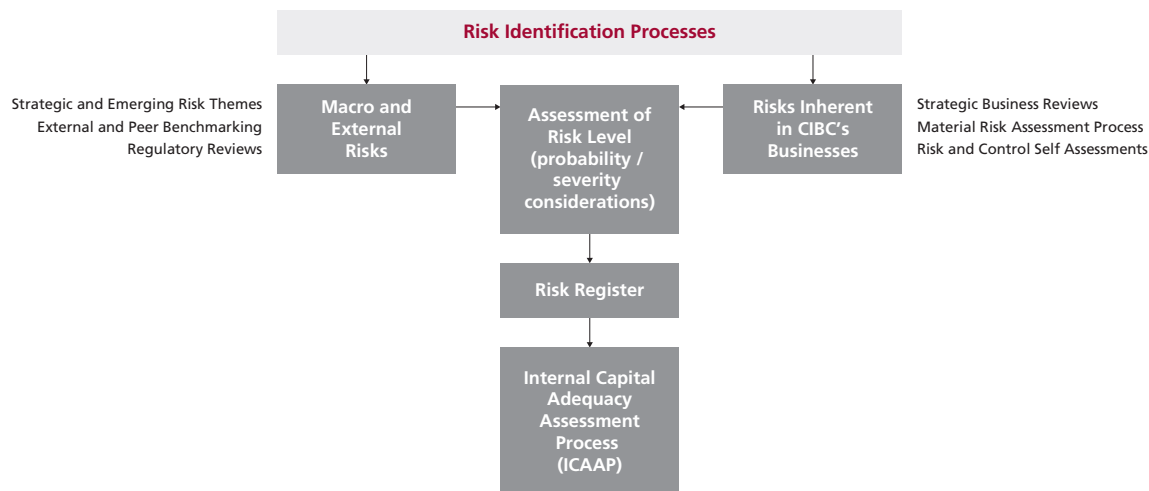
Enterprise-wide Risk Management Framework			
Risk Appetite Statement and Risk Appetite Framework			
Risk	Overarching Framework / Policy	Risk Limits	Management Oversight
Credit	Credit Risk Management Policy	Credit Concentration Limits Delegated Credit Approval Authorities	Credit Committees Global Risk 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 Framework 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 chart below, 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 its 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 the appropriateness and robustness of the model/parameter concepts and assumptions;
- 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 with 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 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, could have serious negative implications for general economic and banking activities.

The upcoming change in leadership in the White House poses new economic policy uncertainties that could either add or subtract to Canadian economic activity. The downside risks would be associated with an increase in protectionism, should that fail to exempt Canadian goods and services, as well as heightened competition for business investment as 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. We will monitor these policy developments as details emerge over the coming year.

The notable impact thus far of the outcome of the U.K. referendum to exit the European Union has been the decline in the value of the British Pound. Moreover, the uncertainty created by the decision has exacerbated an already challenging environment in global credit markets, where risks have been increasing in line with higher debt levels. While the negative economic effects are likely to be concentrated in the U.K., they will have ramifications for the rest of Europe, adding to existing economic challenges in the region. Credit is also a concern for emerging markets, where economies have yet to return to pre-crisis levels, and their credit ratings are showing signs of stress. Our direct exposure to many of these identified areas of concern is limited. However, we continue to actively monitor and assess the global business and geo-political environment for adverse developments.

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.

### Commodity prices

Most commodity prices remain at low levels as growth in global demand continues to be subdued and excess supply persists. Lower commodity prices have placed pressure on corporate margins, which, in turn, have resulted in reduced Canadian tax revenues. Should commodity prices remain at these levels for a protracted period of time, vulnerable companies in the sector will face additional stress.

So far, our overall commodity exposure continues to perform within our risk appetite. However, we have experienced losses in our oil and gas portfolio, and if the trend continues, we could experience further losses. 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 continues to trend negatively.

### 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. While interest rates are expected to remain relatively low in the foreseeable future, concerns remain that an external shock, such as higher unemployment rates, could affect the ability of Canadians to repay their loans, potentially triggering a correction in the housing market, which in turn could result in credit losses to banks. In an attempt to mitigate the risks associated with the housing market, the Canadian government recently introduced regulatory changes, and announced a public consultation on other measures. Earlier, a tax was introduced on purchases of residential property by foreign buyers in Vancouver. See the "Real estate secured personal lending" section for additional details.

Currently, we qualify all variable rate mortgage borrowers using the Bank of Canada 5-year fixed benchmark rate, which is typically higher than the variable rate by approximately two percentage points. If there were an interest rate increase, our variable rate borrowers should be able to withstand some increase in the interest rate. We believe the risk of a severe housing crash that generates significant losses for mortgage portfolios is unlikely, but the risk associated with high levels of consumer debt would be a concern should the economy falter and unemployment rates increase.

### China economic policy risk

While meeting the government-set quarterly targets, China's economy continues to be on a 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.

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 may affect clients that export to China or sell into a market where prices have been pushed down by weakness in Chinese demand, and may raise the credit risk associated with our exposure to trading counterparties.

### Acquisition risk

CIBC seeks out acquisition opportunities which align with its financial goals and strategies. 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, changes in general business and economic conditions, and the ability to control integration and acquisition costs, among others.

Although many of the factors are beyond CIBC's control, their impact is mitigated by conducting thorough due diligence before completing the transaction, developing and executing appropriate action plans to ensure successful integration, and monitoring performance following the acquisition.

### 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 "Capital resources", "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, 2016:

	CIBC				Corporate and Other
SBU's	Retail and Business Banking	Wealth Management	Capital Markets		
Business activities	<ul style="list-style-type: none"> <li>• Deposits</li> <li>• Residential mortgages</li> <li>• Personal loans</li> <li>• Credit cards</li> <li>• Business lending</li> <li>• Insurance</li> </ul>	<ul style="list-style-type: none"> <li>• Retail brokerage</li> <li>• Asset management</li> <li>• Private wealth management</li> </ul>	<ul style="list-style-type: none"> <li>• Credit products</li> <li>• Global markets</li> <li>• Investment banking</li> <li>• Investment portfolios</li> </ul>	<ul style="list-style-type: none"> <li>• International banking</li> <li>• Investment portfolios</li> <li>• Joint ventures</li> <li>• Functional and support groups (see page 27)</li> </ul>	
Balance sheet	(\$ millions) Average assets 265,760 Average deposits 186,034	(\$ millions) Average assets 4,482 Average deposits 9,817	(\$ millions) Average assets 162,842 Average deposits 21,781	(\$ millions) Average assets 76,056 Average deposits 181,439	
CET1 RWA (All-in basis)	(\$ millions) Credit risk 79,659 Market risk – Operational risk 9,529	(\$ millions) Credit risk 470 Market risk – Operational risk 3,888	(\$ millions) Credit risk <sup>(1)</sup> 46,200 Market risk 3,771 Operational risk 6,956	(\$ millions) Credit risk <sup>(2)</sup> 16,746 Market risk 404 Operational risk 1,373	
Economic capital <sup>(3)</sup>	(%) Proportion of total CIBC 40 Comprising: Credit risk <sup>(4)</sup> 71 Market risk 19 Operational/Strategic risks 10	(%) Proportion of total CIBC 11 Comprising: Credit risk <sup>(4)</sup> 3 Market risk 4 Operational/Strategic risks 93	(%) Proportion of total CIBC 25 Comprising: Credit risk <sup>(4)</sup> 78 Market risk 7 Operational/Strategic risks 15	(%) Proportion of total CIBC 24 Comprising: Credit risk <sup>(4)</sup> 25 Market risk 7 Operational/Strategic risks 68	
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 \$1,375 million, which comprises derivatives and repo-style transactions.

(2) Includes counterparty credit risk of \$7,486 million, which comprises derivatives and repo-style transactions.

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

(4) 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 mainly from our Retail and Business Banking and our Capital Markets lending businesses. 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. Front line businesses are responsible for originating and managing the risk – this is the first line of defence.

The second line of defence is Risk Management, which provides enterprise-wide adjudication. Adjudication and portfolio management decisions are based on our risk appetite, as reflected in our policies, standards, and limits. Credit approval authorities are controlled to ensure decisions are made by qualified personnel. Compliance and other oversight functions also provide independent oversight of the management of credit risk in our credit portfolios.

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

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 units in Risk Management with credit risk responsibility include:

**Global Credit Risk Management:** This unit is responsible for the adjudication of risk-rated credit (including trading credit facilities) for Retail and Business Banking, Wealth Management, and Capital Markets clients. 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.

**Retail Risk Management:** This unit is responsible for providing independent oversight of the management of credit risk for mortgages, personal and scored small business lending, and credit card portfolios. This includes establishing credit risk strategies to ensure the portfolio performs within approved limits, and credit adjudication for retail and scored small business credits.

**Wealth Risk Management:** This unit is responsible for the adjudication of private banking credits, the establishment of associated credit procedures, and the oversight of associated credit exposures.

**Capital Markets Risk Management:** This unit 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.

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, \$192 million (2015: \$28 million) of loans have undergone TDR.

### 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					Sovereigns				
Grade	PD bands	CIBC rating	S&P equivalent	Moody's equivalent	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	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	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	Watch list	12.12% – 99.99%	70 – 80	CCC+ to C	Caa1 to Ca
Default	100%	90	D	C	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: 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 following table presents the exposure to credit risk, which is measured as EAD for on- and off-balance sheet financial instruments. EAD represents the estimate of the amount which will be drawn at the time of default.

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		2016			2015	
	AIRB approach	Standardized approach	Total	AIRB approach	Standardized approach	Total
<b>Business and government portfolios</b>						
Corporate						
Drawn	\$ 72,807	\$ 3,370	\$ 76,177	\$ 64,578	\$ 3,190	\$ 67,768
Undrawn commitments	36,845	145	36,990	37,496	112	37,608
Repo-style transactions	53,644	33	53,677	31,447	12	31,459
Other off-balance sheet	18,350	229	18,579	15,694	462	16,156
OTC derivatives	9,001	–	9,001	7,481	–	7,481
	190,647	3,777	194,424	156,696	3,776	160,472
Sovereign						
Drawn	44,055	4,773	48,828	37,498	5,204	42,702
Undrawn commitments	4,670	–	4,670	4,812	–	4,812
Repo-style transactions	10,020	–	10,020	7,410	–	7,410
Other off-balance sheet	753	–	753	884	–	884
OTC derivatives	3,581	–	3,581	3,666	–	3,666
	63,079	4,773	67,852	54,270	5,204	59,474
Banks						
Drawn	10,715	1,940	12,655	12,889	1,374	14,263
Undrawn commitments	1,011	–	1,011	877	–	877
Repo-style transactions	22,720	–	22,720	33,800	–	33,800
Other off-balance sheet	62,107	–	62,107	61,022	–	61,022
OTC derivatives	6,005	167	6,172	5,153	26	5,179
	102,558	2,107	104,665	113,741	1,400	115,141
<b>Gross business and government portfolios</b>	<b>356,284</b>	<b>10,657</b>	<b>366,941</b>	<b>324,707</b>	<b>10,380</b>	<b>335,087</b>
Less: Repo-style transaction collateral	76,263	–	76,263	64,407	–	64,407
<b>Net business and government portfolios</b>	<b>280,021</b>	<b>10,657</b>	<b>290,678</b>	<b>260,300</b>	<b>10,380</b>	<b>270,680</b>
<b>Retail portfolios</b>						
Real estate secured personal lending						
Drawn	201,580	2,645	204,225	182,779	2,602	185,381
Undrawn commitments	18,375	–	18,375	21,396	–	21,396
	219,955	2,645	222,600	204,175	2,602	206,777
Qualifying revolving retail						
Drawn	21,597	–	21,597	20,435	–	20,435
Undrawn commitments	47,140	–	47,140	44,983	–	44,983
Other off-balance sheet	319	–	319	304	–	304
	69,056	–	69,056	65,722	–	65,722
Other retail						
Drawn	9,671	794	10,465	9,268	762	10,030
Undrawn commitments	2,026	26	2,052	1,888	26	1,914
Other off-balance sheet	32	–	32	36	–	36
	11,729	820	12,549	11,192	788	11,980
<b>Total retail portfolios</b>	<b>300,740</b>	<b>3,465</b>	<b>304,205</b>	<b>281,089</b>	<b>3,390</b>	<b>284,479</b>
<b>Securitization exposures <sup>(1)</sup></b>	<b>18,863</b>	<b>–</b>	<b>18,863</b>	<b>15,876</b>	<b>–</b>	<b>15,876</b>
<b>Gross credit exposure</b>	<b>675,887</b>	<b>14,122</b>	<b>690,009</b>	<b>621,672</b>	<b>13,770</b>	<b>635,442</b>
Less: Repo-style transaction collateral	76,263	–	76,263	64,407	–	64,407
<b>Net credit exposure</b>	<b>\$ 599,624</b>	<b>\$ 14,122</b>	<b>\$ 613,746</b>	<b>\$ 557,265</b>	<b>\$ 13,770</b>	<b>\$ 571,035</b>

(1) Under IRB approach.

Net credit exposure increased by \$42.7 billion in 2016, primarily due to business growth in our Canadian lending portfolios, as well as the impact of the appreciation of the U.S. dollar.

### Exposures subject to the standardized approach

Exposures within 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							2016	2015
	0%	20%	35%	50%	75%	100%	150%	Total	Total	
Corporate	\$ –	\$ –	\$ –	\$ –	\$ –	\$ 3,737	\$ 40	\$ 3,777	\$ 3,776	
Sovereign	3,673	315	–	182	–	558	45	4,773	5,204	
Bank	–	1,595	–	327	–	185	–	2,107	1,400	
Real estate secured personal lending	–	–	–	–	2,382	–	263	2,645	2,602	
Other retail	–	–	–	–	751	–	69	820	788	
	\$ 3,673	\$ 1,910	\$ –	\$ 509	\$ 3,133	\$ 4,480	\$ 417	\$ 14,122	\$ 13,770	

### 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		2016		2015	
		Exposure <sup>(1)</sup>			
Investment grade	\$ 7.36	82.8 %	\$ 7.59	89.3 %	
Non-investment grade	1.43	16.1	0.80	9.4	
Watch list	0.03	0.3	0.01	0.1	
Default	0.05	0.6	–	–	
Unrated	0.02	0.2	0.10	1.2	
	\$ 8.89	100.0 %	\$ 8.50	100.0 %	

(1) MTM of the OTC derivative contracts is after the impact of master netting agreements, but before any collateral.

### Concentration of exposures

Concentration of credit risk exists when a number of obligors are engaged in similar activities, or operate in the same geographical 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 \$76.3 billion (2015: \$64.4 billion) of collateral held for our repurchase agreement activities.

\$ millions, as at October 31, 2016	Canada	U.S.	Europe	Other	Total
Drawn	\$ 75,116	\$ 38,792	\$ 5,244	\$ 8,425	\$ 127,577
Undrawn commitments	32,082	7,923	1,725	796	42,526
Repo-style transactions	7,497	1,675	460	489	10,121
Other off-balance sheet	54,925	21,077	4,717	491	81,210
OTC derivatives	8,887	3,885	3,687	2,128	18,587
	\$ 178,507	\$ 73,352	\$ 15,833	\$ 12,329	\$ 280,021
October 31, 2015	\$ 159,525	\$ 76,685	\$ 15,689	\$ 8,401	\$ 260,300

### 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 \$76.3 billion (2015: \$64.4 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	2016 Total	2015 Total
Commercial mortgages	\$ 1,674	\$ 20	\$ –	\$ –	\$ –	\$ 1,694	\$ 8,066
Financial institutions	36,700	4,388	9,574	73,442	10,623 <sup>(1)</sup>	134,727	127,879
Retail and wholesale	4,184	2,450	–	273	60	6,967	6,806
Business services	5,807	2,294	18	489	74	8,682	7,312
Manufacturing – capital goods	1,984	2,111	–	269	287	4,651	4,528
Manufacturing – consumer goods	2,722	1,530	–	229	65	4,546	4,065
Real estate and construction	27,502	5,864	–	978	205	34,549	24,074
Agriculture	5,159	1,279	–	61	83	6,582	6,278
Oil and gas	6,873	7,825	–	963	1,994	17,655	17,276
Mining	1,908	2,407	–	731	58	5,104	4,816
Forest products	444	461	–	137	30	1,072	1,283
Hardware and software	631	437	–	29	11	1,108	1,112
Telecommunications and cable	818	839	–	265	118	2,040	2,241
Broadcasting, publishing and printing	523	183	–	172	11	889	681
Transportation	3,039	1,728	–	512	588	5,867	4,999
Utilities	3,382	4,873	–	2,233	709	11,197	10,943
Education, health, and social services	2,588	796	29	96	115	3,624	2,971
Governments	21,639	3,041	500	331	3,556	29,067	24,970
	\$ 127,577	\$ 42,526	\$ 10,121	\$ 81,210	\$ 18,587	\$ 280,021	\$ 260,300

(1) Includes \$2 million (2015: \$9 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, 2016, we had credit protection purchased totalling \$161 million (2015: \$386 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, 70% are investment grade based on our internal risk rating, which incorporates security pledged (equivalent to S&P/Moody's rating of BBB-/Baa3 and higher).

\$ millions, as at October 31, 2016	Drawn	Undrawn commitments	Other off-balance sheet	OTC derivatives	Total
Exploration and production	\$ 3,659	\$ 3,844	\$ 322	\$ 803	\$ 8,628
Midstream	1,961	1,938	99	284	4,282
Downstream	155	377	33	13	578
Integrated	152	1,149	447	864	2,612
Oil and gas services	357	201	36	4	598
Petroleum distribution	589	316	26	26	957
	\$ 6,873	\$ 7,825	\$ 963	\$ 1,994	\$ 17,655
October 31, 2015	\$ 6,068	\$ 9,473	\$ 784	\$ 951	\$ 17,276

### Credit quality of portfolios

#### Credit quality of the risk-rated portfolios

The following table provides the credit quality of the risk-rated portfolios. 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.

				2016	2015
				EAD	
Obligor grade	Corporate	Sovereign	Banks	Total	Total
Investment grade	\$ 89,034	\$ 53,016	\$ 81,693	\$ 223,743	\$ 202,981
Non-investment grade	49,330	778	1,698	51,806	47,895
Watch list	1,969	4	1	1,974	829
Default	803	–	–	803	525
Total risk-rated exposure	\$ 141,136	\$ 53,798	\$ 83,392	\$ 278,326	\$ 252,230
LGD estimate	Corporate	Sovereign	Banks	Total	Total
Less than 10%	\$ 14,180	\$ 45,178	\$ 57,605	\$ 116,963	\$ 109,323
10% – 25%	33,499	2,318	14,239	50,056	53,774
26% – 45%	65,821	4,317	10,078	80,216	67,913
46% – 65%	26,931	1,906	966	29,803	20,140
66% – 100%	705	79	504	1,288	1,080
	\$ 141,136	\$ 53,798	\$ 83,392	\$ 278,326	\$ 252,230
Strong				1,467	7,198
Good				127	556
Satisfactory				86	264
Weak				8	47
Default				7	5
Total slotted exposure				\$ 1,695	\$ 8,070
Total business and government portfolios				\$ 280,021	\$ 260,300

The total exposures increased by \$19.7 billion from October 31, 2015, largely attributable to growth in our Canadian lending portfolios. The investment grade category increased by \$20.8 billion from October 31, 2015, while the non-investment grade category was up \$3.9 billion. The increase in watch list and default exposures was largely attributable to downgrades in the corporate lending portfolios, related to oil and gas and the exited European leveraged finance portfolio.

#### Credit quality of the retail portfolios

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

				2016	2015
				EAD	
Risk level	Real estate secured personal lending	Qualifying revolving retail	Other retail	Total	Total
Exceptionally low	\$ 180,501	\$ 40,998	\$ 1,515	\$ 223,014	\$ 208,690
Very low	19,186	6,562	1,345	27,093	19,924
Low	16,833	12,409	5,738	34,980	39,026
Medium	2,889	7,696	2,406	12,991	11,110
High	354	1,347	672	2,373	2,099
Default	192	44	53	289	240
	\$ 219,955	\$ 69,056	\$ 11,729	\$ 300,740	\$ 281,089

#### Securitization exposures

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

		2016	2015
		EAD <sup>(1)</sup>	
S&P rating equivalent			
AAA to BBB-		\$ 11,227	\$ 9,547
BB+ to BB-		–	–
Below BB-		13	13
Unrated		7,367	6,036
		\$ 18,607	\$ 15,596

(1) EAD under IRB approach is net of financial collateral of \$256 million (2015: \$280 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.

In July 2016, as a follow-up to its B-20 guidelines, OSFI released a letter to all federally regulated financial institutions reinforcing its expectation that these institutions engage in prudent underwriting of residential mortgage loans.

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

Reflective of the regulatory changes relating to mortgage insurance introduced over the past few years, including the most recent changes noted above, and a change in consumer behaviour in response to the series of government tightening measures on high ratio mortgages, we expect our insured mortgage mix as a proportion of total mortgages to decrease at an accelerated rate.

The following tables provide details on our residential mortgage and HELOC portfolios:

\$ billions, as at October 31, 2016	Residential mortgages				HELOC <sup>(1)</sup>		Total			
	Insured		Uninsured		Uninsured		Insured <sup>(2)</sup>		Uninsured	
Ontario	\$ 46.1	53 %	\$ 41.5	47 %	\$ 10.3	100 %	\$ 46.1	47 %	\$ 51.8	53 %
British Columbia and territories	16.6	42	22.7	58	4.1	100	16.6	38	26.8	62
Alberta	16.5	66	8.6	34	2.7	100	16.5	59	11.3	41
Quebec	7.6	58	5.5	42	1.5	100	7.6	52	7.0	48
Central prairie provinces	5.0	67	2.4	33	0.9	100	5.0	60	3.3	40
Atlantic provinces	5.6	67	2.7	33	0.8	100	5.6	61	3.5	39
Canadian portfolio <sup>(2)(3)</sup>	97.4	54	83.4	46	20.3	100	97.4	48	103.7	52
International portfolio <sup>(2)</sup>	–	–	2.5	100	–	–	–	–	2.5	100
Total portfolio	\$ 97.4	53 %	\$ 85.9	47 %	\$ 20.3	100 %	\$ 97.4	48 %	\$ 106.2	52 %
October 31, 2015	\$ 103.9	63 %	\$ 61.2	37 %	\$ 19.5	100 %	\$ 103.9	56 %	\$ 80.7	44 %

(1) We did not have any insured HELOCs as at October 31, 2016 and 2015.

(2) Geographical location is based on the address of the property managed.

(3) 77% (2015: 82%) of insurance on Canadian residential mortgages is provided by CMHC and the remaining by two private Canadian insurers, both rated at least AA (low) by DBRS.

The average LTV ratios<sup>(1)</sup> 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	2016		2015	
	Residential mortgages	HELOC	Residential mortgages	HELOC
Ontario	64 %	69 %	65 %	70 %
British Columbia and territories	60	64	61	65
Alberta	68	72	68	72
Quebec	67	72	67	72
Central prairie provinces	69	73	69	73
Atlantic provinces	72	73	72	73
Canadian portfolio <sup>(2)</sup>	64 %	68 %	65 %	69 %
International portfolio	71 %	n/m	68 %	n/m

(1) LTV ratios for newly originated residential mortgages and HELOCs are calculated based on weighted average.

(2) Geographical location is based on the address of the property managed.

n/m Not meaningful.

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

	Insured	Uninsured
October 31, 2016 <sup>(1)</sup>	57 %	56 %
October 31, 2015 <sup>(1)</sup>	60 %	59 %

(1) LTV ratios for residential mortgages are calculated based on weighted average. The house price estimates for October 31, 2016 and 2015 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, 2016 and 2015, respectively. Teranet is an independent estimate of the rate of change in Canadian home prices.

The tables below summarize the remaining amortization profile of our total Canadian and 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, 2016	– %	– %	3 %	6 %	30 %	58 %	3 %	– %
October 31, 2015	– %	1 %	3 %	7 %	26 %	56 %	7 %	– %
International portfolio								
October 31, 2016	8 %	16 %	27 %	24 %	16 %	8 %	1 %	– %
October 31, 2015	7 %	16 %	26 %	25 %	16 %	8 %	2 %	– %

### 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								
<b>October 31, 2016</b>	<b>2 %</b>	<b>5 %</b>	<b>8 %</b>	<b>12 %</b>	<b>34 %</b>	<b>37 %</b>	<b>2 %</b>	<b>– %</b>
October 31, 2015	2 %	6 %	9 %	13 %	33 %	34 %	3 %	– %
International portfolio								
<b>October 31, 2016</b>	<b>8 %</b>	<b>16 %</b>	<b>26 %</b>	<b>23 %</b>	<b>16 %</b>	<b>8 %</b>	<b>2 %</b>	<b>1 %</b>
October 31, 2015	7 %	16 %	26 %	24 %	17 %	7 %	2 %	1 %

We have two types of condominium exposures in Canada: mortgages and developer loans. Both are primarily concentrated in the Toronto and Vancouver areas. As at October 31, 2016, our Canadian condominium mortgages were \$20.6 billion (2015: \$18.5 billion) of which 54% (2015: 64%) were insured. Our drawn developer loans were \$0.7 billion (2015: \$1.0 billion), or 0.8% (2015: 1.4%) of our business and government portfolio, and our related undrawn exposure was \$2.2 billion (2015: \$1.9 billion). The condominium developer exposure is diversified across 84 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, 2016, total loans and acceptances after allowance for credit losses were \$319.8 billion (2015: \$291.0 billion). Consumer loans (comprising residential mortgages, credit cards and personal loans, including student loans) constitute 74% (2015: 74%) of the portfolio, and business and government loans (including acceptances) constitute the remainder of the portfolio.

Consumer loans were up by \$20.0 billion or 9% from the prior year, primarily due to an increase in residential mortgages of \$18.1 billion. Business and government loans (including acceptances) were up \$8.8 billion or 12% from the prior year, mainly attributable to the real estate and construction, and financial institutions sectors.

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

	2016			2015		
	Business and government loans	Consumer loans	Total	Business and government loans	Consumer loans	Total
<b>Gross impaired loans</b>						
Balance at beginning of year	\$ 659	\$ 760	\$ 1,419	\$ 700	\$ 734	\$ 1,434
Classified as impaired during the year	1,100	1,222	2,322	207	1,154	1,361
Transferred to not impaired during the year	(16)	(125)	(141)	(17)	(105)	(122)
Net repayments	(405)	(266)	(671)	(141)	(254)	(395)
Amounts written off	(259)	(894)	(1,153)	(174)	(830)	(1,004)
Disposals of loans	(156)	–	(156)	–	–	–
Foreign exchange and other	28	10	38	84	61	145
Balance at end of year	\$ 951	\$ 707	\$ 1,658	\$ 659	\$ 760	\$ 1,419
<b>Allowance for impairment<sup>(1)</sup></b>						
Balance at beginning of year	\$ 313	\$ 333	\$ 646	\$ 337	\$ 307	\$ 644
Amounts written off	(259)	(894)	(1,153)	(174)	(830)	(1,004)
Recoveries of amounts written off in previous years	14	169	183	10	176	186
Charge to income statement	208	724	932	100	662	762
Interest accrued on impaired loans	(20)	(9)	(29)	(8)	(15)	(23)
Foreign exchange and other	3	(10)	(7)	48	33	81
Balance at end of year	\$ 259	\$ 313	\$ 572	\$ 313	\$ 333	\$ 646
<b>Net impaired loans</b>						
Balance at beginning of year	\$ 346	\$ 427	\$ 773	\$ 363	\$ 427	\$ 790
Net change in gross impaired	292	(53)	239	(41)	26	(15)
Net change in allowance	54	20	74	24	(26)	(2)
Balance at end of year	\$ 692	\$ 394	\$ 1,086	\$ 346	\$ 427	\$ 773
Net impaired loans as a percentage of net loans and acceptances			0.34%			0.27%

(1) 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, 2016, gross impaired loans were \$1,658 million, up \$239 million from the prior year. The increase was primarily due to an increase in the U.S. oil and gas sector, and an impairment in our exited European leveraged finance portfolio, partially offset by write-offs and lower new classifications in CIBC FirstCaribbean.

Approximately 35% of gross impaired loans related to Canada, of which residential mortgages accounted for about half. The remaining gross impaired loans in Canada primarily related to personal lending and the oil and gas sector.

Approximately 34% of gross impaired loans related to CIBC FirstCaribbean, of which the residential mortgages and the real estate and construction sectors accounted for the majority.

Approximately 19% of gross impaired loans related to the U.S., of which the oil and gas sector accounted for the majority. The increase was driven by higher new classifications, partially offset by a sale of a large exposure, and write-offs in the oil and gas sector.

The majority of the remaining gross impaired loans related to the impairment in our exited European leveraged finance portfolio noted above.

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 \$572 million, down \$74 million from the prior year.

The decrease was due to higher write-offs and lower new classifications in CIBC FirstCaribbean, and higher write-offs in the oil and gas sector in Canada and the U.S., partially offset by the impact of U.S. dollar appreciation on the existing portfolio. Despite an increase in the gross impaired loans from the prior year, the allowance for impairment decreased, due to a higher value of collateral pledged against the newly impaired loans.

### 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.

#### Direct exposures to certain countries and regions

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 34% (2015: 91%) is to entities in countries with Aaa/AAA ratings from at least one of Moody's or S&P, with the change in ratio this year largely due to a downgrade of the United Kingdom, following the outcome of their referendum to exit the European Union.

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

\$ millions, as at October 31, 2016	Direct exposures						
	Funded				Unfunded		
	Corporate	Sovereign	Bank	Total funded (A)	Corporate	Bank	Total unfunded (B)
Austria	\$ –	\$ 220	\$ –	\$ 220	\$ –	\$ 3	\$ 3
Belgium	–	–	8	8	–	–	–
Finland	11	1	–	12	77	–	77
France	37	–	56	93	70	6	76
Germany	78	525	383	986	3	24	27
Ireland	1	–	–	1	–	–	–
Italy	–	–	–	–	–	–	–
Luxembourg	–	–	–	–	6	–	6
Malta	–	–	–	–	–	–	–
Netherlands	191	1	157	349	123	10	133
Spain	–	–	1	1	–	–	–
<b>Total Eurozone</b>	<b>\$ 318</b>	<b>\$ 747</b>	<b>\$ 605</b>	<b>\$ 1,670</b>	<b>\$ 279</b>	<b>\$ 43</b>	<b>\$ 322</b>
Czech Republic	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –
Denmark	–	–	15	15	–	6	6
Norway	–	–	1	1	319	–	319
Poland	–	–	2	2	–	–	–
Sweden	295	310	37	642	91	–	91
Switzerland	290	–	40	330	17	–	17
Turkey	–	–	256	256	–	43	43
United Kingdom	781	344	532	1,657	2,641 <sup>(1)</sup>	204	2,845
<b>Total non-Eurozone</b>	<b>\$ 1,366</b>	<b>\$ 654</b>	<b>\$ 883</b>	<b>\$ 2,903</b>	<b>\$ 3,068</b>	<b>\$ 253</b>	<b>\$ 3,321</b>
<b>Total Europe<sup>(2)</sup></b>	<b>\$ 1,684</b>	<b>\$ 1,401</b>	<b>\$ 1,488</b>	<b>\$ 4,573</b>	<b>\$ 3,347</b>	<b>\$ 296</b>	<b>\$ 3,643</b>
October 31, 2015	\$ 2,017	\$ 764	\$ 1,609	\$ 4,390	\$ 4,264	\$ 603	\$ 4,867

(1) Includes \$180 million of exposure (notional value of \$202 million and fair value of \$22 million) on a CDS sold on a bond issue of a U.K. corporate entity, which is guaranteed by a financial guarantor. We currently hold the CDS sold as part of our structured credit run-off business. A payout on the CDS sold would be triggered by the bankruptcy of the reference entity, or a failure of the entity to make a principal or interest payment as it is due, as well as a failure of the financial guarantor to meet its obligation under the guarantee.

(2) Includes \$162 million (2015: \$220 million) of loans, net of allowance, related to the discontinued European leveraged finance business.

## Direct exposures (continued)

\$ millions, as at October 31, 2016	Derivative MTM receivables and repo-style transactions						Total direct exposure (A)+(B)+(C)
	Corporate	Sovereign	Bank	Gross exposure <sup>(1)</sup>	Collateral held <sup>(2)</sup>	Net exposure (C)	
Austria	\$ –	\$ –	\$ 25	\$ 25	\$ 25	\$ –	\$ 223
Belgium	6	–	25	31	24	7	15
Finland	5	–	32	37	31	6	95
France	31	30	1,595	1,656	1,623	33	202
Germany	–	–	1,249	1,249	1,215	34	1,047
Ireland	–	–	8	8	2	6	7
Italy	–	–	6	6	–	6	6
Luxembourg	1	–	71	72	–	72	78
Malta	–	–	1	1	–	1	1
Netherlands	109	–	64	173	62	111	593
Spain	–	–	51	51	51	–	1
<b>Total Eurozone</b>	<b>\$ 152</b>	<b>\$ 30</b>	<b>\$ 3,127</b>	<b>\$ 3,309</b>	<b>\$ 3,033</b>	<b>\$ 276</b>	<b>\$ 2,268</b>
Czech Republic	\$ –	\$ 953	\$ –	\$ 953	\$ 904	\$ 49	\$ 49
Denmark	–	–	–	–	–	–	21
Norway	–	73	–	73	73	–	320
Poland	–	–	–	–	–	–	2
Sweden	13	–	140	153	140	13	746
Switzerland	–	–	2,355	2,355	2,306	49	396
Turkey	–	–	–	–	–	–	299
United Kingdom	581	–	4,487	5,068	4,349	719	5,221
<b>Total non-Eurozone</b>	<b>\$ 594</b>	<b>\$ 1,026</b>	<b>\$ 6,982</b>	<b>\$ 8,602</b>	<b>\$ 7,772</b>	<b>\$ 830</b>	<b>\$ 7,054</b>
<b>Total Europe</b>	<b>\$ 746</b>	<b>\$ 1,056</b>	<b>\$ 10,109</b>	<b>\$ 11,911</b>	<b>\$ 10,805</b>	<b>\$ 1,106</b>	<b>\$ 9,322</b>
October 31, 2015	\$ 841	\$ 245	\$ 8,132	\$ 9,218	\$ 8,142	\$ 1,076	\$ 10,333

(1) The amounts shown are net of CVA.

(2) Collateral on derivative MTM receivables was \$1.2 billion (2015: \$1.1 billion), collateral on repo-style transactions was \$9.6 billion (2015: \$7.0 billion), and both are composed of cash and investment grade debt securities.

## Indirect exposures to certain countries and regions

Our indirect exposures comprise securities (primarily CLOs classified as loans on our consolidated balance sheet), and written credit protection on securities in our structured credit run-off business where we benefit from subordination to our position. Our gross exposure before subordination is stated at carrying value for securities and notional, less fair value for derivatives where we have written protection.

\$ millions, as at October 31, 2016	Total indirect exposure
Finland	\$ 5
France	22
Germany	8
Greece	5
Ireland	5
Italy	5
Luxembourg	20
Netherlands	31
Spain	11
<b>Total Eurozone</b>	<b>\$ 112</b>
Denmark	\$ 2
Sweden	2
United Kingdom	16
<b>Total non-Eurozone</b>	<b>\$ 20</b>
<b>Total exposure</b>	<b>\$ 132</b>
October 31, 2015	\$ 404

In addition to the indirect exposures above, we have indirect exposure to European counterparties when we have taken debt or equity securities issued by European entities as collateral for our securities lending and borrowing activity, from entities that are not in Europe. Our indirect exposure was \$399 million (2015: \$533 million).

### Selected exposures in certain selected 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.

#### U.S. real estate finance

In our U.S. real estate finance business, we operate a full-service platform which originates commercial mortgages to mid-market clients, under four programs.

The construction program offers floating-rate financing to properties under construction. The two interim programs offer fixed- and floating-rate financing, typically with an average term of one to three years for properties that are fully leased or with some leasing or renovation yet to be done. In addition, the interim programs provide operating lines to select borrowers. These programs provide feeder product for the group's permanent fixed-rate loan program. Once the construction and interim phases are complete and the properties are income producing, borrowers are offered fixed-rate financing within the permanent program (typically with average terms of 10 years).

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

\$ millions, as at October 31, 2016	Drawn	Undrawn
Construction program	\$ 118	\$ 418
Interim program	8,604	529
Permanent program	105	–
Exposure, net of allowance	\$ 8,827	\$ 947
Of the above:		
Net impaired	\$ 43	\$ –
On credit watch list	138	10
Exposure, net of allowance, as at October 31, 2015	\$ 7,600	\$ 453

As at October 31, 2016, the allowance for credit losses for this portfolio was \$24 million (2015: \$27 million). During the year, the provision for credit losses was \$1 million (2015: \$14 million).

The business also maintains commercial mortgage-backed securities (CMBS) trading and distribution capabilities. As at October 31, 2016, there was no CMBS inventory (2015: nil).

#### 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. Front line businesses are responsible for managing their risk – 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. Compliance and other oversight functions also provide independent oversight for market and pension risks.

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 approved by the RMC 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 RMC. 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 credit default swaps;
  - Equity risk measures the impact of changes in equity prices, volatilities, and dividend yields;
  - 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				2016		2015			
	Consolidated balance sheet	Subject to market risk		Not subject to market risk	Consolidated balance sheet	Subject to market risk		Not subject to market risk	Non-traded risk primary risk sensitivity
		Trading	Non- trading			Trading	Non- trading		
Cash and non-interest-bearing deposits with banks	\$ 3,500	\$ –	\$ 1,645	\$ 1,855	\$ 3,053	\$ –	\$ 1,770	\$ 1,283	Foreign exchange
Interest-bearing deposits with banks	10,665	347	10,318	–	15,584	501	15,083	–	Interest rate
Securities	87,423	48,066 <sup>(1)</sup>	39,357	–	74,982	45,299 <sup>(1)</sup>	29,683	–	Equity, interest rate
Cash collateral on securities borrowed	5,433	–	5,433	–	3,245	–	3,245	–	Interest rate
Securities purchased under resale agreements	28,377	–	28,377	–	30,089	–	30,089	–	Interest rate
Loans									
Residential mortgages	187,298	–	187,298	–	169,258	–	169,258	–	Interest rate
Personal	38,041	–	38,041	–	36,517	–	36,517	–	Interest rate
Credit card	12,332	–	12,332	–	11,804	–	11,804	–	Interest rate
Business and government	71,437	6,536 <sup>(2)</sup>	64,901	–	65,276	5,658 <sup>(2)</sup>	59,618	–	Interest rate
Allowance for credit losses	(1,691)	–	(1,691)	–	(1,670)	–	(1,670)	–	Interest rate
Derivative instruments	27,762	24,130 <sup>(3)</sup>	3,632	–	26,342	22,457 <sup>(3)</sup>	3,885	–	Interest rate, foreign exchange
Customers' liability under acceptances	12,364	–	12,364	–	9,796	–	9,796	–	Interest rate
Other assets	18,416	1,466	9,190	7,760	19,033	1,381	10,260	7,392	Interest rate, equity, foreign exchange
	\$ 501,357	\$ 80,545	\$ 411,197	\$ 9,615	\$ 463,309	\$ 75,296	\$ 379,338	\$ 8,675	
Deposits	\$ 395,647	\$ 331 <sup>(4)</sup>	\$ 352,522	\$ 42,794	\$ 366,657	\$ 363 <sup>(4)</sup>	\$ 327,557	\$ 38,737	Interest rate
Obligations related to securities sold short	10,338	10,256	82	–	9,806	9,468	338	–	Interest rate
Cash collateral on securities lent	2,518	–	2,518	–	1,429	–	1,429	–	Interest rate
Obligations related to securities sold under repurchase agreements	11,694	–	11,694	–	8,914	–	8,914	–	Interest rate
Derivative instruments	28,807	24,433 <sup>(3)</sup>	4,374	–	29,057	24,655 <sup>(3)</sup>	4,402	–	Interest rate, foreign exchange
Acceptances	12,395	–	12,395	–	9,796	–	9,796	–	Interest rate
Other liabilities	12,919	927	5,445	6,547	12,223	1,038	5,138	6,047	Interest rate
Subordinated indebtedness	3,366	–	3,366	–	3,874	–	3,874	–	Interest rate
	\$ 477,684	\$ 35,947	\$ 392,396	\$ 49,341	\$ 441,756	\$ 35,524	\$ 361,448	\$ 44,784	

(1) Excludes securities in the structured credit run-off business of \$496 million (2015: \$565 million), and certain other securities that are considered non-trading for market risk purposes.

(2) Excludes \$103 million (2015: \$333 million) of loans that are warehoused for future securitization purposes. These are considered non-trading for market risk purposes.

(3) Excludes derivatives relating to the structured credit and other run-off businesses which are considered non-trading for market risk purposes.

(4) 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

	2016				2015			
	High	Low	As at	Average	High	Low	As at	Average
Interest rate risk	\$ 4.4	\$ 1.2	\$ 2.1	\$ 2.2	\$ 3.3	\$ 0.9	\$ 1.6	\$ 1.5
Credit spread risk	7.0	1.7	2.5	3.4	4.6	1.7	2.3	2.8
Equity risk	6.0	1.4	4.2	2.9	6.3	1.3	2.0	2.3
Foreign exchange risk	5.0	0.7	1.8	1.8	2.5	0.4	1.3	0.9
Commodity risk	5.6	1.0	2.9	1.9	3.0	0.6	1.5	1.6
Debt specific risk	2.1	0.8	1.1	1.3	3.0	1.1	1.7	2.0
Diversification effect <sup>(1)</sup>	n/m	n/m	(9.0)	(7.7)	n/m	n/m	(7.0)	(7.1)
Total VaR (one-day measure)	\$ 9.9	\$ 3.1	\$ 5.6	\$ 5.8	\$ 7.3	\$ 2.7	\$ 3.4	\$ 4.0

(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, 2016 was up \$1.8 million from the prior year. The increase was driven by an increase in foreign exchange, interest rate, credit spread, equity and commodity risks, partially offset by a decrease in debt specific 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 July 8, 2008 to July 6, 2009.

### Stressed VaR by risk type – trading portfolio

\$ millions, as at or for the year ended October 31

	2016				2015			
	High	Low	As at	Average	High	Low	As at	Average
Interest rate risk	\$ 21.5	\$ 5.2	\$ 11.7	\$ 9.4	\$ 15.9	\$ 2.5	\$ 9.3	\$ 6.7
Credit spread risk	14.9	8.0	11.4	11.2	19.0	9.3	10.9	13.5
Equity risk	5.0	0.9	2.7	2.0	16.8	1.1	4.2	2.4
Foreign exchange risk	13.1	0.5	1.1	2.8	11.0	0.6	3.4	3.8
Commodity risk	8.9	1.5	3.1	3.2	10.1	1.1	2.1	4.0
Debt specific risk	4.5	1.9	2.6	2.9	5.3	2.0	2.5	3.7
Diversification effect <sup>(1)</sup>	n/m	n/m	(25.8)	(22.0)	n/m	n/m	(20.8)	(20.8)
Stressed total VaR (one-day measure)	\$ 16.1	\$ 4.9	\$ 6.8	\$ 9.5	\$ 27.4	\$ 8.7	\$ 11.6	\$ 13.3

(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, 2016 was down \$3.8 million from the prior year. The decrease was driven by a reduction in our credit spread, foreign exchange, commodity, debt specific and equity risks, partially offset by an increase in interest rate 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

	2016				2015			
	High	Low	As at	Average	High	Low	As at	Average
Default risk	\$ 102.5	\$ 42.2	\$ 72.0	\$ 64.6	\$ 156.6	\$ 63.4	\$ 64.2	\$ 94.6
Migration risk	80.3	21.1	57.9	32.8	50.9	26.4	27.3	40.3
IRC (one-year measure)	\$ 137.1	\$ 73.0	\$ 129.9	\$ 97.4	\$ 202.4	\$ 91.5	\$ 91.5	\$ 134.9

Average IRC for the year ended October 31, 2016 was down \$37.5 million from the prior year due to the changes in the composition of fixed income instruments 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 two negative back-testing breaches of the total VaR measure, in line with statistical expectations.

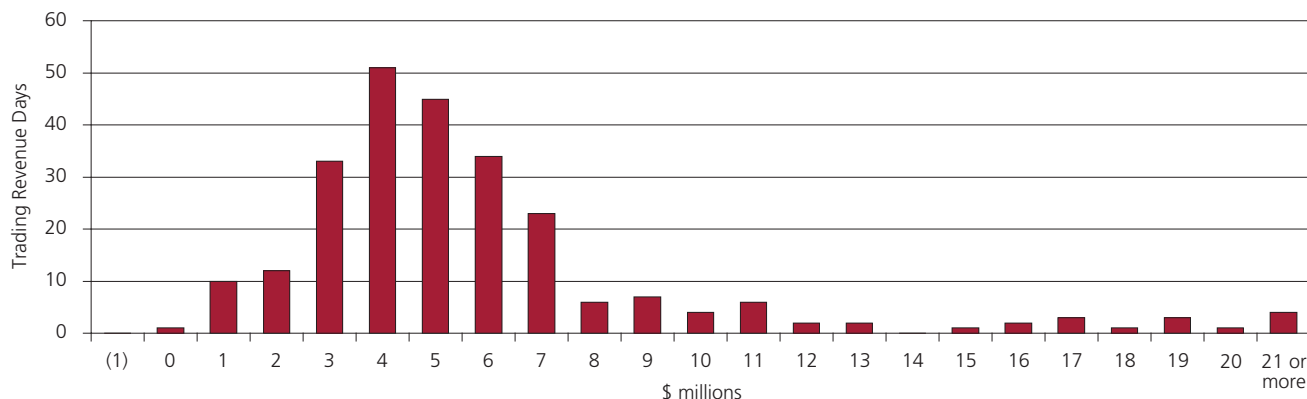
### Trading revenue

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 positions described in the "Structured credit run-off business" section of the MD&A and certain other exited portfolios.

During the year, trading revenue (TEB) was positive for 99.6% of the days. The largest gain of \$22.4 million occurred on August 4, 2016. It was attributable to a large client transaction within the commodities business. The largest loss of \$0.3 million occurred on October 26, 2016, driven by movement in commodity prices. Average daily trading revenue (TEB) was \$5.4 million during the year, and the average daily TEB was \$1.9 million.

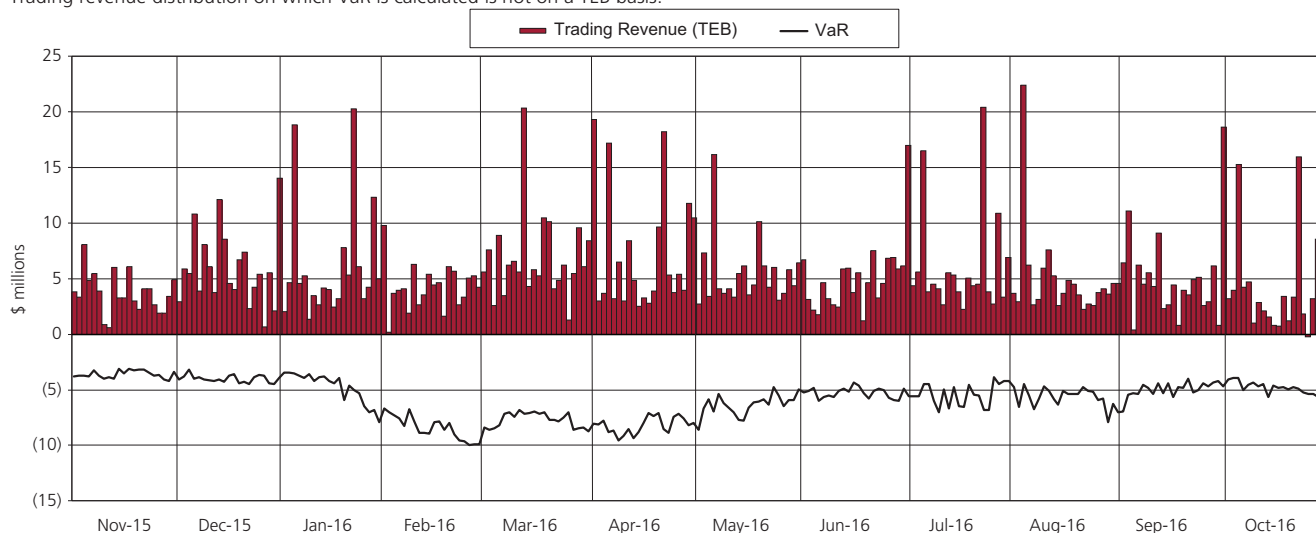
#### Frequency distribution of daily 2016 trading revenue (TEB)

The histogram below presents the frequency distribution of daily trading revenue (TEB) for 2016.



#### Trading revenue (TEB) 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. Trading revenue distribution on which VaR is calculated is not on a TEB basis.



### 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. During 2016, we introduced a Canadian market crisis scenario, which considers the implications of a Canadian real estate market crash or general Canadian crisis. We also introduced new scenarios aiming to quantify market impact surrounding the U.K. referendum on E.U. membership (Brexit "Leave" and "Remain"), and a U.S. protectionism scenario, which looks at the market impact of U.S. policy following the recent election.

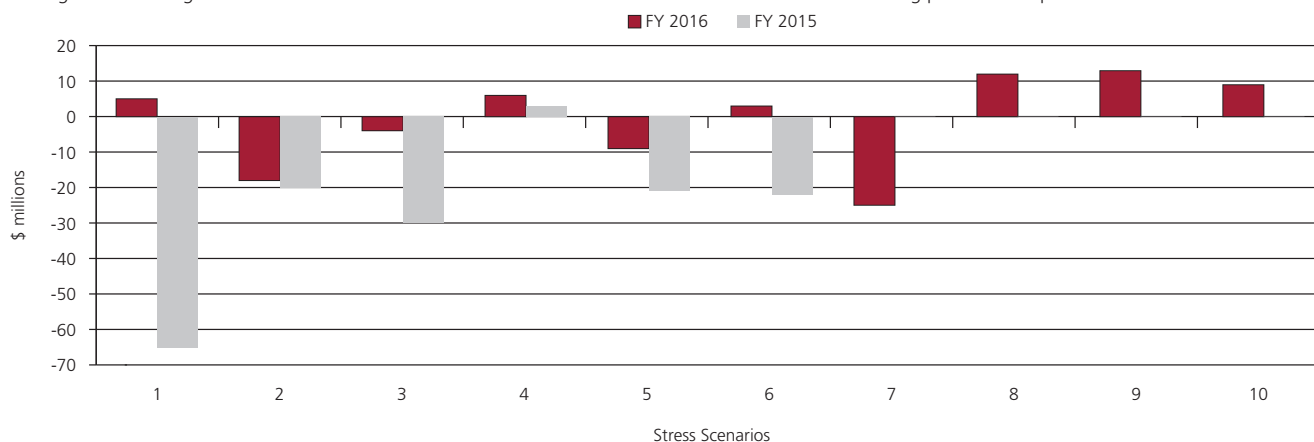
Below are our core stress test scenarios which we run daily to add insight into potential exposure levels under stress. Stress testing scenarios are periodically reviewed and amended as necessary to ensure they remain relevant.

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. Tech bubble burst – 2000
5. U.S. sovereign debt default and downgrade
6. Chinese hard landing
7. Canada market crisis
8. Brexit "Leave"
9. Brexit "Remain"
10. U.S. protectionism

Average stress testing results for 2016 and 2015 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, 2016

	Positive	Negative	Net
Maturity less than 1 year	\$ 336	\$ 365	\$ (29)
Maturity 1 – 3 years	605	326	279
Maturity 4 – 5 years	70	114	(44)
Maturity in excess of 5 years	386	30	356
	\$ 1,397	\$ 835	\$ 562

### 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 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, 2016, 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.

### Interest rate sensitivity - non-trading (after-tax)

\$ millions, as at October 31

	2016			2015		
	CAD	USD	Other	CAD	USD	Other
<b>100 basis point increase in interest rates</b>						
Increase (decrease) in net income attributable to equity shareholders	\$ 88	\$ 11	\$ 10	\$ 83	\$ (5)	\$ –
Increase (decrease) in present value of shareholders' equity	(176)	(79)	(6)	(87)	(128)	(27)
<b>100 basis point decrease in interest rates</b>						
Increase (decrease) in net income attributable to equity shareholders	\$ (153)	\$ (14)	\$ (12)	\$ (154)	\$ (8)	\$ –
Increase (decrease) in present value of shareholders' equity	75	69	3	(39)	92	26
<b>200 basis point increase in interest rates</b>						
Increase (decrease) in net income attributable to equity shareholders	\$ 145	\$ 25	\$ 24	\$ 154	\$ (9)	\$ 1
Increase (decrease) in present value of shareholders' equity	(392)	(137)	(6)	(188)	(256)	(54)
<b>200 basis point decrease in interest rates</b>						
Increase (decrease) in net income attributable to equity shareholders	\$ (327)	\$ (8)	\$ (22)	\$ (244)	\$ (13)	\$ –
Increase (decrease) in present value of shareholders' equity	(78)	90	8	(279)	103	45

### 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, 2016 by approximately \$84 million (2015: \$47 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 \$23 million (2015: \$21 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 other 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
<b>2016</b>	<b>AFS securities</b>	<b>\$ 221</b>	<b>\$ 374</b>
	<b>Equity-accounted investments in associates <sup>(1)</sup></b>	<b>386</b>	<b>421</b>
		<b>\$ 607</b>	<b>\$ 795</b>
<b>2015</b>	<b>AFS securities</b>	<b>\$ 273</b>	<b>\$ 446</b>
	<b>Equity-accounted investments in associates <sup>(1)</sup></b>	<b>1,504</b>	<b>1,815</b>
		<b>\$ 1,777</b>	<b>\$ 2,261</b>

(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, 2016, our consolidated defined benefit pension plans were in a net funded status surplus position of \$22 million, compared with \$445 million as at October 31, 2015. The change in the net funded status position of our pension plans is disclosed in Note 19 to the consolidated financial statements.

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 bps 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 align with desired risk profiles.

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 sub-committee 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 possesses a comprehensive liquidity management framework that supports our business strategy, aligns with our risk appetite and limits established within the liquidity risk management policy, and adheres to regulatory expectations. The liquidity risk management policy requires we maintain sufficient liquid assets and diversified funding sources to consistently fund our balance sheet, commitments and contingent obligations, in order to maintain the strength of our enterprise under both normal and stressed conditions.

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 the Capital Markets Risk Management group 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 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, CFP, 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 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 aggregate pledge limits for both financial and non-financial assets. Pledged assets are considered encumbered and therefore unavailable for liquidity purposes.

We maintain a detailed global CFP that clearly 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 clear 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.

## Process and control

Measurement and management of liquidity risk is performed regionally and centralized in Treasury. Contractual and behavioural on- and off-balance sheet cash flows under normal and stressed conditions are modeled and used to determine liquidity levels to be maintained throughout the policy-prescribed time horizon.

The role of the Liquidity and Non-Trading Market Risk group includes global accountability for the liquidity risk management of all CIBC legal entities and consolidated global exposure. They are responsible for ensuring that all liquidity risks incurred by CIBC are properly identified, analyzed, quantified and in alignment with CIBC's risk appetite.

The RMC is regularly informed of current and prospective liquidity conditions and ongoing enhancement of monitoring and measurement tools.

## 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 external regulatory-driven and internal liquidity risk metrics to measure our liquidity risk exposure. Internally, our liquidity position is measured using the Liquidity Horizon. The Liquidity Horizon measures the future point in time when projected cumulative cash outflows exceed cash inflows under a predefined liquidity 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 modeled 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 framework 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. These include the LCR, and a minimum Liquidity Horizon that contemplates a severe combined CIBC-specific and market-wide stress scenario. 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 multiple 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.

Stress scenario assumptions are subject to periodic review, at least annually, by the RMC.

### 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					2016	2015
	Gross liquid assets		Encumbered liquid assets <sup>(1)</sup>		Unencumbered liquid assets	
	CIBC owned assets	Third-party assets	CIBC owned assets	Third-party assets		
Cash and due from banks	\$ 14,165 <sup>(2)</sup>	\$ –	\$ 500	\$ –	\$ 13,665	\$ 18,177
Securities	86,479 <sup>(3)</sup>	73,724 <sup>(4)</sup>	23,690	45,135	91,378	82,872
National Housing Act mortgage-backed securities	47,219 <sup>(5)</sup>	–	20,996	–	26,223	32,440
Mortgages	14,227 <sup>(6)</sup>	–	14,227	–	–	–
Credit cards	4,245 <sup>(7)</sup>	–	4,245	–	–	–
Other assets	6,608 <sup>(8)</sup>	–	6,022	–	586	427
	\$ 172,943	\$ 73,724	\$ 69,680	\$ 45,135	\$ 131,852	\$ 133,916

(1) 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.

(2) Includes cash, non-interest-bearing deposits and interest-bearing deposits with contractual maturities of less than 30 days.

(3) Includes trading, AFS and FVO securities. Excludes securities in our structured credit run-off business, private debt and private equity securities of \$944 million (2015: \$1,116 million).

(4) Includes \$5,433 million (2015: \$3,245 million) of cash collateral received on securities borrowed, \$28,377 million (2015: \$30,089 million) of securities purchased under resale agreements, \$38,657 million (2015: \$32,169 million) of securities borrowed against securities lent, and \$1,257 (2015: \$1,058 million) of securities received for derivative collateral.

(5) 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.

(6) Includes mortgages in the Covered Bond Programme.

(7) Includes assets held in consolidated trusts supporting funding liabilities.

(8) Includes \$6,022 million (2015: \$5,460 million) of cash pledged for derivative collateral and \$586 million (2015: \$427 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	2016	2015
CIBC (parent)	\$ 96,027	\$ 100,698
CIBC World Markets Inc. <sup>(1)</sup>	18,387	16,005
Other subsidiaries	17,438	17,213
	\$ 131,852	\$ 133,916

(1) Includes CIBC World Markets Inc. and CIBC World Markets Corp.

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 decreased by \$2.1 billion or 2% from October 31, 2015, as a result of multiple drivers that are a part of our ongoing business operations and strategies.

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	
		CIBC owned assets	Third-party assets	Total assets	Pledged as collateral	Other	Available as collateral	Other
\$ millions, as at October 31								
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
2015	Cash and deposits with banks	\$ 18,637	\$ –	\$ 18,637	\$ 16	\$ 444	\$ 18,177	\$ –
	Securities	74,982	–	74,982	24,603	–	49,263	1,116
	Securities borrowed or purchased under resale agreements	–	33,334	33,334	16,748	–	16,586	–
	Loans, net of allowance	281,185	–	281,185	39,858	76	32,440	208,811
	Other							
	Derivative instruments	26,342	–	26,342	–	–	–	26,342
	Customers' liability under acceptances	9,796	–	9,796	–	–	–	9,796
	Land, building and equipment	1,897	–	1,897	–	–	–	1,897
	Goodwill	1,526	–	1,526	–	–	–	1,526
	Software and other intangible assets	1,197	–	1,197	–	–	–	1,197
	Investments in equity-accounted associates and joint ventures	1,847	–	1,847	–	–	–	1,847
	Other assets	12,566	–	12,566	5,460	–	427	6,679
		\$ 429,975	\$ 33,334	\$ 463,309	\$ 86,685	\$ 520	\$ 116,893	\$ 259,211

## 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 and is calculated based on a simple average of the three month end positions within the quarter. Beginning in the first quarter of 2017, the LCR will be calculated based on the average of daily positions.

\$ millions, average of the three months ended October 31, 2016

	Total unweighted value <sup>(1)</sup>	Total weighted value <sup>(2)</sup>
<b>HQLA</b>		
1 HQLA	n/a	\$ 106,348
<b>Cash outflows</b>		
2 Retail deposits and deposits from small business customers, of which:	\$ 130,956	8,565
3 Stable deposits	64,723	1,942
4 Less stable deposits	66,233	6,623
5 Unsecured wholesale funding, of which:	117,460	68,146
6 Operational deposits (all counterparties) and deposits in networks of cooperative banks	35,013	8,632
7 Non-operational deposits (all counterparties)	56,992	34,059
8 Unsecured debt	25,455	25,455
9 Secured wholesale funding	n/a	3,907
10 Additional requirements, of which:	65,413	17,881
11 Outflows related to derivative exposures and other collateral requirements	10,158	6,499
12 Outflows related to loss of funding on debt products	1,870	1,870
13 Credit and liquidity facilities	53,385	9,512
14 Other contractual funding obligations	3,798	3,798
15 Other contingent funding obligations	239,161	4,203
16 Total cash outflows	n/a	106,500
<b>Cash inflows</b>		
17 Secured lending (e.g. reverse repos)	50,965	10,840
18 Inflows from fully performing exposures	13,767	7,295
19 Other cash inflows	2,560	2,560
20 Total cash inflows	\$ 67,292	\$ 20,695
		<b>Total adjusted value</b>
21 Total HQLA	n/a	\$ 106,348
22 Total net cash outflows	n/a	\$ 85,805
23 LCR	n/a	124 %
\$ millions, average of the three months ended July 31, 2016		Total adjusted value
21 Total HQLA	n/a	\$ 96,992
22 Total net cash outflows	n/a	\$ 80,872
23 LCR	n/a	120 %

(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, 2016 increased to 124% from 120% as at July 31, 2016, primarily due to increases in deposits and eligible liquid assets, partially offset by growth in lending. Multiple other factors that are part of normal business operations also impact 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 and support 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 Retail and Business Banking channels. Personal deposits accounted for \$148.1 billion as at October 31, 2016 (2015: \$137.4 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, 2016	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
<b>Deposits from banks</b>	\$ 2,517	\$ 103	\$ 339	\$ 146	\$ 3,105	\$ –	\$ –	\$ 3,105
<b>Certificates of deposit and commercial paper</b>	5,964	12,790	16,597	8,058	43,409	751	–	44,160
<b>Bearer deposit notes and bankers' acceptances</b>	1,970	1,378	3,099	1,231	7,678	–	–	7,678
<b>Asset-backed commercial paper</b>	–	–	–	–	–	–	–	–
<b>Senior unsecured medium-term notes</b>	2,250	677	6,403	8,860	18,190	9,559	9,969	37,718
<b>Senior unsecured structured notes</b>	–	–	–	–	–	478	–	478
<b>Covered bonds/asset-backed securities</b>								
<b>Mortgage securitization</b>	–	685	512	1,450	2,647	3,438	14,927	21,012
<b>Covered bonds</b>	–	510	–	687	1,197	2,325	10,705	14,227
<b>Cards securitization</b>	–	1,837	–	603	2,440	1,006	799	4,245
<b>Subordinated liabilities</b>	–	–	–	–	–	39	3,327	3,366
<b>Other</b>	–	–	–	–	–	–	–	–
	\$ 12,701	\$ 17,980	\$ 26,950	\$ 21,035	\$ 78,666	\$ 17,596	\$ 39,727	\$ 135,989
<b>Of which:</b>								
<b>Secured</b>	\$ –	\$ 3,032	\$ 512	\$ 2,740	\$ 6,284	\$ 6,769	\$ 26,431	\$ 39,484
<b>Unsecured</b>	12,701	14,948	26,438	18,295	72,382	10,827	13,296	96,505
	\$ 12,701	\$ 17,980	\$ 26,950	\$ 21,035	\$ 78,666	\$ 17,596	\$ 39,727	\$ 135,989
October 31, 2015	\$ 15,361	\$ 23,429	\$ 17,787	\$ 20,601	\$ 77,178	\$ 18,977	\$ 37,237	\$ 133,392

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

\$ billions, as at October 31	2016		2015	
CAD	\$ 60.4	44 %	\$ 61.5	46 %
USD	56.6	42	60.1	45
Other	19.0	14	11.8	9
	\$ 136.0	100 %	\$ 133.4	100 %

Our funding volumes increased relative to 2015 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.

Our credit ratings are summarized in the following table:

As at October 31	Short-term debt		Senior debt		Subordinated indebtedness		Subordinated indebtedness – NVCC <sup>(1)</sup>		Preferred Shares – NVCC <sup>(1)</sup>		Outlook
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	
DBRS	<b>R-1(H)</b>	R-1(H)	<b>AA</b>	AA	<b>AA(L)</b>	AA(L)	<b>A(L)</b>	A(L)	<b>Pfd-2</b>	Pfd-2	<b>Negative <sup>(2)</sup></b>
Fitch	<b>F1+</b>	F1+	<b>AA-</b>	AA-	<b>A+</b>	A+	<b>A+</b>	A+	<b>n/a</b>	n/a	<b>Stable</b>
Moody's	<b>P-1</b>	P-1	<b>Aa3</b>	Aa3	<b>A3</b>	A3	<b>Baa1</b>	Baa1	<b>Baa2</b>	Baa2	<b>Negative <sup>(3)</sup></b>
S&P	<b>A-1</b>	A-1	<b>A+</b>	A+	<b>BBB+</b>	BBB+	<b>BBB</b>	BBB	<b>P-3(H)</b>	P-3(H)	<b>Stable</b>

(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	2016	2015
One-notch downgrade	\$ –	\$ 0.1
Two-notch downgrade	0.2	0.2
Three-notch downgrade	0.4	0.5

### 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, which will become effective January 1, 2018. In August 2016, OSFI provided its draft NSFR guideline and is engaging in directed and public consultations prior to issuance of its final NSFR reporting application and related disclosure requirements.

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 modeling a behavioural balance sheet.

\$ millions, as at October 31, 2016	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
<b>Assets</b>										
Cash and non-interest-bearing deposits with banks	\$ 3,500	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ 3,500
Interest-bearing deposits with banks	10,665	–	–	–	–	–	–	–	–	10,665
Securities	2,206	1,820	1,511	2,415	2,876	7,244	18,559	14,801	35,991	87,423
Cash collateral on securities borrowed	5,433	–	–	–	–	–	–	–	–	5,433
Securities purchased under resale agreements	13,262	8,158	3,787	151	–	3,019	–	–	–	28,377
Loans										
Residential mortgages	1,403	3,020	7,517	8,680	8,105	39,213	111,625	7,338	397	187,298
Personal	651	523	962	1,091	838	141	450	2,308	31,077	38,041
Credit card	259	518	777	777	777	3,108	6,116	–	–	12,332
Business and government	5,296	3,485	2,346	2,676	3,269	10,962	21,960	13,134	8,309	71,437
Allowance for credit losses	–	–	–	–	–	–	–	–	(1,691)	(1,691)
Derivative instruments	2,306	2,699	1,009	988	684	3,084	6,068	10,924	–	27,762
Customers' liability under acceptances	10,973	1,344	41	5	1	–	–	–	–	12,364
Other assets	–	–	–	–	–	–	–	–	18,416	18,416
	\$ 55,954	\$ 21,567	\$ 17,950	\$ 16,783	\$ 16,550	\$ 66,771	\$ 164,778	\$ 48,505	\$ 92,499	\$ 501,357
October 31, 2015	\$ 54,058	\$ 22,927	\$ 21,064	\$ 22,485	\$ 16,347	\$ 49,380	\$ 141,529	\$ 47,362	\$ 88,157	\$ 463,309
<b>Liabilities</b>										
Deposits <sup>(1)</sup>	\$ 23,437	\$ 28,771	\$ 40,090	\$ 20,053	\$ 21,004	\$ 27,807	\$ 41,316	\$ 7,500	\$ 185,669	\$ 395,647
Obligations related to securities sold short	10,338	–	–	–	–	–	–	–	–	10,338
Cash collateral on securities lent	2,518	–	–	–	–	–	–	–	–	2,518
Obligations related to securities sold under repurchase agreements	10,935	759	–	–	–	–	–	–	–	11,694
Derivative instruments	1,676	2,415	830	1,042	2,030	4,001	6,607	10,206	–	28,807
Acceptances	11,004	1,344	41	5	1	–	–	–	–	12,395
Other liabilities	–	–	–	–	–	–	–	–	12,919	12,919
Subordinated indebtedness	–	–	–	–	–	39	–	3,327	–	3,366
Equity	–	–	–	–	–	–	–	–	23,673	23,673
	\$ 59,908	\$ 33,289	\$ 40,961	\$ 21,100	\$ 23,035	\$ 31,847	\$ 47,923	\$ 21,033	\$ 222,261	\$ 501,357
October 31, 2015	\$ 60,305	\$ 34,090	\$ 27,455	\$ 26,453	\$ 15,499	\$ 30,998	\$ 47,403	\$ 18,902	\$ 202,204	\$ 463,309

(1) Comprises \$148.1 billion (2015: \$137.4 billion) of personal deposits of which \$143.3 billion (2015: \$132.7 billion) are in Canada and \$4.8 billion (2015: \$4.7 billion) are in other countries; \$229.7 billion (2015: \$218.5 billion) of business and government deposits and secured borrowings of which \$171.9 billion (2015: \$158.9 billion) are in Canada and \$57.8 billion (2015: \$59.6 billion) are in other countries; and \$17.8 billion (2015: \$10.8 billion) of bank deposits of which \$6.8 billion (2015: \$4.0 billion) are in Canada and \$11.0 billion (2015: \$6.8 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, 2016	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 <sup>(1)</sup>	Total
Securities lending <sup>(2)</sup>	\$ 26,229	\$ 6,102	\$ 6,326	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ 38,657
Unutilized credit commitments	468	6,315	715	1,430	1,937	6,459	34,434	1,134	133,514	186,406
Backstop liquidity facilities	15	7,577	316	678	10	233	–	13	–	8,842
Standby and performance letters of credit	1,872	2,961	2,132	2,368	1,483	351	964	246	–	12,377
Documentary and commercial letters of credit	36	84	26	8	53	6	4	–	–	217
Other	282	–	–	–	–	–	–	–	–	282
	\$ 28,902	\$ 23,039	\$ 9,515	\$ 4,484	\$ 3,483	\$ 7,049	\$ 35,402	\$ 1,393	\$ 133,514	\$ 246,781
October 31, 2015	\$ 25,115	\$ 19,910	\$ 5,597	\$ 4,322	\$ 3,748	\$ 8,912	\$ 32,321	\$ 1,560	\$ 124,034	\$ 225,519

(1) Includes \$105.0 billion (2015: \$97.1 billion) of personal, home equity and credit card lines, which are unconditionally cancellable at our discretion.

(2) Excludes securities lending of \$2.5 billion (2015: \$1.4 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, 2016	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	\$ 36	\$ 73	\$ 108	\$ 107	\$ 106	\$ 398	\$ 861	\$ 1,026	\$ 2,715
Purchase obligations <sup>(1)</sup>	84	223	213	241	206	681	874	378	2,900
Pension contributions <sup>(2)</sup>	15	29	44	44	44	–	–	–	176
Underwriting commitments	196	–	–	–	–	–	–	–	196
Investment commitments	–	–	–	4	–	1	12	128	145
	\$ 331	\$ 325	\$ 365	\$ 396	\$ 356	\$ 1,080	\$ 1,747	\$ 1,532	\$ 6,132
October 31, 2015	\$ 797	\$ 284	\$ 306	\$ 336	\$ 340	\$ 1,093	\$ 1,869	\$ 1,669	\$ 6,694

(1) 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 timeframes.

(2) 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 a potential loss due to actual experience being different from that assumed in the design and pricing of an insurance product. 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 insured risk in exchange for premiums. We are exposed to insurance risk in our life insurance business and in our life 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 independent Appointed Actuaries 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 countries.

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 Framework, 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. Front line 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 sub-committee of the Global Risk Committee (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 Framework which supports and governs the processes of identifying, measuring, mitigating, monitoring, and reporting operational risks. We mitigate operational losses by consistently applying control-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. The current year included legal provisions related to certain matters, including those shown as an item of note. The legal provisions included a no-contest settlement agreement with the Ontario Securities Commission (OSC) in relation to a matter resulting in reimbursements to certain clients. See Note 23 to our consolidated financial statements for further details, and 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. Our AMA model was originally approved in 2008 and our second generation AMA model was developed in fiscal 2015. Our current AMA model, along with the standardized method, was approved for capital reporting commencing in fiscal 2016. The basic indicator or standardized approaches are also used as agreed with local regulators.

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 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 in Enterprise Risk Management 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. Identified gaps are incorporated into the model.

### 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 risks 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 refers to the risk of regulatory sanctions arising from CIBC's failure to comply with regulatory requirements that govern its activities.

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 infrastructure 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 signatory to and 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 and support 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			2016		2015	
	Structured credit run-off business	Total CIBC	Total CIBC <sup>(1)</sup>	Structured credit run-off business	Total CIBC	Total CIBC <sup>(1)</sup>
<b>Assets</b>						
Trading securities and loans	\$ 496	\$ 536	0.9 %	\$ 565	\$ 611	1.2 %
AFS securities	3	2,296	6.2	32	2,041	7.2
FVO securities	94	94	36.9	111	111	41.6
Derivative instruments	140	195	0.7	165	192	0.7
	\$ 733	\$ 3,121	2.6 %	\$ 873	\$ 2,955	2.7 %
<b>Liabilities</b>						
Deposits and other liabilities <sup>(2)</sup>	\$ 257	\$ 506	13.9 %	\$ 280	\$ 474	17.8 %
Derivative instruments	197	274	1.0	244	297	1.0
	\$ 454	\$ 780	1.8 %	\$ 524	\$ 771	1.9 %

(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 OIS 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	2016	2015
<b>Securities</b>		
Market risk	\$ 2	\$ 1
<b>Derivatives</b>		
Market risk	85	68
Credit risk	112	99
Administration costs	5	6
Total valuation adjustments	\$ 204	\$ 174

### 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<sup>(1)</sup> of \$1,201 million (2015: \$1,084 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<sup>(1)</sup> to increase by approximately \$120 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", 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, 2016, we had goodwill of \$1,539 million (2015: \$1,526 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, 2016 based on a five-year forecast prepared by management of CIBC FirstCaribbean during the fourth quarter of 2016. The forecast for CIBC FirstCaribbean used in our 2016 annual impairment test reflected the currently challenging, but improving, economic conditions which continue to persist in the Caribbean region, as well as an expected further recovery in those conditions 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, 2016, the carrying amount of goodwill relating to CIBC FirstCaribbean was \$421 million (US\$314 million).

### Other intangible assets and long-lived assets

As at October 31, 2016, we had other intangible assets with an indefinite life of \$142 million (2015: \$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 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 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, 2016, 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 \$1.4 billion as at October 31, 2016. 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, 2016, 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 continue to implement initiatives in support of Program Clarity.

As at October 31, 2016, the remaining provision relating to these restructuring charges was \$256 million. While this amount represents our best estimate as at October 31, 2016 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 "Financial Instruments: Recognition and Measurement" 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 re-state 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 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 functional groups, such as Information Technology 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 OCI (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 fair value option (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 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.

### 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.

The application of the ECL methodology to non-impaired financial instruments requires entities to recognize 12 months of expected credit losses from the date the financial instrument is first recognized (stage 1 loans), and to recognize lifetime expected credit losses if the credit risk on that financial instrument has increased significantly since initial recognition (stage 2 loans). 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. In subsequent reporting periods, if the credit risk of the financial instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then entities shall revert to recognizing 12 months of expected credit losses. In contrast, under the incurred loss methodology inherent in IAS 39, allowances are provided for non-impaired loans for losses that are incurred but not yet identified, while impairment losses are generally only recognized for AFS debt securities when objective evidence of impairment has been identified.

The ECL model under IFRS 9 also requires that lifetime expected credit losses be recognized for financial assets that are assessed as credit-impaired (stage 3 loans), which for loans is similar to the requirements of IAS 39 to recognize impaired loans at their estimated realizable value. This occurs when one or more events have occurred after the initial recognition of the loan and the loss event or events have a detrimental impact on the estimated future cash flows of that loan.

For our business and government portfolios, the individually assessed allowances for impaired loans recognized under IAS 39 will generally be replaced by stage 3 allowances under IFRS 9, while the collective allowances for non-impaired loans 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 loans 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.

We are currently building the application of the ECL methodology for our impacted portfolios, which includes building the processes and systems to determine when a significant increase in credit risk of a financial asset has occurred, and to measure both 12-month and lifetime credit losses in a manner that incorporates forward-looking information. Our design takes into account that interpretations concerning the application of ECL continue to evolve.

For the majority of our retail portfolios, we will determine significant increase in credit risk based on the loan's lifetime probability of default. For the majority of our business and government portfolios and FV-OCI debt securities, we will determine significant increase in credit risk based on our internal risk ratings. Both metrics will incorporate our assessment of the appropriate forward-looking macroeconomic factors.

We are currently building and testing the process to determine the forward-looking macroeconomic factors that will be used in our models. Our process will leverage our existing forecasting processes and will determine the forward-looking macroeconomic factors for multiple scenarios so that we can appropriately probability weight the expected losses we recognize on our balance sheet. The process will be overseen by a governance committee consisting of key internal stakeholders from Economics, Risk Management, and Finance.

Our design also leverages our 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, expected losses under IFRS 9 are for 12 months for stage 1 loans and lifetime for stage 2 and stage 3 loans, as compared with 12 months for AIRB portfolios under Basel. The negative impact from potential increases in our balance sheet allowances under IFRS 9 on CET1 capital could be partially mitigated by reductions in negative regulatory capital adjustments related to any shortfall of allowances to regulatory expected losses in the CET1 calculation. 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	Expected 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		Expected credit losses are discounted from the default date to the reporting date

In December 2015, the BCBS finalized "Guidance on credit risk and accounting for expected credit losses", which sets out supervisory guidance for banks relating to sound credit risk practices associated with implementing and applying an expected credit loss accounting framework, which includes the methodology in IFRS 9. In June 2016, OSFI issued guidance on "IFRS 9 Financial Instruments and Disclosures", which effectively requires the application of the BCBS guidance for Federally Regulated Entities. We are currently building and testing the application of the IFRS 9 ECL methodology to our impacted portfolios, which takes into account OSFI's and the BCBS' supervisory guidance.

In October 2016, the BCBS issued "Discussion Paper, Regulatory treatment of accounting provisions" for comment as it considers policy options for the longer-term regulatory treatment of accounting provisions given the change from an incurred loss to an expected credit loss accounting framework. The BCBS also issued "Consultative Document, Regulatory treatment of accounting provisions – interim approach and transitional arrangements", which proposes to retain, for an interim period, the current regulatory treatment of accounting provisions under both the standardized and IRB approaches for credit risk. The consultative document also issues for commentary three potential approaches for transitional capital relief, if any relief is ultimately to be provided.

### 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.

### Future accounting policy changes

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

## Regulatory developments

### Dodd-Frank Wall Street Reform and Consumer Protection Act

The Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") was enacted in the U.S. in July 2010. The Dodd-Frank Act contains many broad reforms impacting the financial services industry. These reforms impact every financial institution in the U.S. and many financial institutions that operate outside the U.S. Most aspects of the Dodd-Frank Act have become effective, while some portions are still subject to final rulemakings by U.S. government agencies, or the expiration of transition periods. CIBC is subject to a number of specific requirements, including, among other things: (i) mandatory clearing, trade reporting and registration of OTC derivative trading activities; (ii) heightened capital, liquidity and prudential standards, such as the enhanced prudential standards and early remediation requirements under Sections 165 and 166 of the Dodd-Frank Act; (iii) mandatory risk retention rules, which will become effective in December 2016, applicable to sponsors of asset-backed securities and securitizations; and (iv) restrictions on proprietary trading, private equity and hedge fund activities, commonly known as the Volcker Rule.

CIBC continues to devote the resources necessary to ensure that we implement the requirements in compliance with all applicable regulations under the Dodd-Frank Act. We continually monitor developments to prepare for rulemakings that have the potential to impact our operations in the U.S. and elsewhere. Although these reforms have increased our cost of regulatory compliance and have restricted our ability to engage in certain activities in the U.S. and elsewhere, we do not expect costs and restrictions associated with the new regulations to have a material impact on our financial results.

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

Under the initiative of the OECD, many countries have committed to automatic exchange of information relating to accounts held by tax residents of signatory countries, using a Common Reporting Standard (CRS). CRS was implemented in "early adopter" countries in January 2016, with other countries, including Canada agreeing to implementation in subsequent years, through the adoption of local legislation. Proposed legislation to implement the CRS in Canada was released by the Department of Finance on April 15, 2016. CIBC will meet all obligations imposed under the CRS, in accordance with local law, in all applicable jurisdictions in which it operates.

### Principles for Effective Risk Data Aggregation and Risk Reporting

In January 2013, the BCBS published "Principles for Effective Risk Data Aggregation and Risk Reporting". The Principles outline the BCBS' expectations to enhance risk data governance oversight and to improve risk data aggregation and reporting practices, thereby facilitating timely, consistent, and accurate decision making. It is expected that we will be subject to greater reporting scrutiny and may incur increased operating costs as a result of the Principles. We have an enterprise-wide Risk Data Aggregation initiative underway to be compliant with the Principles, which we expect to complete by the December 31, 2016 timeline, as required by OSFI.

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 Corporate Governance Committee (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<sup>(1)</sup>, 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<sup>(1)</sup> 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, 2016 (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, 2016, 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, 2016, 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 95 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, 2016 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		
			2016	2015	2014	2016	2015	2014	2016	2015	2014
<b>Domestic assets<sup>(1)</sup></b>											
Cash and deposits with banks			\$ 2,186	\$ 2,369	\$ 2,210	\$ 19	\$ 16	\$ 11	0.87 %	0.68 %	0.50 %
Securities	Trading		42,563	43,061	45,051	1,273	1,248	1,248	2.99	2.90	2.77
	AFS		13,510	6,231	9,232	167	98	162	1.24	1.57	1.75
	FVO		60	58	48	3	4	4	5.00	6.90	8.33
Securities borrowed or purchased under resale agreements			20,231	26,361	19,905	209	241	275	1.03	0.91	1.38
Loans	Residential mortgages		174,105	159,689	150,893	4,188	4,159	4,241	2.41	2.60	2.81
	Personal and credit card		47,537	46,234	45,289	3,260	3,224	3,183	6.86	6.97	7.03
	Business and government		40,812	36,343	30,839	1,346	1,244	1,171	3.30	3.42	3.80
Total loans			262,454	242,266	227,021	8,794	8,627	8,595	3.35	3.56	3.79
Other interest-bearing assets			1,067	578	443	8	10	10	0.75	1.73	2.26
Derivative instruments			14,326	14,504	9,189	—	—	—	—	—	—
Customers' liability under acceptances			12,720	10,256	10,013	—	—	—	—	—	—
Other non-interest-bearing assets			14,753	13,776	11,555	—	—	—	—	—	—
Total domestic assets			383,870	359,460	334,667	10,473	10,244	10,305	2.73	2.85	3.08
<b>Foreign assets<sup>(1)</sup></b>											
Cash and deposits with banks			30,745	23,473	13,274	137	60	14	0.45	0.26	0.11
Securities	Trading		5,993	4,006	1,681	112	39	38	1.87	0.97	2.26
	AFS		20,883	12,809	13,921	216	129	175	1.03	1.01	1.26
	FVO		206	208	232	3	6	1	1.46	2.88	0.43
Securities borrowed or purchased under resale agreements			19,386	11,407	10,469	120	69	45	0.62	0.60	0.43
Loans	Residential mortgages		2,426	2,324	2,146	131	132	124	5.40	5.68	5.78
	Personal and credit card		761	739	727	74	70	64	9.72	9.47	8.80
	Business and government		26,911	23,464	19,919	826	733	687	3.07	3.12	3.45
Total loans			30,098	26,527	22,792	1,031	935	875	3.43	3.52	3.84
Other interest-bearing assets			114	92	71	—	1	24	—	1.09	33.80
Derivative instruments			14,669	13,812	10,874	—	—	—	—	—	—
Other non-interest-bearing assets			3,176	3,530	3,500	—	—	—	—	—	—
Total foreign assets			125,270	95,864	76,814	1,619	1,239	1,172	1.29	1.29	1.53
<b>Total assets</b>			<b>\$ 509,140</b>	<b>\$ 455,324</b>	<b>\$ 411,481</b>	<b>\$ 12,092</b>	<b>\$ 11,483</b>	<b>\$ 11,477</b>	<b>2.37 %</b>	<b>2.52 %</b>	<b>2.79 %</b>
<b>Domestic liabilities<sup>(1)</sup></b>											
Deposits	Personal		\$ 134,225	\$ 125,982	\$ 120,339	\$ 858	\$ 1,032	\$ 1,129	0.64 %	0.82 %	0.94 %
	Business and government		120,602	106,439	99,318	1,560	1,080	1,271	1.29	1.01	1.28
	Bank		2,246	1,548	847	9	7	4	0.40	0.45	0.47
	Secured borrowings		38,720	38,758	43,525	547	581	717	1.41	1.50	1.65
Total deposits			295,793	272,727	264,029	2,974	2,700	3,121	1.01	0.99	1.18
Derivative instruments			15,297	15,461	8,788	—	—	—	—	—	—
Acceptances			12,719	10,256	10,013	—	—	—	—	—	—
Obligations related to securities sold short			10,875	10,724	13,134	197	221	314	1.81	2.06	2.39
Obligations related to securities lent or sold under repurchase agreements			8,575	9,743	8,191	96	90	109	1.12	0.92	1.33
Other liabilities			10,494	9,459	8,670	3	10	10	0.03	0.11	0.12
Subordinated indebtedness			2,912	4,138	3,974	133	179	176	4.57	4.33	4.43
Total domestic liabilities			356,665	332,508	316,799	3,403	3,200	3,730	0.95	0.96	1.18
<b>Foreign liabilities<sup>(1)</sup></b>											
Deposits	Personal		7,953	7,163	6,707	51	68	71	0.64	0.95	1.06
	Business and government		81,554	63,798	44,317	121	190	112	0.15	0.30	0.25
	Bank		13,771	10,519	6,995	69	31	31	0.50	0.29	0.44
	Secured borrowings		—	115	458	—	1	2	—	0.87	0.44
Total deposits			103,278	81,595	58,477	241	290	216	0.23	0.36	0.37
Derivative instruments			15,662	14,723	10,401	—	—	—	—	—	—
Obligations related to securities sold short			351	721	585	2	9	13	0.57	1.25	2.22
Obligations related to securities lent or sold under repurchase agreements			8,554	3,469	4,522	31	20	18	0.36	0.58	0.40
Other liabilities			1,916	1,911	1,640	45	47	39	2.35	2.46	2.38
Subordinated indebtedness			235	262	250	4	2	2	1.70	0.76	0.80
Total foreign liabilities			129,996	102,681	75,875	323	368	288	0.25	0.36	0.38
Total liabilities			486,661	435,189	392,674	3,726	3,568	4,018	0.77	0.82	1.02
Shareholders' equity			22,275	19,951	18,636	—	—	—	—	—	—
Non-controlling interests			204	184	171	—	—	—	—	—	—
<b>Total liabilities and equity</b>			<b>\$ 509,140</b>	<b>\$ 455,324</b>	<b>\$ 411,481</b>	<b>\$ 3,726</b>	<b>\$ 3,568</b>	<b>\$ 4,018</b>	<b>0.73 %</b>	<b>0.78 %</b>	<b>0.98 %</b>
<b>Net interest income and margin</b>						<b>\$ 8,366</b>	<b>\$ 7,915</b>	<b>\$ 7,459</b>	<b>1.64 %</b>	<b>1.74 %</b>	<b>1.81 %</b>
<b>Additional disclosures: Non-interest-bearing deposit liabilities</b>											
Domestic			\$ 40,843	\$ 37,202	\$ 34,888						
Foreign			\$ 5,605	\$ 4,844	\$ 4,070						

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

## Volume/rate analysis of changes in net interest income

\$ millions

		2016/2015			2015/2014		
		Increase (decrease) due to change in:			Increase (decrease) due to change in:		
		Average balance	Average rate	Total	Average balance	Average rate	Total
<b>Domestic assets<sup>(1)</sup></b>							
Cash and deposits with banks		\$ (1)	\$ 4	\$ 3	\$ 1	\$ 4	\$ 5
Securities	Trading	(14)	39	25	(55)	55	—
	AFS	114	(45)	69	(53)	(11)	(64)
	FVO	—	(1)	(1)	1	(1)	—
Securities borrowed or purchased under resale agreements		(56)	24	(32)	89	(123)	(34)
Loans	Residential mortgages	375	(346)	29	247	(329)	(82)
	Personal and credit card	91	(55)	36	66	(25)	41
	Business and government	153	(51)	102	209	(136)	73
Total loans		619	(452)	167	522	(490)	32
Other interest-bearing assets		8	(10)	(2)	3	(3)	—
Change in domestic interest income		670	(441)	229	508	(569)	(61)
<b>Foreign assets<sup>(1)</sup></b>							
Cash and deposits with banks		19	58	77	11	35	46
Securities	Trading	19	54	73	53	(52)	1
	AFS	81	6	87	(14)	(32)	(46)
	FVO	—	(3)	(3)	—	5	5
Securities borrowed or purchased under resale agreements		48	3	51	4	20	24
Loans	Residential mortgages	6	(7)	(1)	10	(2)	8
	Personal and credit card	2	2	4	1	5	6
	Business and government	108	(15)	93	122	(76)	46
Total loans		116	(20)	96	133	(73)	60
Other interest-bearing assets		—	(1)	(1)	7	(30)	(23)
Change in foreign interest income		283	97	380	194	(127)	67
<b>Total change in interest income</b>		<b>\$ 953</b>	<b>\$ (344)</b>	<b>\$ 609</b>	<b>\$ 702</b>	<b>\$ (696)</b>	<b>\$ 6</b>
<b>Domestic liabilities<sup>(1)</sup></b>							
Deposits	Personal	\$ 68	\$ (242)	\$ (174)	\$ 53	\$ (150)	\$ (97)
	Business and government	144	336	480	91	(282)	(191)
	Bank	3	(1)	2	3	—	3
	Secured borrowings	(1)	(33)	(34)	(79)	(57)	(136)
Total deposits		214	60	274	68	(489)	(421)
Obligations related to securities sold short		3	(27)	(24)	(58)	(35)	(93)
Obligations related to securities lent or sold under repurchase agreements		(11)	17	6	21	(40)	(19)
Other liabilities		1	(8)	(7)	1	(1)	—
Subordinated indebtedness		(53)	7	(46)	7	(4)	3
Change in domestic interest expense		154	49	203	39	(569)	(530)
<b>Foreign liabilities<sup>(1)</sup></b>							
Deposits	Personal	7	(24)	(17)	5	(8)	(3)
	Business and government	53	(122)	(69)	49	29	78
	Bank	10	28	38	16	(16)	—
	Secured borrowings	(1)	—	(1)	(1)	—	(1)
Total deposits		69	(118)	(49)	69	5	74
Obligations related to securities sold short		(5)	(2)	(7)	3	(7)	(4)
Obligations related to securities lent or sold under repurchase agreements		29	(18)	11	(4)	6	2
Other liabilities		—	(2)	(2)	6	2	8
Subordinated indebtedness		—	2	2	—	—	—
Change in foreign interest expense		93	(138)	(45)	74	6	80
<b>Total change in interest expense</b>		<b>\$ 247</b>	<b>\$ (89)</b>	<b>\$ 158</b>	<b>\$ 113</b>	<b>\$ (563)</b>	<b>\$ (450)</b>
<b>Change in total net interest income</b>		<b>\$ 706</b>	<b>\$ (255)</b>	<b>\$ 451</b>	<b>\$ 589</b>	<b>\$ (133)</b>	<b>\$ 456</b>

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

## Analysis of net loans and acceptances

\$ millions, as at October 31	Canada <sup>(1)</sup>					U.S. <sup>(1)</sup>				
	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012
Residential mortgages	\$ 184,610	\$ 166,616	\$ 155,198	\$ 148,664	\$ 147,841	\$ –	\$ –	\$ 1	\$ 1	\$ 1
Student	73	110	151	210	287	–	–	–	–	–
Personal	36,896	35,412	34,342	33,257	33,891	56	51	94	93	109
Credit card	11,755	11,279	11,078	14,097	14,418	36	37	40	32	33
Total net consumer loans	233,334	213,417	200,769	196,228	196,437	92	88	135	126	143
Non-residential mortgages	6,734	7,120	6,947	6,979	7,095	103	333	240	236	–
Financial institutions	4,831	4,137	2,640	2,356	2,384	2,100	667	659	403	435
Retail and wholesale	4,044	3,667	3,515	3,086	2,827	290	310	257	158	113
Business services	5,312	5,011	4,728	4,191	3,694	1,215	814	418	284	226
Manufacturing-capital goods	1,663	1,505	1,308	1,081	1,072	128	181	221	189	188
Manufacturing-consumer goods	2,663	2,626	2,329	1,914	1,736	28	22	14	36	62
Real estate and construction	11,684	8,644	7,201	5,794	4,956	8,554	7,206	6,394	5,611	4,156
Agriculture	5,364	4,828	4,263	3,933	3,689	44	50	6	1	1
Oil and gas	4,532	4,138	3,633	2,969	2,856	1,951	1,469	1,276	988	781
Mining	722	761	602	383	319	242	305	266	223	65
Forest products	465	566	470	434	426	4	11	41	35	44
Hardware and software	267	280	339	468	464	165	167	118	98	–
Telecommunications and cable	444	510	514	413	238	30	44	26	26	14
Publishing, printing, and broadcasting	333	244	208	290	356	–	–	5	–	–
Transportation	1,630	1,449	1,033	870	736	288	183	221	247	332
Utilities	1,663	1,621	1,282	1,170	1,082	1,237	845	804	816	492
Education, health and social services	2,826	2,128	2,017	1,956	1,933	–	–	–	–	25
Governments	728	541	578	613	727	–	–	–	–	–
Others	–	–	–	–	–	17	69	165	210	730
Collective allowance allocated to business and government loans	(215)	(218)	(192)	(192)	(211)	(58)	(50)	(43)	(28)	(38)
Total net business and government loans, including acceptances	55,690	49,558	43,415	38,708	36,379	16,338	12,626	11,088	9,533	7,626
Total net loans and acceptances	\$ 289,024	\$ 262,975	\$ 244,184	\$ 234,936	\$ 232,816	\$ 16,430	\$ 12,714	\$ 11,223	\$ 9,659	\$ 7,769

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

## Analysis of net loans and acceptances (continued)

\$ millions, as at October 31	Other <sup>(1)</sup>					Total				
	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012
Residential mortgages	\$ 2,467	\$ 2,406	\$ 2,118	\$ 2,113	\$ 2,143	\$ 187,077	\$ 169,022	\$ 157,317	\$ 150,778	\$ 149,985
Student	–	–	1	1	1	73	110	152	211	288
Personal	519	476	410	429	568	37,471	35,939	34,846	33,779	34,568
Credit card	155	150	125	126	119	11,946	11,466	11,243	14,255	14,570
Total net consumer loans	3,141	3,032	2,654	2,669	2,831	236,567	216,537	203,558	199,023	199,411
Non-residential mortgages	232	245	228	239	273	7,069	7,698	7,415	7,454	7,368
Financial institutions	1,723	3,291	2,155	1,065	1,099	8,654	8,095	5,454	3,824	3,918
Retail and wholesale	561	548	499	333	326	4,895	4,525	4,271	3,577	3,266
Business services	1,266	1,370	1,098	772	932	7,793	7,195	6,244	5,247	4,852
Manufacturing-capital goods	234	293	248	202	243	2,025	1,979	1,777	1,472	1,503
Manufacturing-consumer goods	114	119	88	249	225	2,805	2,767	2,431	2,199	2,023
Real estate and construction	1,391	1,124	890	777	791	21,629	16,974	14,485	12,182	9,903
Agriculture	24	40	37	40	65	5,432	4,918	4,306	3,974	3,755
Oil and gas	268	324	321	71	16	6,751	5,931	5,230	4,028	3,653
Mining	928	446	384	537	280	1,892	1,512	1,252	1,143	664
Forest products	–	–	38	30	29	469	577	549	499	499
Hardware and software	–	12	14	22	22	432	459	471	588	486
Telecommunications and cable	359	388	162	234	148	833	942	702	673	400
Publishing, printing, and broadcasting	87	79	89	4	37	420	323	302	294	393
Transportation	1,326	899	803	893	430	3,244	2,531	2,057	2,010	1,498
Utilities	532	785	631	318	467	3,432	3,251	2,717	2,304	2,041
Education, health and social services	32	32	26	24	23	2,858	2,160	2,043	1,980	1,981
Governments	1,874	1,611	1,079	943	922	2,602	2,152	1,657	1,556	1,649
Others	300	711	1,431	2,403	3,011	317	780	1,596	2,613	3,741
Collective allowance allocated to business and government loans	(65)	(57)	(42)	(40)	(23)	(338)	(325)	(277)	(260)	(272)
Total net business and government loans, including acceptances	11,186	12,260	10,179	9,116	9,316	83,214	74,444	64,682	57,357	53,321
Total net loans and acceptances	\$ 14,327	\$ 15,292	\$ 12,833	\$ 11,785	\$ 12,147	\$ 319,781	\$ 290,981	\$ 268,240	\$ 256,380	\$ 252,732

(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

	2016	2015	2014	2013	2012
Balance at beginning of year	\$ 1,762	\$ 1,736	\$ 1,758	\$ 1,916	\$ 1,851
Provision for credit losses	1,051	771	937	1,121	1,291
Write-offs					
Domestic <sup>(1)</sup>					
Residential mortgages	13	14	19	15	18
Student	—	1	3	3	6
Personal and credit card	842	781	857	1,030	1,118
Other business and government	116	42	63	137	93
Foreign <sup>(1)</sup>					
Residential mortgages	21	18	8	9	2
Personal and credit card	18	16	16	9	13
Other business and government	143	132	92	245	98
Total write-offs	1,153	1,004	1,058	1,448	1,348
Recoveries					
Domestic <sup>(1)</sup>					
Personal and credit card	163	171	177	172	158
Other business and government	8	8	11	6	8
Foreign <sup>(1)</sup>					
Personal and credit card	6	5	2	3	3
Other business and government	6	2	2	3	1
Total recoveries	183	186	192	184	170
Net write-offs	970	818	866	1,264	1,178
Interest income on impaired loans	(29)	(23)	(30)	(37)	(47)
Foreign exchange and other	(1)	96	(63)	22	(1)
Balance at end of year	\$ 1,813	\$ 1,762	\$ 1,736	\$ 1,758	\$ 1,916
Comprises:					
Loans	\$ 1,691	\$ 1,670	\$ 1,660	\$ 1,698	\$ 1,860
Undrawn credit facilities	122	92	76	60	56
Ratio of net write-offs during the year to average loans outstanding during the year	0.33 %	0.30 %	0.35 %	0.52 %	0.49 %

(1) 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

\$ millions, as at October 31	Allowance for credit losses <sup>(1)</sup>					Allowance as a % of gross impaired loans				
	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012
Domestic <sup>(2)</sup>										
Residential mortgages	\$ 20	\$ 21	\$ 22	\$ 24	\$ 18	8.0 %	9.3 %	10.2 %	11.4 %	8.0 %
Personal loans	105	99	96	105	159	85.4	91.7	80.0	77.8	84.6
Business and government	63	77	38	61	97	30.9	42.8	60.3	63.5	47.3
Total domestic	188	197	156	190	274	32.5	38.4	39.1	43.1	44.3
Foreign <sup>(2)</sup>										
Residential mortgages	148	167	146	65	27	56.3	48.0	45.9	23.8	11.0
Personal loans	40	46	43	30	25	57.1	58.2	53.8	34.9	31.6
Business and government	196	236	299	262	395	26.2	49.3	46.9	35.1	42.8
Total foreign	384	449	488	357	447	35.6	49.6	47.1	32.3	35.8
Total allowance	\$ 572	\$ 646	\$ 644	\$ 547	\$ 721	34.5 %	45.5 %	44.9 %	35.4 %	38.6 %

(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.

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

\$ millions, as at October 31	Allowance for credit losses <sup>(1)</sup>					Allowance as a % of net loans and acceptances				
	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012
Domestic <sup>(2)</sup>										
Residential mortgages	\$ 30	\$ 26	\$ 21	\$ 63	\$ 19	– %	– %	– %	– %	– %
Personal loans	345	316	315	313	278	0.9	0.9	0.9	0.9	0.8
Credit cards	383	334	384	512	582	3.3	3.0	3.5	3.6	4.0
Business and government	205	208	183	179	186	0.4	0.4	0.4	0.5	0.5
Total domestic	963	884	903	1,067	1,065	0.3	0.3	0.4	0.5	0.5
Foreign <sup>(2)</sup>										
Residential mortgages	23	22	20	8	7	0.9	0.9	0.9	0.4	0.3
Personal loans	7	7	6	3	5	1.2	1.3	1.2	0.6	0.7
Credit cards	3	4	2	5	1	1.6	2.1	1.2	3.2	0.7
Business and government	123	107	85	68	61	0.4	0.4	0.4	0.4	0.4
Total foreign	156	140	113	84	74	0.5	0.5	0.5	0.4	0.4
Total allowance	\$ 1,119	\$ 1,024	\$ 1,016	\$ 1,151	\$ 1,139	0.3 %	0.4 %	0.4 %	0.4 %	0.5 %

(1) Excludes allowance on undrawn credit facilities.

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

## Net loans and acceptances by geographic location <sup>(1)</sup>

\$ millions, as at October 31	2016	2015	2014	2013	2012
Canada					
Atlantic provinces	\$ 14,006	\$ 13,598	\$ 13,307	\$ 13,124	\$ 13,228
Quebec	25,471	23,093	21,802	21,257	20,591
Ontario	139,254	125,584	114,940	109,390	108,861
Prairie provinces	13,341	12,877	12,136	11,829	11,440
Alberta, Northwest Territories and Nunavut	43,308	41,197	38,859	37,953	38,300
British Columbia and Yukon	54,567	47,478	44,012	42,421	41,435
Collective allowance allocated to Canada <sup>(2)</sup>	(923)	(852)	(872)	(1,038)	(1,039)
Total Canada	289,024	262,975	244,184	234,936	232,816
U.S.	16,430	12,714	11,223	9,659	7,769
Other countries	14,327	15,292	12,833	11,785	12,147
Total net loans and acceptances	\$ 319,781	\$ 290,981	\$ 268,240	\$ 256,380	\$ 252,732

(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.

## Net impaired loans

	Canada <sup>(1)</sup>					U.S. <sup>(1)</sup>				
\$ millions, as at October 31	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012
<b>Gross impaired loans</b>										
Residential mortgages	\$ 251	\$ 225	\$ 216	\$ 210	\$ 226	\$ –	\$ –	\$ –	\$ –	\$ –
Student	3	5	7	9	12	–	–	–	–	–
Personal	120	103	113	126	176	–	–	1	4	–
Total gross impaired consumer loans	374	333	336	345	414	–	–	1	4	–
Non-residential mortgages	4	4	4	1	–	–	–	–	–	–
Financial institutions	1	–	1	–	1	–	–	–	–	–
Retail, wholesale and business services	23	26	31	54	38	5	–	–	34	58
Manufacturing – consumer and capital goods	19	8	4	6	11	–	–	–	–	3
Real estate and construction	23	9	10	9	23	62	94	135	159	183
Agriculture	4	1	2	4	7	–	–	–	–	–
Resource-based industries	121	126	4	13	55	248	1	–	–	–
Telecommunications, media and technology	4	2	4	6	62	–	–	–	–	–
Transportation	1	1	1	1	6	–	–	–	38	90
Utilities	–	–	–	–	–	–	10	20	–	–
Other	4	3	2	2	2	–	–	–	–	–
Total gross impaired – business and government loans	204	180	63	96	205	315	105	155	231	334
Total gross impaired loans	578	513	399	441	619	315	105	156	235	334
Other past due loans <sup>(2)</sup>	362	337	342	378	401	–	–	–	–	11
Total gross impaired and other past due loans	\$ 940	\$ 850	\$ 741	\$ 819	\$ 1,020	\$ 315	\$ 105	\$ 156	\$ 235	\$ 345
<b>Allowance for credit losses <sup>(3)</sup></b>										
Residential mortgages	\$ 20	\$ 21	\$ 22	\$ 24	\$ 18	\$ –	\$ –	\$ –	\$ –	\$ –
Student	–	–	–	–	–	–	–	–	–	–
Personal	105	99	96	105	159	–	–	1	1	–
Total allowance – consumer loans	125	120	118	129	177	–	–	1	1	–
Non-residential mortgages	2	1	1	–	–	–	–	–	–	–
Financial institutions	–	–	–	–	–	–	–	–	–	–
Retail, wholesale and business services	16	19	20	31	26	4	–	–	20	38
Manufacturing – consumer and capital goods	7	6	3	6	8	–	–	–	–	3
Real estate and construction	10	7	7	6	10	20	27	47	36	90
Agriculture	1	–	–	1	4	–	–	–	–	–
Resource-based industries	21	39	2	9	25	8	–	–	–	–
Telecommunications, media and technology	3	2	3	5	16	–	–	–	–	–
Transportation	1	1	1	1	6	–	–	–	2	55
Utilities	–	–	–	–	–	–	6	13	–	–
Other	2	2	1	2	2	–	–	–	–	–
Total allowance – business and government loans	63	77	38	61	97	32	33	60	58	186
Total allowance	\$ 188	\$ 197	\$ 156	\$ 190	\$ 274	\$ 32	\$ 33	\$ 61	\$ 59	\$ 186
<b>Net impaired loans</b>										
Residential mortgages	\$ 231	\$ 204	\$ 194	\$ 186	\$ 208	\$ –	\$ –	\$ –	\$ –	\$ –
Student	3	5	7	9	12	–	–	–	–	–
Personal	15	4	17	21	17	–	–	–	3	–
Total net impaired consumer loans	249	213	218	216	237	–	–	–	3	–
Non-residential mortgages	2	3	3	1	–	–	–	–	–	–
Financial institutions	1	–	1	–	1	–	–	–	–	–
Retail, wholesale and business services	7	7	11	23	12	1	–	–	14	20
Manufacturing – consumer and capital goods	12	2	1	–	3	–	–	–	–	–
Real estate and construction	13	2	3	3	13	42	67	88	123	93
Agriculture	3	1	2	3	3	–	–	–	–	–
Resource-based industries	100	87	2	4	30	240	1	–	–	–
Telecommunications, media and technology	1	–	1	1	46	–	–	–	–	–
Transportation	–	–	–	–	–	–	–	–	36	35
Utilities	–	–	–	–	–	–	4	7	–	–
Other	2	1	1	–	–	–	–	–	–	–
Total net impaired – business and government loans	141	103	25	35	108	283	72	95	173	148
Total net impaired loans	\$ 390	\$ 316	\$ 243	\$ 251	\$ 345	\$ 283	\$ 72	\$ 95	\$ 176	\$ 148

(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.

## Net impaired loans (continued)

\$ millions, as at October 31	Other <sup>(1)</sup>					Total				
	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012
<b>Gross impaired loans</b>										
Residential mortgages	\$ 263	\$ 348	\$ 318	\$ 273	\$ 246	\$ 514	\$ 573	\$ 534	\$ 483	\$ 472
Student	—	—	—	—	—	3	5	7	9	12
Personal	70	79	79	82	79	190	182	193	212	255
Total gross impaired consumer loans	333	427	397	355	325	707	760	734	704	739
Non-residential mortgages	17	34	60	85	101	21	38	64	86	101
Financial institutions	3	5	5	—	1	4	5	6	—	2
Retail, wholesale and business services	94	141	168	174	191	122	167	199	262	287
Manufacturing – consumer and capital goods	210	47	44	52	54	229	55	48	58	68
Real estate and construction	104	139	184	179	210	189	242	329	347	416
Agriculture	1	3	6	11	12	5	4	8	15	19
Resource-based industries	—	2	1	1	1	369	129	5	14	56
Telecommunications, media and technology	—	—	5	5	9	4	2	9	11	71
Transportation	2	2	8	7	8	3	3	9	46	104
Utilities	—	1	1	1	1	—	11	21	1	1
Other	1	—	—	1	1	5	3	2	3	3
Total gross impaired – business and government loans	432	374	482	516	589	951	659	700	843	1,128
Total gross impaired loans	765	801	879	871	914	1,658	1,419	1,434	1,547	1,867
Other past due loans <sup>(2)</sup>	3	3	8	7	7	365	340	350	385	419
Total gross impaired and other past due loans	\$ 768	\$ 804	\$ 887	\$ 878	\$ 921	\$ 2,023	\$ 1,759	\$ 1,784	\$ 1,932	\$ 2,286
<b>Allowance for credit losses <sup>(3)</sup></b>										
Residential mortgages	\$ 148	\$ 167	\$ 146	\$ 65	\$ 27	\$ 168	\$ 188	\$ 168	\$ 89	\$ 45
Student	—	—	—	—	—	—	—	—	—	—
Personal	40	46	42	29	25	145	145	139	135	184
Total allowance – consumer loans	188	213	188	94	52	313	333	307	224	229
Non-residential mortgages	12	17	31	32	24	14	18	32	32	24
Financial institutions	2	3	3	—	1	2	3	3	—	1
Retail, wholesale and business services	48	65	67	60	63	68	84	87	111	127
Manufacturing – consumer and capital goods	45	43	42	41	37	52	49	45	47	48
Real estate and construction	54	68	91	62	70	84	102	145	104	170
Agriculture	1	3	4	5	3	2	3	4	6	7
Resource-based industries	—	1	—	—	—	29	40	2	9	25
Telecommunications, media and technology	—	—	—	1	9	3	2	3	6	25
Transportation	2	2	—	2	1	3	3	1	5	62
Utilities	—	1	1	1	1	—	7	14	1	1
Other	—	—	—	—	—	2	2	1	2	2
Total allowance – business and government loans	164	203	239	204	209	259	313	337	323	492
Total allowance	\$ 352	\$ 416	\$ 427	\$ 298	\$ 261	\$ 572	\$ 646	\$ 644	\$ 547	\$ 721
<b>Net impaired loans</b>										
Residential mortgages	\$ 115	\$ 181	\$ 172	\$ 208	\$ 219	\$ 346	\$ 385	\$ 366	\$ 394	\$ 427
Student	—	—	—	—	—	3	5	7	9	12
Personal	30	33	37	53	54	45	37	54	77	71
Total net impaired consumer loans	145	214	209	261	273	394	427	427	480	510
Non-residential mortgages	5	17	29	53	77	7	20	32	54	77
Financial institutions	1	2	2	—	—	2	2	3	—	1
Retail, wholesale and business services	46	76	101	114	128	54	83	112	151	160
Manufacturing – consumer and capital goods	165	4	2	11	17	177	6	3	11	20
Real estate and construction	50	71	93	117	140	105	140	184	243	246
Agriculture	—	—	2	6	9	3	1	4	9	12
Resource-based industries	—	1	1	1	1	340	89	3	5	31
Telecommunications, media and technology	—	—	5	4	—	1	—	6	5	46
Transportation	—	—	8	5	7	—	—	8	41	42
Utilities	—	—	—	—	—	—	4	7	—	—
Other	1	—	—	1	1	3	1	1	1	1
Total net impaired – business and government loans	268	171	243	312	380	692	346	363	520	636
Total net impaired loans	\$ 413	\$ 385	\$ 452	\$ 573	\$ 653	\$ 1,086	\$ 773	\$ 790	\$ 1,000	\$ 1,146

(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			Interest			Rate		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
<b>Deposits in domestic bank offices <sup>(1)</sup></b>									
Payable on demand									
Personal	\$ 9,965	\$ 9,252	\$ 8,490	\$ 12	\$ 14	\$ 15	0.12 %	0.15 %	0.18 %
Business and government	37,572	33,735	30,043	138	121	107	0.37	0.36	0.36
Bank	2,943	2,083	1,780	—	2	6	—	0.10	0.34
Payable after notice									
Personal	87,057	80,328	72,928	363	454	461	0.42	0.57	0.63
Business and government	28,873	25,128	21,606	240	243	242	0.83	0.97	1.12
Bank	174	97	19	2	1	—	1.15	1.03	—
Payable on a fixed date									
Personal	40,414	38,996	41,028	505	589	673	1.25	1.51	1.64
Business and government	58,618	50,604	50,060	845	749	928	1.44	1.48	1.85
Bank	1,816	937	427	10	5	4	0.55	0.53	0.94
Secured borrowings	38,720	38,758	43,525	547	581	717	1.41	1.50	1.65
Total domestic	306,152	279,918	269,906	2,662	2,759	3,153	0.87	0.99	1.17
<b>Deposits in foreign bank offices</b>									
Payable on demand									
Personal	818	701	567	1	3	3	0.12	0.43	0.53
Business and government	4,261	3,801	3,089	3	4	3	0.07	0.11	0.10
Bank	3	6	6	—	—	1	—	—	16.67
Payable after notice									
Personal	2,551	2,369	2,040	20	33	38	0.78	1.39	1.86
Business and government	801	766	673	1	1	1	0.12	0.13	0.15
Payable on a fixed date									
Personal	1,373	1,499	1,993	8	7	10	0.58	0.47	0.50
Business and government	72,031	56,203	38,164	454	152	102	0.63	0.27	0.27
Bank	11,081	8,944	5,610	66	30	24	0.60	0.34	0.43
Secured borrowings	—	115	458	—	1	2	—	0.87	0.44
Total foreign	92,919	74,404	52,600	553	231	184	0.60	0.31	0.35
Total deposits	\$ 399,071	\$ 354,322	\$ 322,506	\$ 3,215	\$ 2,990	\$ 3,337	0.81 %	0.84 %	1.03 %

(1) Deposits by foreign depositors in our domestic bank offices amounted to \$10.6 billion (2015: \$7.4 billion; 2014: \$6.0 billion).

## Short-term borrowings

\$ millions, as at or for the year ended October 31	2016	2015	2014
<b>Amounts outstanding at end of year</b>			
Obligations related to securities sold short	\$ 10,338	\$ 9,806	\$ 12,999
Obligations related to securities lent or sold under repurchase agreements	14,212	10,343	10,765
Total short-term borrowings	\$ 24,550	\$ 20,149	\$ 23,764
<b>Obligations related to securities sold short</b>			
Average balance	\$ 11,226	\$ 11,445	\$ 13,719
Maximum month-end balance	13,029	13,248	14,833
Average interest rate	1.77 %	2.01 %	2.38 %
<b>Obligations related to securities lent or sold under repurchase agreements</b>			
Average balance	\$ 17,129	\$ 13,212	\$ 12,713
Maximum month-end balance	24,513	14,766	14,652
Average interest rate	0.74 %	0.83 %	1.00 %

## Fees paid to the shareholders' auditors

\$ millions, for the year ended October 31	2016	2015	2014
Audit fees <sup>(1)</sup>	\$ 16.4	\$ 15.9	\$ 14.2
Audit-related fees <sup>(2)</sup>	2.2	3.2	2.0
Tax fees <sup>(3)</sup>	0.3	0.4	0.1
All other fees <sup>(4)</sup>	—	0.3	0.1
Total	\$ 18.9	\$ 19.8	\$ 16.4

(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.