MANAGEMENT'S DISCUSSION AND ANALYSIS

Management's Discussion and Analysis (MD&A) is provided to enable a reader to assess our results of operations and financial condition for the fiscal year ended October 31, 2012, compared to the preceding two years. This MD&A should be read in conjunction with our 2012 Annual Consolidated Financial Statements and related notes and is dated November 28, 2012. All amounts are in Canadian dollars, unless otherwise specified, and are based on financial statements prepared in accordance with International Financial Reporting Standards (IFRS), unless otherwise noted.

Additional information about us, including our 2012 Annual Information Form, is available free of charge on our website at rbc.com/investorrelations, on the Canadian Securities Administrators' website at sedar.com and on the EDGAR section of the U.S. Securities and Exchange Commission's (SEC) website at sec.gov.

See our Glossary for definitions of terms used throughout this document

Caution regarding forward-looking statements

From time to time, we make written or oral forward-looking statements within the meaning of certain securities laws, including the "safe harbour" provisions of the *United States Private Securities Litigation Reform Act of 1995* and any applicable Canadian securities legislation. We may make forward-looking statements in this 2012 Annual Report, in other filings with Canadian regulators or the SEC, in other reports to shareholders and in other communications. Forward-looking statements in this document include, but are not limited to, statements relating to our financial performance objectives, vision and strategic goals, the economic, market and regulatory review and outlook for Canadian, U.S., European and global economies, the outlook and priorities for each of our business segments, and the risk environment including our liquidity and funding management. The forward-looking information contained in this document is presented for the purpose of assisting the holders of our securities and financial analysts in understanding our financial position and results of operations as at and for the periods ended on the dates presented and our financial performance objectives, vision and strategic goals, and may not be appropriate for other purposes. Forward-looking statements are typically identified by words such as "believe", "expect", "foresee", "forecast", "anticipate", "intend", "estimate", "goal", "plan" and "project" and similar expressions of future or conditional verbs such as "will", "may", "should", "could" or "would".

By their very nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, which give rise to the possibility that our predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that our assumptions may not be correct and that our financial performance objectives, vision and strategic goals will not be achieved. We caution readers not to place undue reliance on these statements as a number of risk factors could cause our actual results to differ materially from the expectations expressed in such forward-looking statements. These factors – many of which are beyond our control and the effects of which can be difficult to predict – include: credit, market, liquidity and funding, operational, legal and regulatory compliance, insurance, reputation and strategic risks and other risks discussed in the Risk management and Overview of other risks sections; the impact of changes in laws and regulations, including relating to the *Dodd-Frank Wall Street Reform and Consumer Protection Act* and the regulations issued and to be issued thereunder, the Basel Committee on Banking Supervision's global standards for capital and liquidity reform, over-the-counter derivatives reform, the payments system in Canada, consumer protection measures and regulatory reforms in the U.K. and Europe; general business and economic market conditions in Canada, the United States and certain other countries in which we operate, including the effects of the European sovereign debt crisis, and the high levels of Canadian household debt; cybersecurity; the effects of changes in government fiscal, monetary and other policies; the effects of competition in the markets in which we operate; our ability to attract and retain employees; the accuracy and completeness of information concerning our clients and counterparties; judicial or regulatory judgments and legal proceedings; development and integration of our distribution networks; and the impact of environmental issues.

We caution that the foregoing list of risk factors is not exhaustive and other factors could also adversely affect our results. When relying on our forward-looking statements to make decisions with respect to us, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Material economic assumptions underlying the forward looking statements contained in this 2012 Annual Report are set out in the Overview and outlook section and for each business segment under the heading Outlook and priorities. Except as required by law, we do not undertake to update any forward-looking statement, whether written or oral, that may be made from time to time by us or on our behalf.

Additional information about these and other factors can be found in the Risk management and Overview of other risks sections.

Information contained in or otherwise accessible through the websites mentioned does not form part of this report. All references in this report to websites are inactive textual references and are for your information only.

Selected financial and other highlights — Table 1

(Millions of Canadian dollars, except per share, number of and percentage amounts)	IFRS 2012	IFRS 2011	Canadian GAAP 2010	2012 vs. 2011 Increase (decrease)	
Continuing operations					
Total revenue	$ **29,772**	$ 27,638	$ 26,082	$ **2,134**	**7.7%**
Provision for credit losses (PCL)	**1,301**	1,133	1,240	**168**	**14.8%**
Insurance policyholder benefits, claims and acquisition expense (PBCAE)	**3,621**	3,358	3,546	**263**	**7.8%**
Non-interest expense	**15,160**	14,167	13,469	**993**	**7.0%**
Net income before income taxes	**9,690**	8,980	7,827	**710**	**7.9%**
Income from continuing operations	**7,590**	6,970	5,732	**620**	**8.9%**
Net loss from discontinued operations	**(51)**	(526)	(509)	**475**	**n.m.**
Net income	$ **7,539**	$ 6,444	$ 5,223	$ **1,095**	**17.0%**
Segments – net income from continuing operations					
Personal & Commercial Banking	$ **4,088**	$ 3,740	$ 3,099	$ **348**	**9.3%**
Wealth Management	**763**	811	669	**(48)**	**(5.9)%**
Insurance	**714**	600	491	**114**	**19.0%**
Investor & Treasury Services	**85**	230	222	**(145)**	**(63.0)%**
Capital Markets	**1,581**	1,292	1,462	**289**	**22.4%**
Corporate Support	**359**	297	(211)	**62**	**20.9%**
Net income from continuing operations	$ **7,590**	$ 6,970	$ 5,732	$ **620**	**8.9%**
Selected information					
Earnings per share (EPS) – basic	$ **4.98**	$ 4.25	$ 3.49	$ **0.73**	**17.2%**
– diluted	**4.93**	4.19	3.46	**0.74**	**17.7%**
Return on common equity (ROE) (1), (2)	**19.3%**	18.7%	14.9%	**n.m.**	**60 bps**
Selected information from continuing operations					
EPS – basic	$ **5.01**	$ 4.62	$ 3.85	$ **0.39**	**8.4%**
– diluted	**4.96**	4.55	3.82	**0.41**	**9.0%**
ROE (1), (2)	**19.5%**	20.3%	16.5%	**n.m.**	**(80)bps**
PCL on impaired loans as a % of average net loans and acceptances	**.35%**	.33%	.40%	**n.m.**	**2 bps**
Gross impaired loans (GIL) as a % of loans and acceptances	**.58%**	.65%	.95%	**n.m.**	**(7)bps**
Capital ratios and multiples (3)					
Tier 1 capital ratio	**13.1%**	13.3%	13.0%	**n.m.**	**(20)bps**
Total capital ratio	**15.1%**	15.3%	14.4%	**n.m.**	**(20)bps**
Assets-to-capital multiple	**16.7 X**	16.1X	16.5X	**n.m.**	**n.m.**
Tier 1 common ratio (2)	**10.5%**	10.6%	9.8%	**n.m.**	**(10)bps**
Selected balance sheet and other information					
Total assets	$ **825,100**	$ 793,833	$ 726,206	$ **31,267**	**3.9%**
Securities	**161,611**	167,022	183,519	**(5,411)**	**(3.2)%**
Loans (net of allowance for loan losses)	**378,244**	347,530	273,006	**30,714**	**8.8%**
Derivative related assets	**91,293**	99,650	106,155	**(8,357)**	**(8.4)%**
Deposits	**508,219**	479,102	414,561	**29,117**	**6.1%**
Common equity	**39,453**	34,889	34,140	**4,564**	**13.1%**
Average common equity (1)	**37,150**	32,600	33,250	**4,550**	**14.0%**
Risk-weighted assets (RWA) (3)	**280,609**	267,780	260,456	**12,829**	**4.8%**
Assets under management (AUM)	**343,000**	308,700	264,700	**34,300**	**11.1%**
Assets under administration (AUA) – RBC (4)	**764,100**	699,800	683,800	**64,300**	**9.2%**
– RBC Investor Services (5)	**2,886,900**	2,744,400	2,779,500	**142,500**	**5.2%**
Common share information					
Shares outstanding (000s) – average basic	**1,442,167**	1,430,722	1,420,719	**11,445**	**0.8%**
– average diluted	**1,468,287**	1,471,493	1,433,754	**(3,206)**	**(0.2)%**
– end of period	**1,445,303**	1,438,376	1,424,922	**6,927**	**0.5%**
Dividends declared per share	$ **2.28**	$ 2.08	$ 2.00	$ **0.20**	**9.6%**
Dividend yield (6)	**4.5%**	3.9%	3.6%	**n.m.**	**60 bps**
Common share price (RY on TSX)	$ **56.94**	$ 48.62	$ 54.39	$ **8.32**	**17.1%**
Market capitalization (TSX)	**82,296**	69,934	77,502	**12,362**	**17.7%**
Business information from continuing operations (number of)					
Employees (full-time equivalent) (FTE)	**74,377**	68,480	67,147	**5,897**	**8.6%**
Bank branches	**1,361**	1,338	1,336	**23**	**1.7%**
Automated teller machines (ATMs)	**5,065**	4,626	4,557	**439**	**9.5%**
Period average US$ equivalent of C$1.00 (7)	$ **.997**	$ 1.015	$ .959	$ **(.018)**	**(1.8)%**
Period-end US$ equivalent of C$1.00	$ **1.001**	$ 1.003	$ .980	$ **(.002)**	**(0.2)%**

(1) Average amounts are calculated using methods intended to approximate the average of the daily balances for the period. This includes ROE and Average common equity. For further details, refer to the How we measure and report our business segments section.
(2) These measures may not have a standardized meaning under generally accepted accounting principles (GAAP) and may not be comparable to similar measures disclosed by other financial institutions. For further details, refer to the How we measure and report our business segments section and the Key performance and non-GAAP measures section.
(3) Capital ratios and multiples for 2010 and 2011 comparative amounts in the MD&A were determined under Canadian GAAP.
(4) RBC AUA includes $38.4 billion (2011 – $36.0 billion, 2010 – $33.5 billion) of securitized mortgages and credit card loans.
(5) RBC Investor Services, formerly RBC Dexia, AUA represented the total AUA of the entity, of which we had a 50% ownership interest prior to July 27, 2012.
(6) Defined as dividends per common share divided by the average of the high and low share price in the relevant period.
(7) Average amounts are calculated using month-end spot rates for the period.

About Royal Bank of Canada

Royal Bank of Canada (RY on TSX and NYSE) and its subsidiaries operate under the master brand name RBC. We are Canada's largest bank as measured by assets and market capitalization, and among the largest banks in the world, based on market capitalization. We are one of North America's leading diversified financial services companies, and provide personal and commercial banking, wealth management services, insurance, investor services and wholesale banking on a global basis. We employ approximately 80,000 full- and part-time employees who serve more than 15 million personal, business, public sector and institutional clients through offices in Canada, the U.S. and 49 other countries. For more information, please visit rbc.com.

Effective October 31, 2012, certain business segments were strategically realigned to better serve and grow our global institutional client base and to leverage our domestic banking expertise across our international operations. We eliminated the International Banking segment and created a new Investor & Treasury Services segment which includes RBC Investor Services, formerly a business under International Banking, and we moved correspondent banking and treasury services from Capital Markets into this new segment. Concurrently, we created a Personal & Commercial Banking segment which includes the former Canadian Banking segment and expanded it to include our banking businesses in the Caribbean and the U.S. From a reporting perspective there were no changes to our Wealth Management or Insurance segments. Our business segments are described below.

Personal & Commercial Banking comprises our personal and business banking operations, as well as certain investment businesses in Canada, the Caribbean and the U.S.

Wealth Management serves affluent, high net worth and ultra high net worth clients in Canada, U.S., U.K., Europe, and Emerging Markets with a comprehensive suite of investment, trust, banking, credit and other wealth management solutions. We also provide asset management products and services directly to institutional and individual clients as well as through RBC distribution channels and third-party distributors.

Insurance offers insurance products and services through our proprietary distribution channels, comprised of the field sales force which includes retail insurance branches, our field sales representatives, call centers and online, as well as through independent insurance advisors and travel agencies in Canada. Outside North America, we operate in reinsurance markets globally.

Investor & Treasury Services serves the needs of institutional investing clients and provides custodial, advisory, financing and other services for clients to safeguard assets, maximize liquidity and manage risk in multiple jurisdictions around the world. We also provide short-term funding for the enterprise.

Capital Markets comprises the majority of our global wholesale banking businesses providing public and private companies, institutional investors, governments and central banks with a wide range of products and services. In North America, we offer a full suite of products and services which include corporate and investment banking, equity and debt origination and distribution, and structuring and trading. Outside North America, we offer a diversified set of capabilities in our key sectors of expertise such as energy, mining and infrastructure.

Our business segments are supported by Corporate Support, which consists of Technology & Operations and Functions. Technology & Operations provides the technological and operational foundation required to effectively deliver products and services to our clients, while Functions includes our finance, human resources, risk management, corporate treasury, internal audit and other functional groups.

ROYAL BANK OF CANADA

Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets
○ Canadian Banking ○ Caribbean & U.S. Banking	○ Canadian Wealth Management ○ U.S. & International Wealth Management ○ Global Asset Management	○ Canadian Insurance ○ International & Other Insurance		○ Global Markets ○ Corporate and Investment Banking ○ Other

Corporate Support	
○ Technology & Operations	○ Functions

Vision and strategic goals

Our business strategies and actions are guided by our vision of **"Always earning the right to be our clients' first choice."** Our strategic goals are:

- In Canada, to be the undisputed leader in financial services;
- Globally, to be a leading provider of capital markets and wealth management solutions; and
- In targeted markets, to be a leading provider of select financial services complementary to our core strengths.

For our progress in 2012 against these goals, refer to the Business segment results section.

Overview and outlook

Economic and market review and outlook – data as at November 28, 2012

Canada

The Canadian economy is estimated to grow at 2.2% during calendar 2012, down from our estimate of 2.5% as at December 1, 2011. Economic growth continues to be driven by moderate consumer spending, as labour markets stabilized, and solid business investment supported by the low interest rate environment. Housing market activity is moderating from recent elevated levels. Household debt-to-income ratios remain high causing concerns about the ability to manage the debt if interest rates were to increase. Although the Canadian economy continues to grow at a moderate pace, the Bank of Canada (BoC) maintained the overnight rate at 1.0% reflecting concern about ongoing global economic uncertainty throughout the year and the related softening of global demand.

In calendar 2013, the Canadian economy is expected to grow by 2.4%, mainly driven by consumer spending, business investment, and improved net exports. However, given the continued global uncertainty, the BoC is expected to maintain the overnight rate at 1.0% until global factors restraining the Canadian economy ease. Modest and gradual withdrawal of the BoC stimulus measures is expected to begin in the second half of 2013.

U.S.
The U.S. economy is estimated to grow at 2.2% during calendar 2012, down from our estimate of 2.5% as at December 1, 2011, largely reflecting moderate consumer spending and business investment. An improvement in the housing market is also providing some lift to growth in 2012. Weaker growth in the second calendar quarter of the year reflected heightened uncertainty about the domestic fiscal outlook and U.S. election, as well as increased worries about the impact of slowing global activity. Growth is moderately improving in the latter half of calendar 2012 as the Federal Reserve (Fed), in addition to maintaining interest rates at exceptionally low levels, also extended the policy stimulus aimed at generating an improvement in the labour market conditions.

In calendar 2013, growth in the U.S. economy is expected at a modestly improved rate of 2.3% mainly driven by slightly higher consumer spending, continued business investment and improvement in the housing market. We expect growth in 2013 will be restrained by fiscal policy tightening. In order to mitigate some of the impact of fiscal tightening the Fed is expected to maintain interest rates at historically low levels through mid-2015 and continue to engage in non-traditional policies until there is evidence of a sustained improvement in labour market conditions.

Europe
The Euro area economy is estimated to contract by (0.4)% during calendar 2012 led by deep declines in the member countries that have been seeing financial conditions worsen and access to funding restrained. Actions by the European Central Bank (ECB), including recently announced programs designed to boost liquidity in the weak financial system, are helping to moderately improve investor confidence. In addition, the ECB further decreased interest rates during the year by 25 basis points (bps) to 0.75%.

In calendar 2013, Eurozone growth is expected to improve to 0.1% as governments implement policy measures to address the Eurozone structural issues and restore confidence. The outlook on growth will therefore depend on the effectiveness of policy actions. Improvement in the economic growth rate is expected to be mainly driven by increased net exports and supported by the low interest rate environment. Consumer and government spending are expected to further decrease reflecting weak labour market conditions and fiscal austerity measures implemented to ensure sovereign debt sustainability. While inflation remains elevated, we believe that interest rates will be maintained at 0.75% for calendar 2013 to provide continued stimulus to the economy.

Financial markets
Global capital markets strengthened in the first half of the year, although uncertainty continued throughout the year due to renewed concerns over the European sovereign debt crisis. Aggressive actions taken by policymakers in Europe and the U.S. to revive the ailing global economy helped to ease those concerns. In turn, investors' risk appetite increased and capital markets improved in the final months of fiscal 2012. Debt issuances were stronger as clients took advantage of the record-low interest rate environment and narrower credit spreads, largely in the latter half of the year.

However, throughout the year, uncertain global growth prospects weighed on capital markets, with the economic recovery in the U.S. continuing at a gradual but slowing pace. Trading volatility remained elevated in response to investor uncertainty, and equity issuances were subdued throughout the year due to weak demand.

In 2013, we expect the current economic headwinds to curb activity in capital markets until there is improvement in the global economy and resolution of European sovereign debt issues. Markets will also be closely watching whether U.S. policymakers will avert the "fiscal cliff" – the delayed tax increases and spending cuts expected to be implemented over the next decade due to come into effect in January 2013. If an agreement is not reached, the U.S. economy could be negatively impacted, which in turn could adversely impact global economic recovery.

The predictions and forecasts in this section are based on information and assumptions from sources we consider reliable. If this information or these assumptions are not accurate, actual economic outcomes may differ materially from the outlook presented in this section.

For details on risk factors from general business and economic conditions that may affect our business and financial results, refer to the Risk management – Top and emerging risks section.

Regulatory environment
We continue to monitor and prepare for global and domestic regulatory developments such as the Volcker Rule under the U.S. *Dodd-Frank Wall Street Reform and Consumer Protection Act* and other Dodd-Frank initiatives, changes to capital and liquidity requirements under the Basel Committee on Banking Supervision's global standards (Basel III), Over-the-Counter (OTC) derivatives reform, and other financial reforms. For a discussion of regulatory developments which may affect our business and financial results, refer to the Risk management – Top and emerging risks section. For details on our framework and activities to manage risks, refer to the Risk management and Capital management sections.

Defining and measuring success through Total Shareholder Returns (TSR)
Our focus is to maximize total shareholder returns through the achievement of top quartile performance over the medium term (3-5 years) which we believe reflects a longer term view of strong and consistent financial performance.

TSR aligns to our three strategic goals and we believe represents the most appropriate measure of shareholder value creation. TSR is a concept used to compare the performance of our common shares over a period of time, reflecting share price appreciation and dividends paid to common shareholders. The absolute size of the TSR will vary depending on market conditions and the relative position reflects the market's perception of our overall performance relative to our peers over a period of time.

Financial performance objectives are used to measure progress against our medium-term TSR objectives. We review and revise these financial performance objectives as economic, market and regulatory environments change. By focusing on our medium-term objectives in our decision-making, we believe we will be well positioned to provide sustainable earnings growth and solid returns to our common shareholders.

On both a continuing operations and consolidated basis, we compared favourably to all our financial performance objectives in 2012. The following table provides a summary of our performance against our financial performance objectives on a continuing and consolidated basis in 2012:

Financial performance objectives **Table 2**

	2012 results		
	Continuing operations	Consolidated	Achieved
Diluted EPS growth of 7% +	9.0%	17.7%	✓
ROE of 18% +	19.5%	19.3%	✓
Strong capital ratios (Tier 1 capital, Common Equity Tier 1) (1), (2)	n.a.	13.1%, 10.5%	✓
Dividend payout ratio 40% – 50%	45%	46%	✓

(1) For further details on Tier 1 capital ratio and Common Equity Tier 1 ratio, refer to the Capital management and Key performance and non-GAAP measures sections, respectively.
(2) Effective November 1, 2012, we will evaluate our Common Equity Tier 1 ratio under the new Basel III framework and remove the Tier 1 capital ratio from our objectives. For further details, refer to the Capital management section.

For 2013, our current financial performance objectives will remain unchanged and we will evaluate our strong capital ratios objective under the new Basel III framework.

Medium-term objectives – three and five year TSR vs. peer group average **Table 3**

	three year TSR (1)	five year TSR (1)
Royal Bank of Canada	5% 2nd Quartile	5% Top Quartile
Peer group average (excluding RBC) (2)	1%	(5)%

(1) The three and the five year average annual TSR are calculated based on our common share price appreciation plus reinvested dividend income for the period October 31, 2009 to October 31, 2012 and October 31, 2007 to October 31, 2012 respectively, based on information as disclosed by Bloomberg L.P.
(2) We compare our TSR to that of a global peer group approved by our Board of Directors and consisting of the following 20 financial institutions: seven large Canadian financial institutions in addition to us (Bank of Montreal, Canadian Imperial Bank of Commerce, Manulife Financial Corporation, National Bank of Canada, Power Financial Corporation, The Bank of Nova Scotia and The Toronto-Dominion Bank), five U.S. financial institutions (Bank of America Corporation, JPMorgan Chase & Co., The Bank of New York Mellon Corporation, U.S. Bancorp and Wells Fargo & Company), five European financial institutions (Banco Bilbao Vizcaya Argentaria Group (BBVA), Barclays PLC, BNP Paribas, Credit Suisse Group AG and Deutsche Bank Group) and two Australian financial institutions (National Australia Bank and Westpac Banking Corporation).

Our three and five year average annual TSR of 5% ranked us in the second quartile for the three year period and top quartile for the five year period within our global peer group. The three year and five year average annual TSR for our global peer group was 1% and (5)% respectively.

Common share and dividend information **Table 4**

For the year ended October 31	2012	2011	2010	2009	2008
Common share price (RY on TSX) – close, end of period	$ 56.94	$ 48.62	$ 54.39	$ 54.80	$ 46.84
Dividends paid per share	2.22	2.04	2.00	2.00	2.00
Increase (decrease) in share price	17.1%	(10.6)%	(0.7)%	17.0%	(16.4)%
Total shareholder return	22.0%	(6.7)%	2.9%	22.7%	(12.8)%

Key corporate events of 2012

Canadian auto finance and deposit business of Ally Financial Inc.
On October 23, 2012, we announced that we have entered into a definitive agreement to acquire the Canadian auto finance and deposit business of Ally Financial Inc. for a $1.4 billion investment net of excess capital. Subject to certain closing adjustments and including the excess capital, this will result in total consideration of $3.1 to $3.8 billion, depending on the size of the dividend taken out by the seller prior to closing. The transaction is subject to regulatory approvals and other customary closing conditions and is expected to be completed in the first calendar quarter of 2013.

Acquisition of the remaining 50% stake in RBC Dexia Investor Services Limited (RBC Dexia)
On July 27, 2012, we completed the acquisition of the remaining 50% stake in the joint venture RBC Dexia from Banque Internationale à Luxembourg S.A. (formerly Dexia Banque Internationale à Luxembourg S.A.) for total consideration of €837.5 million ($1 billion) in cash. As a result of this transaction, we own 100% of RBC Dexia which has been rebranded RBC Investor Services. In our disclosure, we refer to the acquired entity as RBC Investor Services, except when referring to the acquisition transaction or acquisition related costs, for which we use RBC Dexia.

As a result of the agreement to acquire the remaining 50% stake in RBC Dexia, we completed an impairment test. The results indicated that our investment was impaired and we recorded impairment losses of $168 million (before- and after-tax). Also, as part of the agreement, RBC Dexia sold €1.4 billion ($1.9 billion) in securities issued by Dexia Group back to the Dexia Group and acquired approximately an equivalent amount of U.S. dollar-denominated securities. The sale of securities and subsequent trading losses on the securities purchased resulted in a loss to RBC Dexia. Our proportionate share of the loss was $36 million ($26 million after-tax). In addition, we recognized other costs related to our acquisition of $20 million ($19 million after-tax). In total, the loss amounted to $224 million ($213 million after-tax).

Latin American, Caribbean and African Private Banking Business of Coutts (Coutts)
On May 31, 2012, we completed the acquisition of the Latin American, Caribbean and African private banking business of Coutts, the wealth division of The Royal Bank of Scotland Group plc, with client assets of approximately US$2 billion. The business includes clients who reside in Latin America, the Caribbean and Africa, as well as key private banking staff based primarily in Geneva, Switzerland along with a team in the Cayman Islands.

U.S. regional retail banking operations
On March 2, 2012, we completed the disposition of our U.S. regional retail banking operations to PNC Financial Services Group, Inc. As a result, effective the third quarter of 2012, we no longer have discontinued operations.

For further details related to the acquisitions and dispositions noted above, refer to Note 12 of our 2012 Annual Consolidated Financial Statements.

Financial performance

Adoption of IFRS
Our 2012 Annual Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB). It reflects the first time that we have prepared our annual results in accordance with IFRS, with corresponding comparative IFRS financial information presented for the year ended or as at October 31, 2011. All amounts for 2010 are based on Canadian generally accepted accounting principles (Canadian GAAP).

As our 2011 results are prepared in accordance with IFRS and 2010 results are prepared in accordance with Canadian GAAP, our analysis of the variance of our results from 2011 to 2010 is not directly comparable. Accordingly, our discussion related to our 2011 results compared to our 2010 results focuses on the drivers of the changes and also highlights where there are differences in accounting principles.

For further details on the impacts of the adoption of IFRS including the description of accounting policies selected, refer to the Accounting and control matters section and Notes 2 and 3 of our 2012 Annual Consolidated Financial Statements.

Overview

2012 vs. 2011
We reported net income of $7,539 million, up $1,095 million or 17% from a year ago. Diluted earnings per share (EPS) of $4.93 increased $0.74 and return on common equity (ROE) of 19.3% increased 60 bps, despite holding higher capital levels in anticipation of Basel III capital requirements, driven by strong earnings growth in Canadian Banking and Capital Markets. As well, our prior year results were unfavourably impacted by a net loss related to the sale of our U.S. regional retail banking operations. Our Tier 1 capital ratio was 13.1%, down 20 bps from last year. For further details on our Tier 1 capital ratio, refer to the Capital management section.

Continuing operations
2012 vs. 2011
Net income from continuing operations of $7,590 million increased $620 million or 9% from a year ago. Diluted EPS from continuing operations of $4.96 increased $0.41 and ROE from continuing operations was 19.5%, down 80 bps from the prior year. The increase in net income was driven by higher fixed income trading and corporate and investment banking results, reflecting improved market conditions compared to the challenging market conditions in the latter half of 2011, and strong volume growth across most of our domestic banking businesses. Lower claims costs in Insurance, higher funding and liquidity trading in Investor & Treasury Services, increased average fee-based client assets in Wealth Management resulting from capital appreciation and net sales, and cost reductions resulting from our cost management program also contributed to the increase. In addition, our current year net income was favourably impacted by a release of $128 million of tax uncertainty provisions and interest income of $72 million ($53 million after-tax) related to a refund of taxes paid due to the settlement of several tax matters with the Canada Revenue Agency (CRA) and an adjustment related to a change in estimate of mortgage prepayment interest of $125 million ($92 million after-tax). These factors were partially offset by higher costs in support of business growth, increased provision for credit losses (PCL) in Capital Markets and our Caribbean portfolio, and lower transaction volumes in Wealth Management reflecting continued investor uncertainty. A loss of $224 million ($213 million after-tax) related to the acquisition of the remaining 50% stake in RBC Dexia also negatively impacted our results. While our earnings have increased, our ROE was down as a result of holding higher common equity in anticipation of Basel III capital requirements.

Discontinued operations
2012 vs. 2011
Net loss from discontinued operations was $51 million compared to a net loss of $526 million a year ago, primarily related to a loss on sale of our U.S. regional retail banking operations in the prior year. The current year only included four months of operating losses related to our U.S. regional retail banking operations compared to a full year of results in 2011.

Summary of 2011 vs. 2010
Our net income from continuing operations was higher in 2011 as compared to 2010, largely due to strong business growth in Canadian Banking and Insurance, higher average fee-based client assets in Wealth Management as well as growth in our corporate and investment banking businesses in Capital Markets. Lower PCL and a decrease in income tax expense, reflecting a lower effective tax rate also contributed to the increase. These factors were partially offset by higher costs in support of business growth and lower trading revenue reflecting challenging market conditions. In addition, our 2011 net income from continuing operations was higher under IFRS than Canadian GAAP. For further details on the differences between IFRS and Canadian GAAP, refer to Note 3 of our Annual Consolidated Financial Statements.

In 2011, net loss from discontinued operations increased from 2010, primarily reflecting a loss on sale of our U.S. regional retail banking operations largely offset by a loss on sale related to Liberty Life in 2010 and lower write-offs in our U.S. commercial and builder finance portfolios.

Estimated impact of foreign currency translation on our consolidated financial results
Our foreign currency-denominated results are impacted by exchange rate fluctuations. Revenue, PCL, insurance policyholder benefits, claims and acquisition expense (PBCAE), non-interest expense and net income denominated in foreign currency are translated at the average rates of exchange for the year. The impact of the foreign currency translation on our results was not significant in 2012 as compared to 2011.

Changes in the relevant average exchange rates that impact our business are shown in the following table:

Table 5

(Average foreign currency equivalent of Canadian dollar 1.00) (1)	2012	2011	2010
U.S. dollar	.997	1.015	.959
British pound	.630	.631	.617
Euro	.771	.727	.713

(1) Average amounts are calculated using month-end spot rates for the period.

Certain of our business segment results are impacted by fluctuations in the exchange rates in the previous table. For further details, refer to the Business segment results section.

Results from continuing operations

The following provides a discussion of our reported results from continuing operations:

Total revenue

Table 6

	IFRS		Canadian GAAP
(Millions of Canadian dollars)	2012	2011	2010
Interest income	$ 20,852	$ 20,813	$ 17,746
Interest expense	8,354	9,456	7,408
Net interest income	12,498	11,357	10,338
Investments (1)	5,375	5,305	4,616
Insurance (2)	4,897	4,474	4,485
Trading	1,298	655	1,333
Banking (3)	3,799	3,596	3,071
Underwriting and other advisory	1,434	1,485	1,193
Other (4)	471	766	1,046
Non-interest income	$ 17,274	$ 16,281	$ 15,744
Total revenue	$ 29,772	$ 27,638	$ 26,082
Additional information			
Total trading revenue			
Net interest income	$ 1,532	$ 1,377	$ 1,443
Non-interest income	1,298	655	1,333
Total trading revenue	$ 2,830	$ 2,032	$ 2,776
Total trading revenue by product			
Interest rate and credit	$ 1,923	$ 1,218	$ 1,990
Equities	516	463	371
Foreign exchange and commodities	391	351	415
Total trading revenue	$ 2,830	$ 2,032	$ 2,776
Trading revenue (teb) by product			
Interest rate and credit	$ 1,923	$ 1,218	$ 1,990
Equities	945	920	858
Foreign exchange and commodities	391	351	415
Total trading revenue (teb)	$ 3,259	$ 2,489	$ 3,263
Trading revenue (teb) by product – Capital Markets			
Interest rate and credit	$ 1,584	$ 968	$ 1,707
Equities	925	906	883
Foreign exchange and commodities	323	289	344
Total Capital Markets trading revenue (teb)	$ 2,832	$ 2,163	$ 2,934

(1) Includes securities brokerage commissions, investment management and custodial fees, and mutual fund revenue.
(2) Includes premiums and investment and fee income. Investment income includes the change in fair value of investments backing policyholder liabilities and is largely offset in PBCAE.
(3) Includes service charges, foreign exchange revenue other than trading, card service revenue and credit fees.
(4) Includes other non-interest income, net gain (loss) on available-for-sale (AFS) securities and share of profit in associates.

2012 vs. 2011

Total revenue increased $2,134 million or 8% from last year, mainly due to strong trading revenue reflecting improved market conditions compared to the unfavourable conditions last year and strong growth in lending and increased loan syndication activity in our corporate and investment banking businesses. Strong volume growth across most of our Canadian banking businesses, higher average fee-based client assets in Wealth Management, and a full quarter of revenue related to our additional 50% ownership of RBC Investor Services also contributed to the increase. Volume growth across most insurance products, and the change in fair value of investments backing our policyholder liabilities, which was largely offset in PBCAE, also contributed to the increase. These factors were partially offset by losses compared to gains in the prior year as noted below in Other revenue and lower transaction volumes mainly in Wealth Management.

Net interest income increased $1,141 million or 10%, mainly due to strong volume growth across most Canadian banking businesses, higher trading-related net interest income and growth in our lending business in Capital Markets. The mortgage prepayment interest adjustment of $125 million in Canadian Banking and interest income of $72 million related to a refund of taxes paid due to the announced settlement of several tax matters with the CRA in Corporate Support also contributed to the increase.

Investment-related revenue increased $70 million or 1%, mainly due to higher average fee-based client assets and a full quarter of revenue related to our additional 50% ownership of RBC Investor Services, partially offset by lower transaction volumes.

Insurance revenue increased $423 million or 9%, mainly due to volume growth across most products and the change in fair value of investments backing our policyholder liabilities, which was largely offset in PBCAE.

Trading revenue in Non-interest income increased $643 million. Total trading revenue, which comprises trading-related revenue recorded in Net interest income and Non-interest income, was $2,830 million, up $798 million, or 39%, mainly due to higher fixed income trading primarily driven by improved market conditions mainly in the U.S. as compared to the challenging market conditions in the latter half of the prior year.

Banking revenue increased $203 million or 6%, mainly due to strong client growth in our loan syndication business in Capital Markets, higher service fee revenue and credit card transaction volume.

Underwriting and other advisory revenue decreased $51 million or 3%, mainly due to lower mergers and acquisitions (M&A) activity, largely in Canada.

Other revenue decreased $295 million or 39%, mainly due to losses compared to gains in the prior year on credit default swaps used to economically hedge our corporate loan portfolio in Capital Markets, and losses compared to gains in the prior year related to the change in fair value of certain derivatives used to economically hedge our funding activities.

2011 vs. 2010

Total revenue for 2011 was higher as compared to 2010, primarily due to solid volume growth across most of our Canadian banking businesses, higher average fee-based client assets and higher transaction volumes in Wealth Management, strong growth in our corporate and investment banking businesses, higher debt origination activity in our global markets businesses and solid volume growth in Insurance. These factors were partially offset by significantly lower trading revenue reflecting challenging market conditions in the latter half of 2011 and the unfavourable impact of the stronger Canadian dollar. There were also favourable impacts resulting from differences between IFRS and Canadian GAAP. For further details, refer to Note 3 of our Annual Consolidated Financial Statements.

Provision for credit losses

2012 vs. 2011

Total PCL increased $168 million or 15% from a year ago, mainly due to higher provisions related to Capital Markets and our Caribbean portfolios. Higher average loan balances reflecting volume growth in Canadian home equity products also contributed to the increase. These factors were partially offset by lower PCL in our Canadian credit card portfolio.

2011 vs. 2010

Total PCL for 2011 was lower as compared to 2010, largely reflecting lower provisions in our Caribbean and Canadian business portfolios, a recovery as compared to PCL in 2010 in our corporate portfolio in Capital Markets, lower write-offs in our Canadian credit card portfolio and lower provisions in our Canadian unsecured personal lending portfolio. There were also unfavourable impacts resulting from differences between IFRS and Canadian GAAP. For further details, refer to Note 3 of our Annual Consolidated Financial Statements.

Insurance policyholder benefits, claims and acquisition expense

2012 vs. 2011

PBCAE increased $263 million or 8% from a year ago, mainly due to the change in fair value of investments backing our policyholder liabilities, largely offset in revenue, and volume growth across most products. These factors were partially offset by lower claims costs in Canadian insurance products and a reduction of policy acquisition cost-related liabilities.

2011 vs. 2010

PBCAE for 2011 was lower as compared to 2010, primarily due to the change in fair value of investments mainly backing our Canadian life policyholder liabilities, largely offset in revenue, lower claims costs in our reinsurance, auto and disability products and favourable actuarial adjustments reflecting management actions and assumption changes. These factors were partially offset by higher costs due to solid volume growth across all insurance businesses. There were no significant impacts resulting from differences between IFRS and Canadian GAAP.

Non-interest expense

Table 7

(Millions of Canadian dollars)	IFRS 2012	IFRS 2011	Canadian GAAP 2010
Salaries	$ 4,313	$ 4,074	$ 3,777
Variable compensation	3,650	3,300	3,335
Benefits and retention compensation	1,185	1,099	1,132
Share-based compensation	139	188	186
Human resources	$ 9,287	$ 8,661	$ 8,430
Impairment of goodwill and other intangibles	168	–	–
Equipment	1,083	1,010	944
Occupancy	1,107	1,026	960
Communications	764	746	750
Professional and other external services	949	958	850
Other expenses	1,802	1,766	1,535
Non-interest expense	$ 15,160	$ 14,167	$ 13,469

2012 vs. 2011
Non-interest expense increased $993 million or 7%, primarily due to higher variable compensation, largely driven by improved results in Capital Markets and increased commission-based revenue in Wealth Management. Higher costs in support of business and volume growth and the impact of a full quarter of non-interest expense related to our additional 50% ownership of RBC Investor Services also contributed to the increase. In addition, our non-interest expense this year was negatively impacted by an impairment loss of $168 million related to our acquisition of the remaining 50% stake in RBC Dexia. The increase in non-interest expense was partially offset by cost reductions resulting from our cost management program.

2011 vs. 2010
Non-interest expense was higher in 2011 as compared to 2010, mainly due to higher costs in support of business growth including the initiatives in our corporate and investment banking businesses, our BlueBay acquisition, and increased staff levels in most businesses. Infrastructure investments in Capital Markets, higher variable compensation in Wealth Management, professional fees and sundry losses also contributed to the increase. These factors were partially offset by lower variable compensation in Capital Markets, the impact of a stronger Canadian dollar and our ongoing focus on cost management. In addition, our 2011 non-interest expense was lower under IFRS than Canadian GAAP. For further details on the differences between IFRS and Canadian GAAP, refer to Note 3 of our Annual Consolidated Financial Statements.

Income and other taxes

Table 8

(Millions of Canadian dollars, except percentage amounts)	IFRS 2012	IFRS 2011	Canadian GAAP 2010
Income taxes	$ 2,100	$ 2,010	$ 1,996
Other taxes			
Goods and services sales taxes	$ 343	$ 338	$ 250
Payroll taxes	371	349	317
Capital taxes	80	75	133
Property taxes	124	107	105
Insurance premium taxes	50	49	46
Business taxes	21	18	9
	$ 989	$ 936	$ 860
Total income and other taxes	$ 3,089	$ 2,946	$ 2,856
Net income before income taxes from continuing operations	$ 9,690	$ 8,980	$ 7,827
Effective income tax rate from continuing operations	21.7%	22.4%	25.5%
Effective total tax rate (1)	28.9%	29.7%	32.9%

(1) Total income and other taxes as a percentage of net income before income and other taxes.

Our 2012 results included the release of $128 million of tax uncertainty provisions and interest income of $72 million ($53 million after-tax) related to a refund of taxes paid due to the settlement of several tax matters with the CRA in the current year.

2012 vs. 2011
Income tax expense increased $90 million or 4% from a year ago, mainly due to higher earnings before income taxes. The effective income tax rate of 21.7% decreased 70 bps from 22.4% in the prior year, mainly due to a reduction in statutory Canadian corporate income tax rates and the release of the tax uncertainty provisions noted above. These factors were partially offset by a loss related to our acquisition of the remaining 50% stake in RBC Dexia, which was not deductible for tax purposes.

Other taxes increased $53 million or 6% from 2011, mainly due to higher payroll and property taxes. In addition to the income and other taxes reported in our Consolidated Statements of Income, we recorded income taxes of $72 million in 2012 (2011 – $434 million) in shareholders' equity, a decrease of $362 million, primarily reflecting decreased unrealized foreign currency translation gains, net of hedging activities, and decreased gains on derivatives designated as cash flow hedges, net of increased unrealized gains in our available-for-sale (AFS) portfolio.

2011 vs. 2010

Income taxes for 2011 were higher as compared to 2010, largely due to higher earnings before income taxes in 2011. The effective tax rate decreased from the prior year, mainly due to a reduction in Canadian corporate income tax rates, and more favourable tax adjustments in 2011. For further details on the differences between IFRS and Canadian GAAP, refer to Note 3 of our Annual Consolidated Financial Statements.

Our other taxes for 2011 were higher as compared to 2010, due to the full year impact of the Harmonized Sales Tax (HST) in Ontario and British Columbia introduced on July 1, 2010 and higher payroll taxes. The increase was partially offset by lower capital taxes reflecting lower capital tax rates.

Business segment results

Results by business segment — Table 9

	IFRS								Canadian GAAP
	2012							2011	2010
(Millions of Canadian dollars, except percentage amounts)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total	Total	Total
Net interest income	$ 9,061	$ 393	$ –	$ 668	$ 2,559	$ (183)	$ 12,498	$ 11,357	$ 10,338
Non-interest income	3,582	4,442	4,897	657	3,629	67	17,274	16,281	15,744
Total revenue	$ 12,643	$ 4,835	$ 4,897	$ 1,325	$ 6,188	$ (116)	$ 29,772	$ 27,638	$ 26,082
PCL	1,167	(1)	–	–	135	–	1,301	1,133	1,240
PBCAE	–	–	3,621	–	–	–	3,621	3,358	3,546
Non-interest expense	5,932	3,796	515	1,134	3,746	37	15,160	14,167	13,469
Net income before income taxes	$ 5,544	$ 1,040	$ 761	$ 191	$ 2,307	$ (153)	$ 9,690	$ 8,980	$ 7,827
Income tax	1,456	277	47	106	726	(512)	2,100	2,010	1,996
Net income from continuing operations	$ 4,088	$ 763	$ 714	$ 85	$ 1,581	$ 359	$ 7,590	$ 6,970	$ 5,831
Non-controlling interest in net income of subsidiaries	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	99
Net income from continuing operations – Canadian GAAP	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	5,732
Loss from discontinued operations	–	–	–	–	–	–	(51)	(526)	(509)
Net income	$ 4,088	$ 763	$ 714	$ 85	$ 1,581	$ 359	$ 7,539	$ 6,444	$ 5,223
ROE from continuing operations	31.5%	14.1%	46.8%	4.3%	13.5%	n.m.	19.5%	20.3%	16.5%
ROE							19.3%	18.7%	14.9%
Average assets	$ 331,500	$ 20,900	$ 11,500	$73,600	$ 349,200	$ 15,300	$ 810,600	$ 778,900	$ 683,000

(1) Net interest income, total revenue and net income before income taxes are presented in Capital Markets on a taxable equivalent basis (teb). The taxable equivalent basis adjustment is eliminated in the Corporate Support segment. For a further discussion, refer to the How we measure and report our business segments section.

How we measure and report our business segments

Our management reporting framework is intended to measure the performance of each business segment as if it were a stand-alone business and reflect the way that the business segment is managed. This approach is intended to ensure that our business segments' results include all applicable revenue and expenses associated with the conduct of their business and depicts how management views those results.

The following highlights the key aspects of how our business segments are managed and reported:

- Personal & Commercial Banking reported results include securitized Canadian residential mortgage and credit card loans and related amounts for income and provisions for credit losses on impaired loans.
- Wealth Management reported results also include disclosure in U.S. dollars as we review and manage the results of certain business lines largely in U.S. dollars.
- Insurance reported results include the change in fair value of investments mainly backing our Canadian life policyholder liabilities recorded as revenue, which is largely offset in PBCAE.
- Capital Markets results are reported on a taxable equivalent basis (teb), which grosses up net interest income from certain tax-advantaged sources (Canadian taxable corporate dividends) to their effective taxable equivalent value with a corresponding offset recorded in the provision for income taxes. We record the elimination of the teb adjustments in Corporate Support. We believe these adjustments are useful and reflect how Capital Markets manages its business, since it enhances the comparability of revenue and related ratios across taxable revenue and our principal tax-advantaged source of revenue. The use of teb adjustments and measures may not be comparable to similar GAAP measures or similarly adjusted amounts disclosed by other financial institutions.
- Corporate Support results include all enterprise-level activities that are undertaken for the benefit of the organization that are not allocated to our five business segments, including residual asset liability management results, impact from income tax adjustments and net charges associated with unattributed capital.

- PCL are recorded to recognize estimated losses on impaired loans, as well as losses that have been incurred but are not yet identified in our loans portfolio. This portfolio includes on-balance sheet exposures, such as loans and acceptances, and off-balance sheet items such as letters of credit, guarantees and unfunded commitments. PCL on impaired loans are included in the results of each business segment to fully reflect the appropriate expenses related to the conduct of each business segment. PCL on loans not yet identified as impaired are included in Corporate Support, as Group Risk Management effectively controls this through its monitoring and oversight of various lending portfolios throughout the enterprise.

Key methodologies
The following outlines the key methodologies and assumptions used in our management reporting framework. These are periodically reviewed by management to ensure they remain valid.

Expense allocation
To ensure that our business segments' results include expenses associated with the conduct of their business, we allocate costs incurred or services provided by Technology & Operations and Functions, which were directly undertaken or provided on the business segments' behalf. For other costs not directly attributable to our business segments, including overhead costs and other indirect expenses, we use our management reporting framework for allocating these costs to each business segment in a manner that reflects the underlying benefits.

Capital attribution
Our framework also determines the attribution of capital to our business segments in a manner that is intended to consistently measure and align economic costs with the underlying benefits and risks associated with the activities of each business segment. The amount of capital assigned to each business segment is referred to as attributed capital. Unattributed capital and associated net charges are reported in Corporate Support. For further information, refer to the Capital management section.

On November 1, 2011, we prospectively revised our capital allocation methodology to further align our allocation processes with evolving increased regulatory capital requirements. The revised methodology replaced the pro-rata allocation of unallocated capital that was used in 2011 and the impacts were phased-in over 2012 in anticipation of our requirement to report under Basel III in 2013. The revised methodology resulted in a reduction in our attributed capital for Personal & Commercial Banking and an increase in attributed capital for Capital Markets.

Funds transfer pricing
A funds transfer pricing methodology is used to allocate interest income and expense by product to each business segment. This allocation considers the interest rate risk, liquidity and funding risk and regulatory requirements of each of our business segments. We base transfer pricing on external market costs and each business segment fully absorbs the costs of running its business. Our business segments may retain certain interest rate exposures subject to management approval that would be expected in the normal course of operations.

Net interest margin
We report net interest margin (NIM) for Personal & Commercial Banking and our Canadian banking businesses based on average earning assets which includes only those assets that give rise to net interest income including deposits with other banks, certain securities and loans.

Changes made in 2012
Effective October 31, 2012, we realigned our business segments. For further details on the realignment, refer to the About Royal Bank of Canada section and Note 30 of our 2012 Annual Consolidated Financial Statements.

Key performance and non-GAAP measures

Performance measures

Return on common equity
We measure and evaluate the performance of our consolidated operations and each business segment using a number of financial metrics such as net income and ROE. We use ROE, at both the consolidated and business segment levels, as a measure of return on total capital invested in our business. The business segment ROE measure is viewed as a useful measure for supporting investment and resource allocation decisions because it adjusts for certain items that may affect comparability between business segments and certain competitors.

Our consolidated ROE calculation is based on net income available to common shareholders divided by total average common equity for the period. Business segment ROE calculations are based on net income available to common shareholders divided by average attributed capital for the period. For each segment, average attributed capital includes the capital required to underpin various risks as described in the Capital Management section and amounts invested in goodwill and intangibles.

The attribution of capital and risk capital involves the use of assumptions, judgments and methodologies that are regularly reviewed and revised by management as necessary. Changes to such assumptions, judgments and methodologies can have a material effect on the segment ROE information that we report. Other companies that disclose information on similar attributions and related return measures may use different assumptions, judgments and methodologies.

The following table provides a summary of our ROE calculations:

Calculation of ROE **Table 10**

(Millions of Canadian dollars, except percentage amounts)	IFRS 2012 Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	IFRS 2011 Total	Canadian GAAP 2010 Total
Net income available to common shareholders from continuing operations	$ 3,996	$ 727	$ 702	$ 71	$ 1,503	$ 236	$ 7,235	$ 6,611	$ 5,474
Loss to common shareholders from discontinued operations							(51)	(526)	(509)
Net income available to common shareholders	$ 3,996	$ 727	$ 702	$ 71	$ 1,503	$ 236	$ 7,184	$ 6,085	$ 4,965
Average common equity from continuing operations (1), (2)	$ 12,700	$ 5,150	$ 1,500	$ 1,700	$ 11,150	$ 4,550	$ 36,750	$ 29,800	$ 29,450
Average common equity from discontinued operations (1)							400	2,800	3,800
Total average common equity	$ 12,700	$ 5,150	$ 1,500	$ 1,700	$ 11,150	$ 4,550	$ 37,150	$ 32,600	$ 33,250
ROE from continuing operations	31.5%	14.1%	46.8%	4.3%	13.5%	n.m.	19.5%	20.3%	16.5%
ROE							19.3%	18.7%	14.9%

(1) Average common equity represent rounded figures. ROE is based on actual balances before rounding.
(2) The amounts for the segments are referred to as attributed capital or economic capital.
n.m. not meaningful

Tier 1 common ratio (consolidated basis)

We use the Tier 1 common ratio prepared under the Basel II framework in conjunction with regulatory capital ratios to evaluate our capital adequacy specifically related to common equity. We believe that it is a useful supplemental measure of capital adequacy. The Tier 1 common ratio does not have a standardized meaning under GAAP and may not be comparable to similar measures disclosed by other financial institutions. The following table provides a calculation of our Tier 1 common ratio.

Tier 1 common ratio **Table 11**

(Millions of Canadian dollars, except percentage amounts)	IFRS 2012	Canadian GAAP 2011	Canadian GAAP 2010
Tier 1 capital	$ 36,807	$ 35,713	$ 33,972
Less:			
Qualifying other NCI in subsidiaries	34	30	351
Innovative Tier 1 capital instruments (1)	2,580	2,582	3,327
Non-cumulative First Preferred shares (1)	4,814	4,810	4,810
Tier 1 common capital	$ 29,379	$ 28,291	$ 25,484
Risk-weighted assets	$ 280,609	$ 267,780	$ 260,456
Tier 1 common ratio	10.5%	10.6%	9.8%

(1) Net of treasury shares.

Embedded value

Embedded value is a measure of shareholder value embedded in the balance sheet of our Insurance segment, excluding any value from future new sales. We use the change in embedded value between reporting periods as a measure of the value created by the insurance operations during the period.

We define embedded value as the value of equity held in our Insurance segment and the value of in-force business (existing policies). The value of in-force business is calculated as the present value of future expected earnings on in-force business less the present value of capital required to support in-force business. We use discount rates that are consistent with other insurance companies. Required capital uses the capital frameworks in the jurisdictions in which we operate.

Key drivers affecting the change in embedded value from period to period are new sales, investment performance, claims and policyholder experience, change in actuarial assumptions, changes in foreign exchange rates and changes in shareholder equity arising from transfers in capital.

Embedded value does not have a standardized meaning under GAAP and may not be directly comparable to similar measures disclosed by other companies. Given that this measure is specifically used for our Insurance segment and involves the use of discount rates to present value the future expected earnings and capital required for the in-force business, reconciliation to financial statements information is not applicable.

Non-GAAP measures

Economic profit on a continuing operations basis

Economic profit is net income from continuing operations excluding the after-tax effect of amortization of other intangibles and goodwill and intangibles writedown less a capital charge for use of attributed capital. It measures the return generated by our businesses in excess of our cost of capital, thus enabling users to identify relative contributions to shareholder value. Economic profit is a non-GAAP measure and does not have a standardized meaning under GAAP and may not be comparable to similar measures disclosed by other financial institutions.

The capital charge includes a charge for common equity and preferred shares. We prospectively revised our cost of equity in the first quarter of 2012 to 9.5% from 10% in 2011.

The following table provides a summary of our Economic profit on a continuing basis:

Economic profit from continuing operations **Table 12**

	IFRS								Canadian GAAP
	2012							2011	2010
(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total	Total
Net income from continuing operations	$ 4,088	$ 763	$ 714	$ 85	$ 1,581	$ 359	$ 7,590	$ 6,970	$ 5,732
add: Non-controlling interests	(3)	–	–	(1)	(1)	(92)	(97)	(101)	n.a.
After-tax effect of amortization of other intangibles	17	66	–	28	2	(1)	112	123	127
Goodwill and intangibles writedown	–	–	–	168	–	–	168	–	–
Adjusted net income	$ 4,102	$ 829	$ 714	$ 280	$ 1,582	$ 266	$ 7,773	$ 6,992	$ 5,859
less: Capital charge	1,306	532	155	173	1,147	431	3,744	3,213	3,318
Economic profit from continuing operations	$ 2,796	$ 297	$ 559	$ 107	$ 435	$ (165)	$ 4,029	$ 3,779	$ 2,541

Results excluding a loss related to the acquisition of the remaining 50% stake in RBC Dexia in Investor & Treasury Services

Our Investor & Treasury Services results have been impacted by a loss related to the acquisition of the remaining 50% stake in RBC Dexia as noted in the following table. We believe that excluding this item is more reflective of our ongoing operating results, will provide readers with a better understanding of management's perspective on our performance, and should enhance the comparability of the financial performance for the fiscal year ended October 31, 2012. These measures are non-GAAP, do not have a standardized meaning under GAAP and may not be comparable to similar measures disclosed by other financial institutions.

The following table provides calculations of our results excluding the loss related the acquisition of the remaining 50% stake in RBC Dexia:

Investor & Treasury Services **Table 13**

	2012		
(Millions of Canadian dollars)	As reported	Loss related to the acquisition of the remaining 50% stake in RBC Dexia (1)	Adjusted
Revenue	$ 1,325	$ 36	$ 1,361
Non-interest expense	1,134	(188)	946
Net income before income taxes	$ 191	$ 224	$ 415
Income taxes	106	11	117
Net income	$ 85	$ 213	$ 298

(1) For further details, refer to the Key corporate events of 2012 section.

Effective October 31, 2012, we created a Personal & Commercial Banking segment which includes the former Canadian Banking segment and expanded it to include our banking businesses in the Caribbean and the U.S.

Personal & Commercial Banking comprises our personal and business banking operations as well as certain retail investment businesses and is operated through four business lines: Personal Financial Services, Business Financial Services and Cards and Payment Solutions (collectively Canadian Banking), and Caribbean & U.S. Banking. We serve 13 million individual, business and institutional clients across Canada, the Caribbean and the U.S. In Canada, we provide a broad suite of financial products and services through our extensive branch, automated teller machine (ATM), online and telephone banking networks, as well as through a large number of proprietary sales professionals. In the Caribbean, we offer a broad range of financial products and services to individuals, business clients and public institutions in their respective markets. In the U.S., our cross-border banking business serves the needs of Canadian clients within the U.S.

The landscape in which our banking-related operations compete in the Canadian financial services industry consists of other Schedule I banks, independent trust companies, foreign banks, credit unions and caisses populaires. In this competitive environment, we have top rankings in market share for most retail financial product categories, the largest branch network, the most ATMs and the largest mobile sales network across Canada. In the Caribbean, we compete against banks, trust companies and investment management companies serving retail, corporate and institutional customers. We are the second largest bank as measured by assets in the English Caribbean, with 121 branches in 19 countries and territories. In the U.S., we compete primarily with other Canadian banking institutions with operations in the U.S., along with traditional U.S. retail banking institutions and U.S. wealth management firms with integrated banking and brokerage capabilities.

Economic and market review

During the year, the Canadian economy grew at a modest pace, driven by moderate consumer spending, stable labour markets, and solid business investment, supported by the low interest rate environment. These factors resulted in strong volume growth across most of our Canadian banking businesses, despite the impact of moderating housing market activity and continued spread compression. Overall, credit conditions remained stable throughout the year resulting in improved credit loss rates in our credit card portfolio. In the Caribbean, unfavourable economic conditions continued to negatively impact our results through higher credit losses, spread compression and lower loan volumes.

Year in review

- We were named “Best Retail Bank in North America” by Retail Banker International in 2012, the only Canadian bank to be recognized.
- We expanded our sales capacity by increasing commercial and mobile career sales forces and invested in our retail distribution capabilities by opening 27 new stores in Canada, and converting 16 branches to our new innovative retail store concept offering merchandising areas and interactive digital technologies which redesign and simplify the customer shopping experience.
- We launched a co-branded RBC Shoppers Optimum banking account, debit card and credit card with enhanced Shoppers Optimum rewards, and expanded distribution into the retail environment with in-store ATMs located in Shoppers Drugmart stores.
- We introduced innovative banking solutions including RBC My Project MasterCard, combining the convenience of a credit card and the features of a loan, RBC Virtual Visa Debit, enabling customers to pay online with funds directly from their bank account, and Travelocity online booking tool, allowing customers to book their next vacation using RBC Rewards points.
- We entered into an agreement to acquire the Canadian auto finance and deposit business of Ally Financial Inc., which would give us the top market position in Canada for the consumer auto financing market and a leadership position in commercial auto financing.
- In the Caribbean, we continued to integrate our operations onto a common banking platform as well as implement improved banking practices across the region.
- We successfully transitioned our clients to our new banking platform in the U.S., designed to meet the needs of clients following the sale of our U.S. regional retail banking operations.

Outlook and priorities

Financial conditions in Canada are expected to remain favourable, and we expect continued volume growth across most of our products. However, due to moderated housing market activity and elevated consumer debt ratios, growth in our home equity products and personal loans is expected to slow. We anticipate our business lending will remain strong as business investment is expected to improve further, reflecting favourable credit conditions. Spread compression related to the continued low interest rate and highly competitive environment is expected to continue to pressure our net interest margins.

In the Caribbean, challenging market conditions and a slow economic recovery continue to constrain our outlook. Net interest margins will likely remain challenged by strong competition and spread compression. However, as we leverage a new common operating model in our Caribbean platforms, efficiency is expected to improve and result in volume growth as well as a reduction in expenses.

For further details on our general economic review and outlook, refer to the Economic and market review and outlook section.

Key strategic priorities for 2013

In Canada, our priorities are to continue to:

- Deliver a superior client experience and advice to drive industry leading volume growth in Canada.
- Build our sales capabilities and strategic partnerships, to grow our client base and deepen our relationships across our distribution network.
- Explore and develop partnerships and new delivery opportunities in the emerging payments space.
- Simplify the way we do business by redesigning our processes with customers to drive efficiency improvements.

In the Caribbean and the U.S., we are focused on:

- Leveraging the new common operating model implemented across all of our Caribbean businesses to become an undisputed leader in financial services by simplifying business processes and improving efficiency while delivering an enhanced client experience through a strong focus on proactive sales and relationship-based financial advice, development of our people and strengthening their engagement, optimizing distribution of our products and sustainably improving compliance and risk management.
- Supporting our U.S. growth strategy through retaining and growing the high value cross-border business and serving the banking product needs of our U.S. wealth management client base.

Personal & Commercial Banking financial highlights **Table 14**

(Millions of Canadian dollars, except number of and percentage amounts and as otherwise noted)	IFRS 2012	IFRS 2011	Canadian GAAP 2010
Net interest income	$ 9,061	$ 8,515	$ 8,095
Non-interest income	3,582	3,510	3,306
Total revenue	12,643	12,025	11,401
PCL	1,167	1,142	1,333
Non-interest expense	5,932	5,682	5,600
Net income before income taxes	5,544	5,201	4,468
Net income	$ 4,088	$ 3,740	$ 3,099
Revenue by business			
Canadian Banking	11,815	11,199	10,555
Caribbean & U.S. Banking	828	826	846
Key ratios			
ROE	31.5%	30.9%	28.0%
NIM (1)	2.86%	2.86%	2.86%
Efficiency ratio (2)	46.9%	47.3%	49.1%
Operating leverage	0.7%	n.a.	1.8%
Selected average balance sheet information			
Total assets	$ 331,500	$ 310,700	$ 295,200
Total earning assets (3)	316,400	297,200	283,000
Loans and acceptances (3)	315,400	294,800	277,900
Deposits	243,900	221,200	203,600
Attributed capital	12,700	11,800	10,800
Other information			
AUA (4)	$ 179,200	$ 165,900	$ 156,000
AUM	3,100	2,700	2,600
Number of employees (FTE) (5)	38,213	38,216	38,328
Effective income tax rate	26.3%	28.1%	30.6%
Credit information			
Gross impaired loans as a % of average net loans and acceptances	.58%	.70%	.77%
PCL on impaired loans as a % of average net loans and acceptances	.37%	.39%	.48%

(1) NIM is calculated as Net interest income divided by Average total earning assets.
(2) Efficiency ratio is calculated as Non-interest expense divided by Total revenue.
(3) Average total earning assets and average loans and acceptances include average securitized residential mortgages and credit card loans for the year of $44.9 billion and $7.3 billion, respectively (2011 – $42.0 billion and $4.0 billion; 2010 – $37.0 billion and $3.0 billion).
(4) AUA includes securitized residential mortgages and credit card loans as at October 31, 2012 of $31.0 billion and $7.4 billion respectively (October 31, 2011 – $32.1 billion and $3.9 billion; October 31, 2010 – $30.2 billion and $3.3 billion).
(5) FTE numbers for 2010 were restated to account for the transfer of Canadian banking operations from Corporate Support into Personal & Commercial Banking during 2011.

Financial performance
2012 vs. 2011

Net income increased $348 million or 9%, reflecting strong volume growth across most of our domestic businesses, a lower effective tax rate in Canada and a mortgage prepayment interest adjustment (prepayment adjustment) of $125 million ($92 million after-tax) that favourably impacted our results this year. These factors were partially offset by higher costs in support of business growth and continued spread compression in Canada as well as higher PCL in the Caribbean.

Total revenue increased $618 million or 5% from the previous year, reflecting strong volume growth in Canada in personal deposits, residential mortgages, business deposits and loans and personal loans. The favourable impact of the prepayment adjustment as well as higher credit card transaction volumes also contributed to the increase.

Net interest margin remained flat as the favourable impact of the prepayment adjustment was largely offset by spread compression reflecting the continuing low interest rate environment.

PCL increased $25 million or 2%, mainly due to higher provisions in our Caribbean portfolio and higher PCL in our Canadian secured retail and business lending portfolios. These factors were partially offset by lower write-offs related to our Canadian credit card portfolio.

Non-interest expense increased $250 million or 4%, mainly due to higher costs in support of business growth in Canada. Higher staff costs in the Caribbean and set-up costs in our U.S. cross border banking business also contributed to the increase. These factors were partially offset by our ongoing focus on cost management. In addition, the prior year included net stamp tax and accounting adjustments in Caribbean banking, which favourably impacted our results in that year.

Average loans and acceptances increased $21 billion or 7%, mainly due to continued growth in Canada in home equity and business and personal lending products. Average deposits were up $23 billion or 10%, primarily in Canada, reflecting solid growth in personal and business deposits.

For further details on the prepayment adjustment, refer to the Accounting and control matters section.

2011 vs. 2010

Net income increased from 2010, largely reflecting solid volume growth across most of our Canadian businesses and lower PCL. These factors were partially offset by higher costs in support of business growth.

Total revenue increased from 2010 largely reflecting solid volume growth in home equity products, personal loans and personal deposits. Higher mutual fund distribution fees mostly reflecting net sales of long-term funds and higher credit card transaction volumes also contributed to the increase. These factors were partly offset by lower revenue in Caribbean and U.S. banking due to lower volumes in business loans reflecting unfavourable economic conditions and spread compression in Caribbean banking.

Net interest margin remained relatively flat compared to 2010 as the favourable impact of changes in product mix in our Canadian portfolio was largely offset by increased competitive pricing on mortgages as well as spread compression.

PCL decreased as compared to 2010 reflecting lower write-offs in our Canadian credit card portfolio reflecting fewer bankruptcies and lower provisions in our Canadian business lending and unsecured personal lending portfolios. Lower provisions in our Caribbean business portfolio also contributed to the decrease.

Non-interest expense increased moderately from 2010 due to increased costs in support of business growth and the unfavourable impact from the implementation of the HST in Ontario and British Columbia in July 2010. These factors were largely offset by the favourable impact of our election to recognize all deferred actuarial gains and losses on our employee benefit plans on transition to IFRS which reduced pension expenses in subsequent periods relative to Canadian GAAP. For further details on the differences between IFRS and Canadian GAAP, refer to Note 3 of our Annual Consolidated Financial Statements.

In Canada, we operate through three business lines: Personal Financial Services, Business Financial Services and Cards and Payment Solutions. The following provides a discussion of our consolidated Canadian Banking results.

Canadian Banking financial highlights **Table 15**

(Millions of Canadian dollars, except number of and percentage amounts and as otherwise noted)	IFRS 2012	IFRS 2011	Canadian GAAP 2010
Net interest income	$ 8,483	$ 7,960	$ 7,488
Non-interest income	3,332	3,239	3,067
Total revenue	11,815	11,199	10,555
PCL	1,017	1,033	1,191
Non-interest expense	5,258	5,082	4,995
Net income before income taxes	5,540	5,084	4,369
Net income	$ 4,085	$ 3,664	$ 3,044
Revenue by business			
Personal Financial Services	$ 6,591	$ 6,192	$ 5,760
Business Financial Services	2,894	2,750	2,557
Cards and Payment Solutions	2,330	2,257	2,238
Key ratios			
ROE	39.3%	38.0%	35.6%
NIM (1)	2.78%	2.77%	2.75%
Efficiency ratio (2)	44.5%	45.4%	47.3%
Operating leverage	2.0%	n.a.	1.1%
Selected average balance sheet information			
Total assets	$ 315,400	$ 296,100	$ 279,900
Total earning assets (3)	305,300	287,200	272,100
Loans and acceptances (3)	307,900	287,300	269,500
Deposits	230,300	208,600	191,400
Attributed capital	10,200	9,450	8,350
Other information			
AUA (4)	$ 171,100	$ 158,000	$ 148,200
Number of employees (FTE) (5)	31,769	31,607	31,900
Effective income tax rate	26.3%	27.9%	30.3%
Credit information			
Gross impaired loans as a % of average net loans and acceptances	.37%	.44%	.52%
PCL on impaired loans as a % of average net loans and acceptances	.33%	.36%	.44%

(1) NIM is calculated as Net interest income divided by Average total earning assets.
(2) Efficiency ratio is calculated as Non-interest expense divided by Total revenue.
(3) Average total earning assets and average loans and acceptances include average securitized residential mortgages and credit card loans for the year of $44.9 billion and $7.3 billion, respectively (2011 – $42.0 billion and $4.0 billion; 2010 – $37.0 billion and $3.0 billion).
(4) AUA includes securitized residential mortgages and credit card loans as at October 31, 2012 of $31.0 billion and $7.4 billion respectively (October 31, 2011 – $32.1 billion and $3.9 billion; October 31, 2010 – $30.2 billion and $3.3 billion).
(5) FTE numbers for 2010 were restated to account for the transfer of Canadian banking operations from Corporate Support into Personal & Commercial Banking during 2011.

Financial performance
2012 vs. 2011

Net income increased $421 million or 11%, reflecting strong volume growth across most of our businesses, a lower effective tax rate and the favourable prepayment adjustment noted above. These factors were partially offset by higher costs in support of business growth and spread compression.

Total revenue increased $616 million or 6% from the previous year, reflecting strong volume growth in personal deposits, residential mortgages, business deposits and loans and personal loans. The favourable prepayment adjustment and higher credit card transaction volumes also contributed to the increase. These factors were partially offset by spread compression.

Net interest margin increased 1 bp mainly due to the prepayment adjustment and a favourable change in product mix, largely offset by spread compression reflecting the continuing low interest rate environment.

PCL decreased $16 million or 2%, mainly due to lower write-offs related to our credit card portfolio, partially offset by higher provisions in our secured retail and business lending portfolios.

Non-interest expense increased $176 million or 3%, mainly due to higher costs in support of business growth, partially offset by our ongoing focus on cost management.

Average loans and acceptances increased $21 billion or 7%, mainly due to continued growth in home equity, business and personal lending products. Average deposits were up $22 billion or 10%, reflecting solid growth in personal and business deposits.

2011 vs. 2010

Net income increased from 2010, largely reflecting solid volume growth across most of our businesses and lower PCL. These factors were partially offset by higher costs in support of business growth.

Total revenue increased from 2010 largely reflecting solid volume growth in home equity products, personal loans and personal deposits. Higher mutual fund distribution fees mostly reflecting net sales of long-term funds and higher credit card transaction volumes also contributed to the increase.

Net interest margin remained relatively flat compared to 2010 as the favourable impact of changes in product mix in our Canadian portfolio was largely offset by increased competitive pricing on mortgages.

PCL decreased as compared to 2010 due to lower write-offs in our credit card portfolio reflecting fewer bankruptcies and lower provisions in our business lending and unsecured personal lending portfolios.

Non-interest expense increased modestly from 2010 due to increased costs in support of business growth and the unfavourable impact from the implementation of the HST in Ontario and British Columbia in July 2010. These factors were largely offset by the favourable impact of our election to recognize all deferred actuarial gains and losses on our employee benefit plans on transition to IFRS which reduced pension expenses in subsequent periods relative to Canadian GAAP. For further details on the differences between IFRS and Canadian GAAP, refer to Note 3 of our Annual Consolidated Financial Statements.

Business line review

Personal Financial Services

Personal Financial Services focuses on meeting the needs of our individual Canadian clients at every stage of their lives through a wide range of financing and investment products and services, including home equity financing, personal lending, deposit accounts, mutual funds and self-directed brokerage accounts, GICs and Canadian private banking. We rank first or second in market share for most personal banking products and our retail banking network is the largest in Canada with 1,239 branches and 4,724 ATMs.

Financial performance

Total revenue increased $399 million or 6% compared to the prior year, reflecting strong volume growth in home equity products and personal deposits and loans. The favourable mortgage prepayment interest adjustment and higher mutual fund distribution fees also contributed to the increase. These factors were partially offset by lower brokerage volumes and lower spreads on deposits.

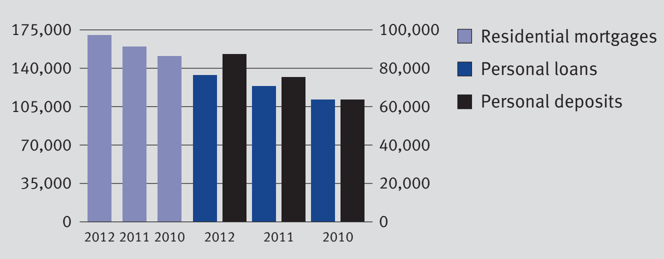
Average residential mortgages were up 7% over last year supported by the continued low interest rate environment and moderating but solid housing market activity. Average personal loans grew by 8% from last year largely due to strong growth in our home equity products and our consumer and auto finance businesses reflecting the continued low interest rate environment. Average personal deposits grew by 16% from last year reflecting strong growth through our advisory channel, as new and existing clients continued to use savings and other deposit products, due to ongoing uncertainty in global markets.

Selected highlights — Table 16

	IFRS		Canadian GAAP
(Millions of Canadian dollars, except number of)	**2012**	2011	2010
Total revenue	**$ 6,591**	$ 6,192	$ 5,760
Other information (average)			
Residential mortgages	**170,400**	159,700	151,000
Personal loans	**76,300**	70,500	63,700
Personal deposits	**87,300**	75,200	63,700
Personal GICs	**59,100**	56,900	58,300
Branch mutual fund balances (1)	**82,300**	74,500	70,100
AUA – Self-directed brokerage (1)	**48,900**	45,500	42,400
New deposit accounts opened (thousands)	**1,204**	1,158	968
Number of:			
Branches	**1,239**	1,214	1,209
ATM	**4,724**	4,293	4,227

(1) Represents year-end spot balances.

Average residential mortgages, personal loans and deposits
(Millions of Canadian dollars)



Business Financial Services

Business Financial Services offers a wide range of lending, leasing, deposit, investment, foreign exchange, cash management and trade products and services to small, medium-sized and commercial businesses, agriculture and agribusiness clients across Canada. Our extensive business banking network includes over 100 business banking centers and over 2,000 business account managers. Our strong commitment to our clients has resulted in our leading market share in business loans and deposits.

Financial performance
Total revenue increased $144 million or 5% compared to the prior year, reflecting strong volume growth in business deposits and business loans, partially offset by lower spreads.

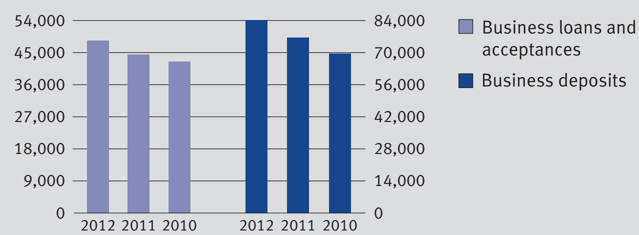
Average business deposits were up 10% and average loans increased 9% mainly reflecting increased volumes due to an expansion of our sales force.

Selected highlights **Table 17**

	IFRS		Canadian GAAP
(Millions of Canadian dollars)	2012	2011	2010
Total revenue	$ 2,894	$ 2,750	$ 2,557
Other information (average)			
Business loans and acceptances	48,300	44,200	42,400
Business deposits (1)	83,900	76,500	69,400

(1) Includes GIC balances.

Average business loans and acceptances and business deposits
(Millions of Canadian dollars)



Cards and Payment Solutions

Cards and Payment Solutions provides a wide array of convenient and customized credit cards and related payment products and solutions within Canada. We have over 6 million credit card accounts and have approximately 21% market share of Canada's credit card purchase volume.

In addition, this business line includes our 50% interest in Moneris Solutions, Inc., our merchant card processing joint venture with the Bank of Montreal.

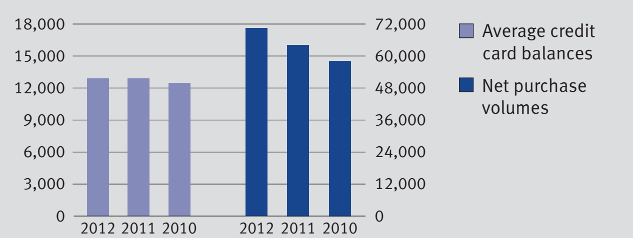
Financial performance
Total revenue increased $73 million or 3%, compared to the prior year reflecting higher credit card transaction volumes and higher spreads. The prior year included a gain on sale of Canadian Banking's remaining Visa shares of $29 million which favourably impacted revenue in that year.

Average credit card balances were flat. Strong net purchase volume growth of 10% was driven by strong loyalty programs and new product launches.

Selected highlights **Table 18**

	IFRS		Canadian GAAP
(Millions of Canadian dollars)	2012	2011	2010
Total revenue	$ 2,330	$ 2,257	$ 2,238
Other information			
Average credit card balances	12,900	12,900	12,500
Net purchase volumes	70,500	64,300	58,400

Average credit card balances and net purchase volumes
(Millions of Canadian dollars)



Caribbean & U.S. Banking

Our Caribbean banking business offers a comprehensive suite of banking products and services, as well as international financing and trade promotion services through an extensive branch and ATM network, and online banking.

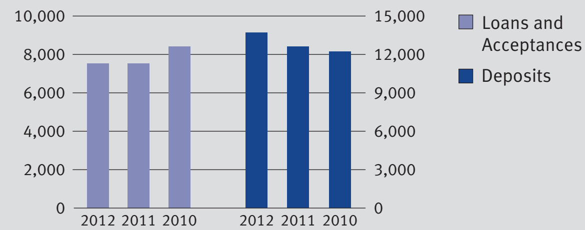
Our U.S. retail banking operations include our cross-border banking business which serves the needs of our Canadian clients within the U.S., offering a broad range of financial products and services to individuals across all 50 states.

Financial performance
Total revenue was relatively flat compared to the prior year as the favourable impact from the weaker Canadian dollar was largely offset by lower loans and transaction volumes in our Caribbean business reflecting unfavourable economic conditions in the region.

Average loans and acceptances were flat compared to last year, as the favourable impact of the weaker Canadian dollar was largely offset by lower loan balances in the Caribbean as noted above. Average deposits increased $1.0 billion or 8%, mainly due to deposit growth in our U.S. banking business.

Selected highlights			Table 19
	IFRS		Canadian GAAP
(Millions of Canadian dollars)	2012	2011	2010
Total revenue	$ 828	$ 826	$ 846
Other information			
Net interest margin	5.21%	5.52%	5.60%
Average loans and acceptances	7,500	7,500	8,400
Average deposits	13,600	12,600	12,200
AUA	8,100	7,900	7,800
AUM	3,100	2,700	2,600
Average AUA	8,000	7,500	7,600
Average AUM	2,800	2,600	2,800
Number of:			
Branches	121	123	127
ATM	341	333	330

Average loans and deposits (Millions of Canadian dollars)



Wealth Management

Wealth Management comprises Canadian Wealth Management, U.S. & International Wealth Management and Global Asset Management. We serve affluent, high net worth and ultra high net worth clients in Canada, the U.S., the U.K., Europe, and Emerging Markets with a comprehensive suite of investment, trust, banking, credit and other wealth management solutions. We also provide asset management products and services directly to institutional and individual clients as well as through RBC distribution channels and third-party distributors. Our competitive environment is discussed below in each business.

Economic and market review

Global capital markets conditions improved in the early half of 2012 as compared to the challenging market conditions in the latter half of last year, driving higher average fee-based client assets reflecting capital appreciation and net sales. However, investor confidence remained uncertain and negatively impacted our transaction volumes throughout the year, reflecting the weakening global economy and the deteriorating economic conditions in certain European countries particularly in the latter half of the year. The continued low interest rate environment resulted in spread compression and money market fee waivers.

Year in review

- We have completed two years of the five-year transformation of our business to deliver integrated global wealth management advice, solutions and services to high net worth and ultra high net worth clients. In 2012 we were recognized as a top 10 global wealth manager, ranking sixth globally by assets for the second consecutive year in Scorpio Partnership's 2012 Global Private Banking KPI Benchmark. We also received numerous Canadian, U.S. and international awards, reflecting the strength of our global capabilities and commitment to client service. In June 2012, we announced our partnership with Capgemini with the launch of the 2012 World Wealth Report and the 2012 Asia-Pacific Wealth Report, widely considered as the global benchmarks in wealth management thought leadership. This partnership further strengthens our brand and reputation globally.
- In Canada, we extended our market share leadership in our retail asset management business to 14.6% as well as in our full service wealth management business, where we lead the industry in high net worth market share.
- In the U.S., client assets grew by 8% and we continued our focus on improving advisor productivity and efficiency although the challenging environment continued to impact transaction volumes.
- On May 31, 2012, we completed the acquisition of the Latin American, Caribbean and African private banking business of Coutts, the wealth division of The Royal Bank of Scotland Group plc, with client assets of approximately US$2 billion. The business includes key private banking staff based primarily in Geneva, Switzerland along with a team in the Cayman Islands.
- We leveraged our leading fixed income and Emerging Markets expertise of BlueBay Asset Management through the launch of multiple funds in Canada and the U.S., as well as the addition of BlueBay offshore funds to platforms in the U.K. and Emerging Markets.

Outlook and priorities

Global market volatility, investor uncertainty and low interest rates are expected to continue in the early half of 2013 due to the impact of the European sovereign debt crisis, resulting in ongoing pressure on our transaction volumes. As the low interest rate environment is expected to continue in 2013, we anticipate continuing money market fund fee waivers in the U.S. and ongoing spread compression. Despite the overall economic uncertainty and uncertain equity markets, we expect global growth in private wealth will be driven by high net worth individuals, particularly in Emerging Markets. To capitalize on this growth, we will continue to build in the U.K. and Emerging Markets. For further details on our general economic review and outlook, refer to the Economic and market review and outlook section.

Key strategic priorities for 2013

- Continue to organically and through selective acquisitions build a high-performing global asset management business that is complementary to and coordinated with our geographic wealth businesses.
- In our wealth business: (i) extend our industry-leading share of high net worth client assets in Canada and expand share globally through recruiting and by delivering an integrated approach to wealth management; (ii) improve advisor and professional productivity and operating efficiencies in our U.S. wealth management and Global Trust businesses; and (iii) continue our long-term build in the U.K. and key Emerging Markets, particularly in Hong Kong, Singapore, Switzerland and Brazil.
- Deliver best-in-class service and support to our client-facing professionals through our global support teams, accelerate our operations and technology investments to achieve global operating efficiencies, leverage segment and enterprise capabilities to deliver value to our clients and maintain a disciplined approach to cost management.
- Continue to capitalize on our strength and stability and Canadian heritage through continued investment in our global brand to drive further growth in our wealth and asset management businesses in Canada and globally.

Wealth Management financial highlights — Table 20

(Millions of Canadian dollars, except number of and percentage amounts and as otherwise noted)	IFRS 2012	IFRS 2011	Canadian GAAP 2010
Net interest income	$ 393	$ 365	$ 305
Non-interest income			
Fee-based revenue	2,964	2,821	2,362
Transactional and other revenue	1,478	1,522	1,521
Total revenue	4,835	4,708	4,188
PCL	(1)	–	3
Non-interest expense	3,796	3,586	3,295
Net income before income taxes	1,040	1,122	890
Net income	$ 763	$ 811	$ 669
Revenue by business			
Canadian Wealth Management	$ 1,741	$ 1,724	$ 1,502
U.S. & International Wealth Management	1,977	1,948	1,949
U.S. & International Wealth Management (US$ millions)	1,973	1,980	1,878
Global Asset Management	1,117	1,036	737
Key ratios			
ROE	14.1%	15.9%	17.6%
Pre-tax margin (1)	21.5%	23.8%	21.3%
Selected average balance sheet information			
Total assets	$ 20,900	$ 20,900	$ 18,400
Loans and acceptances	9,900	8,200	6,800
Deposits	29,200	28,200	29,000
Attributed capital	5,150	4,850	3,650
Risk capital	1,400	1,200	1,000
Other information			
Revenue per advisor (000s) (2)	$ 793	$ 784	$ 703
AUA	577,800	527,200	521,600
AUM	339,600	305,700	261,800
Average AUA	554,800	532,300	505,300
Average AUM	322,500	302,800	251,900
Number of employees (FTE)	10,670	10,564	10,107
Number of advisors (3)	4,388	4,281	4,188

Estimated impact of U.S. translation on key income statement items	2012 vs. 2011
Increase (decrease):	
Total revenue	20
Non-interest expense	25
Percentage change in average US$ equivalent of C$1.00	(2)%

(1) Pre-tax margin is defined as net income before income taxes divided by total revenue.
(2) Represents investment advisors and financial consultants of our Canadian and U.S. full-service wealth businesses.
(3) Represents client-facing advisors across all our wealth management businesses.

Financial performance

2012 vs. 2011

Net income decreased $48 million or 6% from a year ago, mainly due to lower transaction volumes partially offset by higher average fee-based client assets and a lower effective tax rate. In addition, our current year results included the unfavourable impact of certain regulatory and legal matters of $29 million ($21 million after-tax) and the prior year results included favourable accounting and tax adjustments of $39 million after-tax.

Total revenue increased $127 million or 3%, mainly due to higher average fee-based client assets across all business lines resulting from capital appreciation and net sales, and volume growth in loans and deposits. The increase in fair value of our U.S. share-based compensation plan and the favourable impact of the weaker Canadian dollar also contributed to the increase. These factors were partially offset by lower transaction volumes.

Non-interest expense increased $210 million or 6%, mainly due to higher staff levels and infrastructure investments in support of business growth. The unfavourable impact of certain regulatory and legal matters noted above and the unfavourable impact of the weaker Canadian dollar also contributed to the increase. In addition, our prior year results included favourable accounting adjustments related to our deferred compensation plan of $42 million.

2011 vs. 2010

Net income increased as compared to 2010 mainly due to higher average fee-based client assets and increased transaction volumes. These factors were partially offset by higher costs in support of business growth.

Total revenue increased mainly due to higher average fee-based client assets resulting from capital appreciation, net sales and the inclusion of our BlueBay acquisition. Higher transaction volumes reflecting improved market conditions and investor confidence in the first half of the year also contributed to the increase. These factors were partially offset by the impact of a stronger Canadian dollar.

Non-interest expense increased mainly due to higher costs in support of business growth, largely reflecting the inclusion of our BlueBay acquisition and higher variable compensation driven by higher commission-based revenue. These factors were partially offset by accounting adjustments related to our deferred compensation liability and the impact of a stronger Canadian dollar.

Canadian Wealth Management

Canadian Wealth Management includes our full-service Canadian wealth advisory business, which is the largest as measured by AUA, with over 1,500 investment advisors providing comprehensive advice-based financial solutions to affluent, high and ultra high net worth clients. Additionally, we provide discretionary investment management and estate and trust services to our clients through close to 60 investment counsellors and close to 120 trust professionals in locations across Canada. We also serve international clients through a team of over 25 private bankers in key centres across Canada.

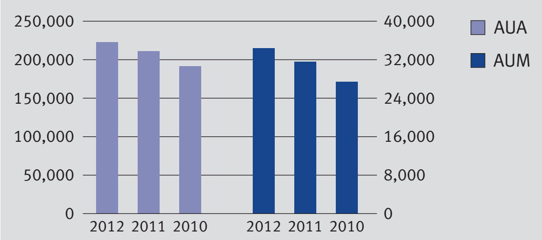
We compete with domestic banks and trust companies, investment counselling firms, bank-owned full service brokerages and boutique brokerages, mutual fund companies and global private banks. In Canada, bank-owned wealth managers continue to be the major players.

Financial performance
Revenue increased $17 million or 1%. The 10% increase in AUA from a year ago reflecting capital appreciation and net sales was offset by lower transaction volumes.

Selected highlights — **Table 21**

	IFRS		Canadian GAAP
(Millions of Canadian dollars)	**2012**	2011	2010
Total revenue	**$ 1,741**	$ 1,724	$ 1,502
Other information			
AUA	**230,400**	209,700	201,200
AUM	**36,100**	31,700	29,700
Average AUA	**222,100**	210,900	191,600
Average AUM	**34,400**	31,500	27,400
Total assets under fee-based programs	**120,700**	109,000	102,000

Average AUA and AUM (1) (Millions of Canadian dollars)



(1) Represents average balances, which are more representative of the impact client balances have upon our revenue.

U.S. & International Wealth Management

U.S. Wealth Management includes our private client group, which is the 7th largest full-service wealth advisory firm in the U.S., as measured by number of advisors, with close to 2,000 financial advisors. It also serves international clients through a team of more than 70 financial advisors and private bankers in key centres across the U.S. Additionally, our correspondent and advisor services businesses deliver clearing and execution services for small to mid-sized independent broker-dealers and registered investment advisor firms. In the U.S., we operate in a fragmented and extremely competitive industry. There are approximately 4,500 registered broker-dealers in the U.S., comprising independent, regional and global players.

International Wealth Management includes Global Trust, Wealth Management – U.K., and Wealth Management – Emerging Markets. We provide customized and integrated trust, banking, credit, and investment solutions to high and ultra high net worth clients and corporate clients with over 1,500 employees located in 18 countries around the world. Competitors in International Wealth Management comprise global wealth managers, traditional offshore private banks, domestic wealth managers and U.S. investment-led private client operations.

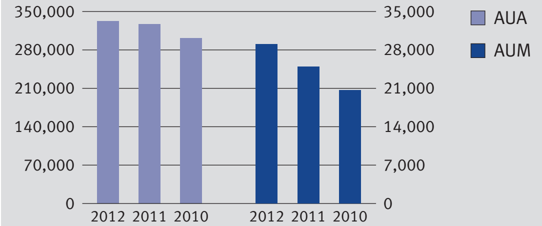
Financial performance
Revenue increased $29 million or 1% from a year ago. In U.S. dollars, revenue was relatively flat as volume growth in loans, the 9% increase in assets under administration reflecting capital appreciation and the increase in the fair value of our U.S. share-based compensation plan were largely offset by lower transaction volumes.

Selected highlights **Table 22**

(Millions of Canadian dollars)	IFRS 2012	IFRS 2011	Canadian GAAP 2010
Total revenue	$ **1,977**	$ 1,948	$ 1,949
Other Information (US $ millions)			
Total revenue	**1,973**	1,980	1,878
Total loans, guarantees and letters of credit (1)	**10,200**	8,800	7,500
Total deposits (1)	**17,200**	17,400	17,500
AUA	**347,800**	318,600	314,000
AUM	**31,300**	26,900	22,500
Average AUA	**331,700**	326,500	300,700
Average AUM	**29,000**	24,900	20,600
Total assets under fee-based programs (2)	**71,700**	66,900	62,900

(1) Represents an average amount, which is calculated using methods intended to approximate the average of the daily balances for the period.
(2) Represents amounts related to our U.S. wealth management businesses.

Average AUA and AUM (1) (Millions of U.S. dollars)



(1) Represents average balances, which are more representative of the impact client balances have upon our revenue.

Global Asset Management

Global Asset Management provides global investment management services and solutions for individual and institutional investors in Canada, the U.S., U.K., Europe and Emerging Markets. We provide a broad range of investment management services through mutual, pooled and hedge funds, fee-based accounts and separately managed portfolios. We distribute our investment solutions through a broad network of bank branches, our self-directed and full-service wealth advisory businesses, independent third party advisors and directly to individual clients. We also provide investment solutions directly to institutional clients, including pension plans, endowments and foundations.

We are the largest retail fund company in Canada as well as a leading institutional asset manager. We face competition in Canada from major banks, insurance companies, asset management organizations and boutique firms. The Canadian fund management industry is large and mature, but still a relatively fragmented industry.

In the U.S., our asset management business offers investment management solutions and services primarily to institutional investors and competes with independent asset management firms, as well as those that are part of national and international banks, insurance companies and boutique asset managers.

Internationally, through our leading global capabilities of U.K.-based BlueBay Asset Management, we offer investment management solutions for institutions and, through private banks including RBC Wealth Management, to high net worth and ultra high net worth investors. We face competition from asset managers that are part of international banks as well as national, regional and boutique asset managers in the geographies where we serve clients.

Financial performance

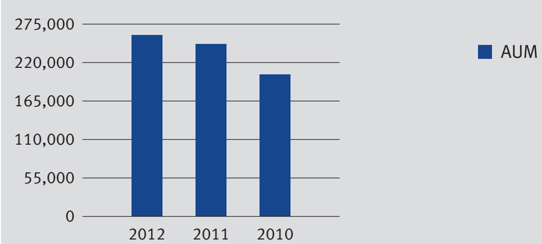
Total revenue increased $81 million or 8% from a year ago, mainly due to the 10% increase in AUM reflecting capital appreciation and net sales.

Selected highlights **Table 23**

(Millions of Canadian dollars)	IFRS 2012	IFRS 2011	Canadian GAAP 2010
Total revenue (1)	$ **1,117**	$ 1,036	$ 737
Other information			
Canadian net long-term mutual fund sales	**7,906**	7,300	6,400
Canadian net money market mutual fund (redemptions) sales	**(1,981)**	(3,400)	(8,700)
AUM	**272,200**	247,200	209,200
Average AUM	**259,100**	246,700	203,000

(1) Includes BlueBay results which are reported on a one-month lag.

Average AUM (1) (Millions of Canadian dollars)



(1) Represents average balances, which are more representative of the impact client balances have upon our revenue.

Insurance

Insurance comprises our insurance operations in Canada and globally and operates under two business lines: Canadian Insurance and International & Other. In Canada, we offer our products and services through our proprietary distribution channels, comprised of the field sales force which includes retail insurance branches, our field sales representatives, call centers and online, as well as through independent insurance advisors and travel agencies. Outside North America, we operate in reinsurance markets globally. Our competitive environment is discussed below in each business.

Economic and market review

Low interest rates, global market conditions and changes in the regulatory environment continued to impact the insurance marketplace resulting in price increases, product withdrawals and competitors exiting certain lines of business. These factors have impacted our businesses; however, product and pricing actions taken in the current and prior years, conservative investment practices and diversified mix of business have mitigated this challenging environment and enabled continued earnings growth.

Year in review

- In Canada, we continued to improve our distribution efficiency through the integration of our retail insurance branches and career sales force into our new field sales channel. This new integrated channel facilitates the delivery of advice-based solutions, enhances the overall client experience and increases cross-sell opportunities.
- During the third quarter, the Canadian Life and Health business suspended sales of certain life and health products in response to overall economic conditions, including the prolonged low interest rate environment. These actions continued to shift our sales mix toward higher margin products that align with our profitability targets.
- Ontario auto reforms, which were first introduced in September 2010, resulted in improved auto claims experience during the year. The reforms, coupled with pricing actions and fraud management, resulted in strong earnings growth in our Home and Auto businesses.
- In the U.S., we began to wind down our U.S. travel insurance business, while maintaining key cross-border relationships.
- Internationally, we continued to work well with our existing partners and added new counterparties to grow our diversified business, reflecting our strong credit rating and our expertise.

Outlook and priorities

In 2013, as a result of product and pricing actions taken and investments in our proprietary channels, we expect continued profitable growth. In particular, the low interest rate environment continues to adversely impact margins on sales of certain life insurance products and interest rate related actuarial assumptions. We expect the product and pricing actions taken, increasing volumes through our growing proprietary channels and execution of cost management initiatives will mitigate this challenging environment. The positive claims trend resulting from Ontario Auto Reforms and various initiatives across our claims operations are expected to continue. For further details on our general economic review and outlook, refer to the Economic and market review and outlook section.

Key strategic priorities for 2013

- Leverage the field sales force through implementation of performance management processes, while continuing to deliver a variety of insurance products and services to our clients through advice-based cross-sell strategies.
- Deepen client relationships by continuing to provide our customers with a comprehensive suite of insurance products and services based on their unique family needs.
- Actively manage our Life & Health product portfolios to ensure the adverse impact of the interest rate environment is addressed through product mix and pricing decisions.
- Continue to simplify the way we do business by streamlining all business processes to ensure that clients find it easy to do business with us, while diligently managing our expenses.
- Pursue select international niche opportunities, within our risk appetite, with the aim of continuing to grow our core reinsurance business.

Insurance financial highlights **Table 24**

	IFRS		Canadian GAAP
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	2012	2011	2010
Non-interest income			
Net earned premiums	$ 3,705	$ 3,533	$ 3,313
Investment income (1)	929	703	928
Fee income	263	239	248
Total revenue	4,897	4,475	4,489
Insurance policyholder benefits and claims (1)	3,055	2,757	2,989
Insurance policyholder acquisition expense	566	601	557
Non-interest expense	515	498	468
Net income before income taxes	761	619	475
Net income	$ 714	$ 600	$ 491
Revenue by business line			
Canadian Insurance	$ 2,992	$ 2,676	$ 2,756
International & Other Insurance	1,905	1,799	1,733
Key ratios			
ROE	46.8%	37.6%	37.2%
Selected average balance sheet information			
Total assets	$ 11,500	$ 10,500	$ 9,900
Attributed capital	1,500	1,550	1,300
Risk capital	1,350	1,400	1,150
Other information			
Premiums and deposits (2)	$ 4,849	$ 4,701	$ 4,457
Canadian Insurance	2,362	2,355	2,191
International & Other Insurance	2,487	2,346	2,266
Insurance claims and policy benefit liabilities	$ 7,921	$ 7,119	$ 6,273
Fair value changes on investments backing policyholder liabilities (1)	410	214	389
Embedded value (3)	5,861	5,327	5,466
AUM	300	300	300
Number of employees (FTE)	2,744	2,859	2,724

(1) Investment income can experience volatility arising from fluctuation in the fair value of Fair Value Through Profit or Loss (FVTPL) assets. The investments which support actuarial liabilities are predominantly fixed income assets designated as FVTPL. Consequently changes in the fair values of these assets are recorded in investment income in the consolidated statements of income and are largely offset by changes in the fair value of the actuarial liabilities, the impact of which is reflected in insurance policyholder benefits and claims.

(2) Premiums and deposits include premiums on risk-based insurance and annuity products, and individual and group segregated fund deposits, consistent with insurance industry practices.

(3) Embedded value is defined as the sum of value of equity held in our Insurance segment and the value of in-force business (existing policies). For further details, refer to the Key performance and non-GAAP measures section.

Financial performance
2012 vs. 2011
Net income increased $114 million or 19%, mainly due to lower claims costs in disability, home and auto products and the reduction of policy acquisition cost-related liabilities of $33 million ($24 million after-tax) reflecting changes to our proprietary distribution channel. Higher net investment gains and volume growth in our reinsurance products also contributed to the increase. These factors were partially offset by higher claims costs in our reinsurance products.

Total revenue increased $422 million or 9%, mainly due to volume growth across reinsurance, life and home and auto products and the change in fair value of investments backing our policyholder liabilities, which was largely offset in PBCAE.

PBCAE increased $263 million or 8%, mainly due to the change in fair value of investments backing our policyholder liabilities, largely offset in revenue, and volume growth across reinsurance, life, home and auto products. These factors were partially offset by lower claims costs in disability, home and auto products and the reduction of policy acquisition cost-related liabilities as noted above.

Non-interest expense increased $17 million or 3%, mainly due to higher costs in support of business growth, partially offset by our ongoing focus on cost management.

Premiums and deposits were up $148 million or 3%, reflecting volume growth, mainly in International & Other and strong client retention.

Embedded value increased $534 million or 10%, reflecting favourable experience adjustments and the impact of declining discount rates. These factors were partially offset by the transfer of capital from our insurance businesses through dividend payments. For further details, refer to the Key performance and non-GAAP measures section.

2011 vs. 2010
Net income increased from 2010 mainly due to lower claims costs in our reinsurance, auto and disability products, solid volume growth across all businesses and favourable actuarial adjustments. These factors were partially offset by lower net investment gains in 2011.

Total revenue decreased as solid volume growth across all businesses was more than offset by the change in fair value of investments mainly backing our Canadian life policyholder liabilities, lower net investment gains and the impact of the stronger Canadian dollar. The change in fair value of investments was largely offset in PBCAE.

PBCAE decreased primarily due to the change in fair value of investments as noted above, lower claims costs in our reinsurance, auto and disability products and favourable actuarial adjustments reflecting management actions and assumption changes. These factors were partially offset by higher costs due to solid volume growth across all businesses.

Non-interest expense increased mainly in our Canadian businesses in support of business growth and strategic initiatives.

Business line review

Canadian Insurance

We offer life, health, property and casualty insurance products as well as wealth accumulation solutions, to individual and group clients across Canada. Our life and health portfolio includes universal life, term life, critical illness, disability, long-term care insurance and group benefits. We offer a wide range of property and casualty products including home, auto and travel insurance. Our travel products include out of province/country medical coverage, trip cancellation insurance and interruption insurance.

In Canada, we compete against over 200 insurance companies, with the majority of the organizations specializing in either life and health, or property and casualty products. We hold a leading market position in travel insurance products, have a significant presence in life and health products, and have a growing presence in the home and auto markets.

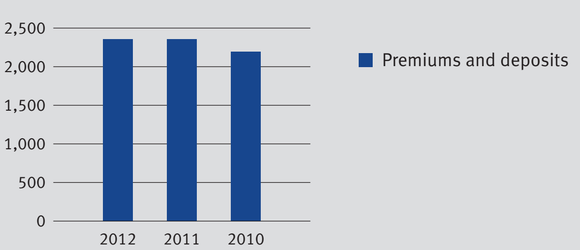
Financial performance
Total revenue increased $316 million or 12% from last year, mainly due to the change in fair value of investments backing our policyholder liabilities, largely offset in PBCAE, and volume growth across most products.

Premiums and deposits were relatively flat as sales growth in home, auto, life, and health and continued strong client retention were mostly offset by lower sales in travel products.

Selected highlights **Table 25**

	IFRS		Canadian GAAP
(Millions of Canadian dollars)	**2012**	2011	2010
Total revenue	**$ 2,992**	$ 2,676	$ 2,756
Other information			
Premiums and deposits			
Life and health	**1,280**	1,274	1,249
Property and casualty	**965**	962	859
Annuity and segregated fund deposits	**117**	119	83
Fair Value changes on investments backing policyholder liabilities	**408**	209	382

Premiums and deposits (Millions of Canadian dollars)



International & Other Insurance

International & Other Insurance is primarily comprised of our reinsurance businesses which insure risks of other insurance and reinsurance companies. We offer life and health, accident, annuity and trade credit reinsurance products.

The global reinsurance market is dominated by a few large players, with significant presence in the U.S., U.K. and Eurozone. The reinsurance industry is competitive but barriers to entry remain high.

Financial performance

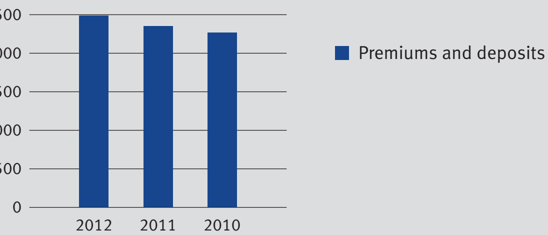
Total revenue increased $106 million or 6%, mainly due to volume growth in our U.K. annuity and European life products.

Premiums and deposits increased $141 million, or 6% reflecting volume growth in our major reinsurance product lines as noted above.

Selected highlights **Table 26**

	IFRS		Canadian GAAP
(Millions of Canadian dollars)	**2012**	2011	2010
Total revenue	**$ 1,905**	$ 1,799	$ 1,733
Other information			
Premiums and deposits			
Life and health	**1,980**	1,969	1,895
Property and casualty	**56**	38	50
Annuity	**451**	339	321

Premiums and deposits (Millions of Canadian dollars)



Investor & Treasury Services

Investor & Treasury Services offers global custody and fund administration, as well as an integrated suite of products and services to institutional investors worldwide. We also provide cash management, correspondent banking and trade finance services to financial institutions globally and funding and liquidity management for RBC as well as other select institutions. We are a top 10 global custodian by assets under administration with a worldwide network of offices in 15 countries. While we compete against the world's largest global custodians, we remain a specialist service provider and our correspondent banking business competes primarily with major Canadian banks.

Economic and market review

Although global capital markets improved in the first half of 2012 as compared to the challenging market conditions in the latter half of last year, investor confidence remained uncertain reflecting ongoing concerns related to European sovereign debt. As a result, our transaction volumes were negatively impacted throughout the year.

Year in review

- On July 27, 2012, we completed the acquisition of the remaining 50% stake in RBC Dexia and the business was rebranded RBC Investor Services. Full ownership of RBC Investor Services should deliver key synergies that we believe will enable us to leverage our leadership in capital markets and wealth management globally to access new business and increase cross-sell opportunities. Our current year includes three months of results reflecting full ownership of RBC Investor Services.
- With the acquisition, we also reorganized our investor services, correspondent banking and treasury services businesses under our newly created Investor & Treasury Services segment to better align our operating structure with our enhanced focus on financial institutions and institutional investing clients.
- In 2012, we continued to rank among the top 10 global custodians by assets under administration. We were also ranked best custodian overall (Global Investor) and custodian of the year in Canada (Custody Risk Americas Awards).

Outlook and priorities

In 2013, we expect to leverage our strong reputation, brand and financial strength to provide custody, treasury and payment services. We anticipate that uncertainty in global markets will continue due to ongoing concerns related to the European sovereign debt crisis which will negatively impact our business through lower transaction volumes. However, we believe there are strong long-term prospects for our business, largely due to the importance of global custody and related services in a low interest rate environment. This newly created segment will allow us to offer various benefits to our clients that stem from our ability to provide seamless and integrated product offerings. For further details on our general economic review and outlook, refer to the Economic and market review and outlook section.

Key strategic priorities for 2013

- Continue to capitalize on our wholesale deposit gathering and liability origination strategies aligned with our enterprise funding and liquidity requirements.
- Grow revenue in our correspondent banking business by increasing our focus on fee generation to offset the unfavourable impact of the low interest rate environment.
- Evolve our capabilities in custodial, fund administration, financing and other services to deliver a globally integrated client experience.
- Integrate and streamline our cash, collateral and excess liquidity management processes for our businesses and our clients in order to improve efficiency.

Investor & Treasury Services financial highlights **Table 27**

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	IFRS 2012	IFRS 2011	Canadian GAAP 2010
Net interest income	$ 668	$ 573	$ 498
Non-interest income	657	569	623
Total revenue	1,325	1,142	1,121
PCL	–	–	15
Non-interest expense	1,134	821	783
Net income before income taxes and NCI in subsidiaries	191	321	323
Net income	$ 85	$ 230	$ 222
Key ratios			
ROE	4.3%	18.4%	19.7%
Selected average balance sheet information			
Total assets	$ 73,600	$ 70,000	$ 60,400
Deposits	102,200	103,200	93,100
Attributed capital	1,700	1,200	1,050
Other information			
Economic profit (1)	$ 107	$ 133	$ 131
AUA	2,886,900	2,744,400	2,779,500
Average AUA	2,781,800	2,825,100	2,544,500
Number of employees (FTE) (2)	6,084	112	108

(1) Economic profit is a non-GAAP measure. For further details, refer to the Key performance and non-GAAP measures section.
(2) On July 27, 2012, we completed our acquisition of the remaining 50% stake in RBC Dexia. Prior to this acquisition, FTE numbers do not include our RBC Dexia joint venture.

Financial performance
2012 vs. 2011
Net income decreased $145 million or 63%, driven by a loss of $224 million ($213 million after-tax) related to the acquisition of the remaining 50% stake in RBC Dexia. Excluding this loss, net income increased $68 million or 30%. The increase was mainly due to higher funding and liquidity trading results reflecting improved market conditions. This was partially offset by lower foreign exchange revenue and decreased custodial fees resulting from lower margins.

Total revenue increased $183 million or 16% which included our proportionate share of the loss of $36 million ($26 million after-tax) recorded by RBC Dexia from the securities exchange with Dexia Group and trading losses on the sale of a majority of the securities received in the exchange. Excluding this loss, total revenue increased $219 million or 19%, largely related to higher funding and liquidity trading revenue across all geographies, driven by improved market liquidity, tightening credit spreads, and favourable market conditions as compared to the challenging conditions in the latter half of last year. Higher interest income on assets held for liquidity purposes and a full quarter of revenue related to our additional 50% ownership of RBC Investor Services, partially offset by lower foreign exchange revenue and decreased custodial fees resulting from lower margins, also contributed to the increase. The increase in revenue was partially offset by the unfavourable impact of the depreciation of the Euro against the Canadian dollar.

Non-interest expense increased $313 million or 38% which included an impairment loss related to our investment in RBC Dexia and other costs related to this acquisition of $188 million ($187 million after-tax). Excluding these costs, non-interest expense increased $125 million or 15%, mainly due to a full quarter of costs related to our additional 50% ownership of RBC Investor Services. Higher staff costs, including increased variable compensation on improved results also contributed to the increase. These factors were partially offset by the depreciation of the Euro against the Canadian dollar.

Results excluding the loss related to the acquisition of the remaining 50% stake in RBC Dexia noted above are non-GAAP measures. For further details, including a reconciliation, refer to the Key performance and non-GAAP measures section.

2011 vs. 2010
Net income increased from the prior year mainly related to higher earnings in our custodial services business, primarily driven by increased transaction volumes and higher average fee-based client assets. Higher volumes in our correspondent banking business also contributed to the increase. These factors were partially offset by losses on certain of our European and U.S. money market securities and lower fair values on our non-trading derivatives.

Total revenue was higher in 2011 as compared to 2010, largely reflecting business growth and improved spreads on client cash deposits in our custodial services. A favourable adjustment in 2011 related to a change in our allocation of long-term funding costs and higher cash management fees also contributed to the increase. These factors were partially offset by losses on certain of our money market securities, lower fair values on our non-trading derivatives, and the unfavourable impact of the stronger Canadian dollar.

In 2011, there was no provision for credit losses as compared to a provision on certain accounts in 2010.

Non-interest expense increased mainly due to higher costs in support of infrastructure spend for growth and control initiatives, partially offset by lower variable compensation and the impact of the stronger Canadian dollar.

Capital Markets

Capital Markets comprises the majority of our global wholesale banking businesses providing public and private companies, institutional investors, governments and central banks with a wide range of products and services across our two main business lines, Global Markets and Corporate and Investment Banking. Our legacy portfolio is grouped under Other, as discussed in our Other section below. As part of our announced reorganization, we transferred our correspondent banking and treasury services businesses from Capital Markets to our Investor & Treasury Services segment. For details on the reorganization, refer to the About Royal Bank of Canada section.

In North America, we offer a full suite of products and services which include corporate and investment banking, equity and debt origination and distribution, and structuring and trading. Outside North America, we have a select presence in the U.K. and Europe and Asia Pacific, where we offer a diversified set of capabilities in our key sectors of expertise such as energy, mining and infrastructure.

In Canada, we compete mainly with Canadian banks where we are the premier global investment bank and market leader with a strategic presence in all lines of wholesale business. In the U.S., we have full industry sector coverage and investment banking product range and compete with large U.S. and global investment banks as well as smaller regional firms. In the U.K. and Europe, we compete in our key sectors of expertise with global and regional investment banks. In Asia Pacific, we compete with global and regional investment banks in select products, including fixed income distribution and currencies trading and investment banking.

Economic and market review

Global capital markets improved in the first half of 2012 primarily reflecting stabilizing market conditions particularly in the U.S. and Canada as compared to the challenging market conditions in the latter half of last year. Generally, European market conditions remained volatile as sovereign debt issues persisted.

Fixed income trading businesses strengthened largely in the U.S. and Canada, primarily due to higher client volumes, greater market liquidity and tightening credit spreads. Improvements in the U.S. market led to higher client activity and the low interest rate environment led to strong issuance activity throughout most of the year. Our corporate and investment banking businesses in the U.S. performed well, driven by higher lending, loan syndication, and debt and equity origination.

Year in review

- We continued to focus on rebalancing our corporate and investment banking and global markets businesses by redeploying capital from trading to lending and other investment banking businesses, and managing risks by narrowing our focus of trading products and reducing trading inventory positions particularly in the early part of the year, largely in our fixed income business. We also phased in Basel III ahead of many of our global peers and actively managed our businesses in compliance with the new capital requirements. Given this phase in, we increased our attributed capital by 39% and we delivered a ROE of 13.5%.
- In Canada, we extended our market leadership by winning new clients, strengthening our existing client relationships, and offering a full suite of global capabilities. We were named Best Investment Bank in Canada by Euromoney Magazine for the 5^{th} consecutive year and we continued to win significant mandates including acting as financial advisor to Glencore on their $7.5 billion proposed acquisition of Viterra.
- In the U.S., as a result of our key strategic investments made in recent years to expand our corporate and investment banking businesses, we developed new lending relationships and focused on our origination and client flow businesses. We continued to gain market share and won several significant mandates including lead financial and technical advisor to the Apollo Global Management led consortium on their $7.2 billion acquisition of El Paso's exploration and production assets.
- In the U.K. and Europe, after selectively expanding our investment banking businesses in recent years in our key sectors of expertise, we focused on gaining new clients and increasing our market positions. Despite challenging market conditions, we continued to win new mandates, including acting as financial advisor on the €3.2 billion acquisition of Open Grid Europe, our largest U.K. cross-border M&A deal.
- In Asia Pacific, we continued to focus on our fixed income trading distribution and foreign exchange trading capabilities. We also selectively grew our corporate and investment banking business in mining, energy and infrastructure and were ranked number one in Australia's M&A Advisor League table for the first half of 2012.
- As a result of our successes in each of our regions, we were ranked globally as the 10th largest investment bank by fees (Dealogic – published October 2, 2012), up from 12th for the same period last year.

Outlook and priorities

In 2013, as a result of strategic investments in our investment banking businesses in the U.S. in recent years, we expect continued growth in our lending, loan syndication, origination and advisory businesses, while remaining committed to our cost management initiatives. However, our overall growth may be impacted by increased competition in select markets and global economic uncertainties reflecting the U.S. fiscal cliff and European sovereign debt concerns.

Any growth in our trading businesses will be dependent on improved investor confidence and resolutions on several macroeconomic issues. We anticipate that global market volatility will continue to exist in the early half of 2013, as concerns surrounding the U.S. fiscal cliff and European sovereign debt will continue to persist. We further anticipate that certain regulatory reforms will unfavourably impact growth in our trading businesses.

For further details refer to our Risk management – Top and emerging risks section. For further details on our general economic outlook, refer to the Economic and market review and outlook section.

Key strategic priorities for 2013

- Extend our leading market position in Canada by focusing on execution and long-term client relationships, increasing our market share with small and medium sized companies and leveraging our global capabilities.
- Build on our momentum in the U.S. by leveraging industry sector coverage and deepening our client lending relationships to increase market share and drive fee-based revenues, while improving margins.
- Capitalize on our investments in the U.K. and Europe in both Corporate and Investment Banking and Global Markets.
- Continue to expand our distribution capabilities across Asia Pacific and selectively grow corporate and investment banking in our sectors of expertise.
- Deepen client relationships, optimize capital and effectively manage risk within the new regulatory and macroeconomic environment and leverage our recent investments in infrastructure and governance to drive efficiencies.

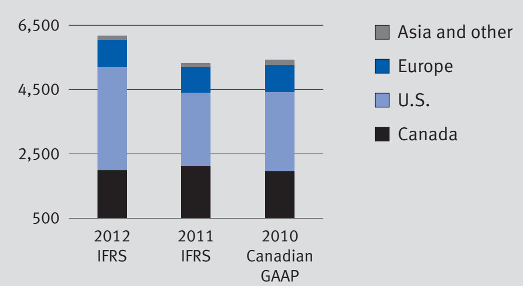
Capital Markets financial highlights — Table 28

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	IFRS 2012	IFRS 2011	Canadian GAAP 2010
Net interest income (1)	$ 2,559	$ 2,197	$ 2,283
Non-interest income	3,629	3,127	3,140
Total revenue (1)	6,188	5,324	5,423
PCL	135	(14)	5
Non-interest expense	3,746	3,487	3,242
Net income before income taxes and NCI in subsidiaries	2,307	1,851	2,176
Net income	$ 1,581	$ 1,292	$ 1,462
Revenue by business			
Global Markets	$ 3,635	$ 3,143	$ 3,495
Corporate and Investment Banking	2,533	2,371	1,952
Other	20	(190)	(24)
Key ratios			
ROE	13.5%	15.2%	18.3%
Selected average balance sheet information			
Total assets	$ 349,200	$ 322,000	$ 277,400
Trading securities	90,400	112,300	102,600
Loans and acceptances	47,000	35,300	25,400
Deposits	30,900	26,500	16,400
Attributed capital	11,150	8,000	7,650
Other information			
Number of employees (FTE)	3,533	3,510	3,291
Credit information			
Gross impaired loans as a % of average net loans and acceptances	0.83%	0.65%	1.48%
PCL on impaired loans as a % of average net loans and acceptances	0.29%	(0.04)%	0.02%

Estimated impact of U.S., British pound and Euro translation on key income statement items	**2012 vs. 2011**
Increase (decrease):	
Total revenue (pre-tax)	$ 65
Non-interest expense (pre-tax)	25
Net income	20
Percentage change in average US$ equivalent of C$1.00	(2)%
Percentage change in average British pound equivalent of C$1.00	(0)%
Percentage change in average Euro equivalent of C$1.00	6%

(1) The teb adjustment for 2012 was $431 million (2011 – $459 million, 2010 – $489 million). For further discussion, refer to the How we measure and report our business segments section.

Revenue by geography (Millions of Canadian dollars)



Financial performance
2012 vs. 2011

Net income increased $289 million or 22%, driven primarily by our global markets businesses due to higher fixed income trading results reflecting improved market conditions as compared to the challenging market conditions in the latter half of the prior year. Strong growth in our corporate and investment banking results driven by higher lending and increased loan syndication activity primarily in the U.S. also contributed to the increase. These factors were partially offset by higher PCL, as compared to recoveries in the prior year and a higher effective tax rate reflecting increased earnings in higher tax jurisdictions.

Total revenue increased $864 million or 16%, largely due to higher fixed income trading primarily driven by improved market conditions mainly in the U.S. as compared to the challenging market conditions in the latter half of the prior year, resulting in increased client activity, greater market liquidity and tightening credit spreads. In our corporate and investment banking businesses, strong client growth in lending and increased loan syndication activity, mainly in the U.S. also contributed to the increase.

PCL of $135 million compared to a recovery of $14 million in the prior year, largely reflected higher provisions on a few accounts in the current year.

Non-interest expense increased $259 million or 7%, mainly due to higher variable compensation on improved results. Higher costs in support of business growth, primarily in our corporate and investment banking businesses in the U.S. and U.K., and higher regulatory costs also contributed to the increase. This increase was partially offset by our ongoing focus on cost management activities.

2011 vs. 2010
Our net income for 2011 of $1,292 million decreased by $170 million or 12% as compared to 2010, mainly due to significantly lower fixed income trading results reflecting challenging market conditions, higher costs in support of infrastructure investments and business growth and the unfavourable impact of the stronger Canadian dollar. These factors were partially offset by strong growth in our corporate and investment banking businesses and higher debt origination activity in our global markets businesses. A recovery in PCL as compared to PCL expense in 2010 also partially offset the decrease. In addition, upon migration to IFRS accounting, our trading results were impacted in 2011 by a loss of $99 million ($65 million after-tax) on the consolidation of a special purpose entity and the unfavourable impact of $56 million ($41 million after-tax) translating foreign currency securities upon the transfer from held for trading under Canadian GAAP to AFS under IFRS.

For further details on the differences between IFRS and Canadian GAAP, refer to Note 3 of our Annual Consolidated Financial Statements.

Business line review

Global Markets

Global Markets comprises our fixed income, foreign exchange, equity sales and trading, repos and secured financing and commodities businesses. For debt and equity origination, revenues are allocated between Global Markets and Corporate and Investment Banking based on the contribution of each group in accordance with an established agreement.

Financial performance
Total revenue of $3,635 million increased $492 million or 16% as compared to the prior year.

Revenue in our Fixed income, currencies and commodities business increased $468 million or 30%, largely due to significantly higher fixed income trading revenue mainly in the U.S. from improved market conditions as compared to the challenging conditions in the latter half of the prior year, which resulted in higher client volumes, greater market liquidity and tightening credit spreads. These factors were partially offset by losses on fair value adjustments on certain RBC debt, resulting from the narrowing of our credit spreads as compared to gains in the prior year. In addition, the prior year was favourably impacted by gains related to MBIA of $102 million ($49 million after-tax and compensation adjustments).

Revenue in our Global equities business decreased $106 million or 10%, largely reflecting reduced fees and an industry-wide decrease in volumes impacting our cash equities and electronic trading businesses.

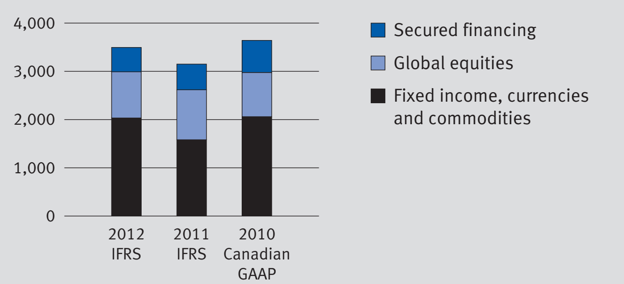
Revenue in our Repo and secured financing business increased $130 million or 25% mainly due to higher trading revenue reflecting wider spreads and increased client activity.

Selected highlights — **Table 29**

(Millions of Canadian dollars, except number of amounts)	IFRS 2012	IFRS 2011	Canadian GAAP 2010
Total revenue (1)	**$ 3,635**	$ 3,143	$ 3,495
Breakdown of revenue (1)			
Fixed income, currencies and commodities	**2,052**	1,584	2,033
Global equities	**927**	1,033	960
Repo and secured financing (2)	**656**	526	502
Other information			
Average assets	**311,700**	278,500	227,600
FTE	**1,452**	1,498	1,476

(1) The teb adjustment for 2012 was $421 million (2011 – $439 million, 2010 – $465 million). For further discussion, refer to the How we measure and report our business segments section.
(2) Repo and secured financing comprises our secured funding businesses for internal businesses and external clients.

Breakdown of total revenue (Millions of Canadian dollars)



Corporate and Investment Banking

Corporate and Investment Banking comprises our debt and equity origination, mergers and acquisitions advisory services, loan syndication, research, private equity, as well as corporate lending, client securitization, and global credit businesses.

Financial performance
Corporate and Investment Banking revenue of $2,533 million increased $162 million or 7%, as compared to the prior year.

Investment banking revenue increased $32 million or 2%, mainly in the U.S. driven by strong client growth in our loan syndication business and higher debt and equity origination reflecting solid issuance activity. Higher M&A activity largely reflecting increased mandates primarily in the U.S. and Asia Pacific also contributed to the increase. These factors were largely offset by lower debt origination and M&A activity in Canada.

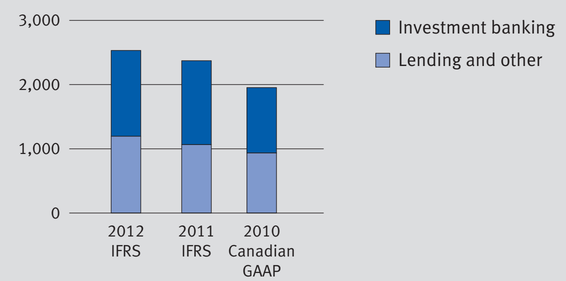
Lending and other revenue increased $130 million or 12%, mainly due to strong volume growth in our U.S. lending portfolio. This was partially offset by losses instead of gains in the prior year on credit default swaps used to economically hedge our corporate loan portfolio.

Selected highlights **Table 30**

(Millions of Canadian dollars, except number of amounts)	IFRS 2012	IFRS 2011	Canadian GAAP 2010
Total revenue (1)	**$ 2,533**	$ 2,371	$ 1,952
Breakdown of revenue (1)			
Investment banking	**1,338**	1,306	1,021
Lending and other (2)	**1,195**	1,065	931
Other information			
Average assets	**33,800**	21,300	19,100
FTE	**1,845**	1,793	1,590

(1) The teb adjustment for 2012 was $10 million (2011 – $20 million, 2010 – $24 million). For further discussion, refer to the How we measure and report our business segments section.
(2) Lending and other comprises our corporate lending, client securitization, and global credit businesses.

Breakdown of total revenue (Millions of Canadian dollars)



Other

Other comprises our legacy portfolio. In recent years, we have significantly reduced our legacy portfolio including our bank-owned life insurance (BOLI) stable value products, U.S. commercial mortgage-backed securities and U.S. auction rate securities (ARS).

Financial performance
Revenue of $20 million compared to a loss of $190 million last year, reflecting gains on BOLI stable value products as compared to losses in the prior year and a loss in the prior year related to a consolidated special purpose entity (SPE) from which we exited all transactions in the first quarter of 2012.

Corporate Support

Corporate Support comprises Technology & Operations and Functions. Our Technology & Operations teams provide the technological and operational foundation required to effectively deliver products and services to our clients, while Functions includes our finance, human resources, risk management, corporate treasury, internal audit and other functional groups. Reported results for Corporate Support mainly reflect certain activities related to monitoring and oversight of enterprise activities which are not allocated to business segments. Included within Corporate Support is our Corporate Treasury function that performs Asset Liability Management of our non-trading interest rate risk for our retail banking portfolios within specified risk limits. These results, for the most part, are largely allocated to Personal & Commercial Banking. For further details, refer to the How we measure and report our business segments section.

Selected highlights **Table 31**

(Millions of Canadian dollars, except number of)	IFRS 2012	IFRS 2011	Canadian GAAP 2010
Net interest (loss) (1)	**$ (183)**	$ (293)	$ (843)
Non-interest income	**67**	257	303
Total revenue (1)	**(116)**	(36)	(540)
PCL	**–**	5	(116)
Non-interest expense	**37**	93	81
Income taxes (recoveries) (1)	**(512)**	(431)	(386)
Non-controlling interest	**n.a.**	n.a.	92
Net income (loss) (2)	**$ 359**	$ 297	$ (211)
Other information			
Number of employees (FTE)	**13,133**	13,219	12,589

(1) Teb adjusted.
(2) Net income reflects income attributable to both shareholders and NCI under IFRS. Net income attributable to NCI for the year ended October 31, 2012 was $92 million (October 31, 2011 – $92 million).

Due to the nature of activities and consolidated adjustments reported in this segment, we believe that a comparative period analysis is not relevant. The following identifies material items affecting the reported results in each period.

Net interest income (loss) and income taxes (recoveries) in each period in Corporate Support include the deduction of the teb adjustments related to the gross-up of income from Canadian taxable corporate dividends recorded in Capital Markets. The amount deducted from net interest income (loss) was offset by an equivalent increase in income taxes (recoveries). The teb amount for the year ended October 31, 2012 was $431 million as compared to $459 million in the prior year and $489 million for the year ended October 31, 2010. For further discussion, refer to the How we measure and report our business segments section.

In addition to the teb impacts noted above, the following identifies the other material items affecting the reported results in each period.

2012
Net income was $359 million largely reflecting the settlement of several tax matters with the CRA which resulted in the release of $128 million of tax uncertainty provisions and interest income of $72 million ($53 million after-tax) related to a refund of taxes paid and asset/liability management activities.

2011
Net income was $297 million largely due to asset/liability management activities and gains related to the change in fair value of certain derivatives used to economically hedge our funding activities.

2010
Net loss was $211 million largely reflecting net unfavourable tax and accounting adjustments and losses of $21 million on both a before-and after-tax basis attributed to an equity accounted for investment.

Quarterly financial information

Fourth quarter 2012 performance

Q4 2012 vs. Q4 2011
Fourth quarter net income was $1,911 million, up $340 million or 22% from the prior year.

Continuing operations
Fourth quarter net income from continuing operations of $1,911 million, increased $302 million or 19% from last year driven by higher fixed income trading results reflecting improved market conditions as compared to the challenging market conditions in the prior year and solid volume growth across most of our Canadian banking businesses. Lower claims cost in Insurance, higher funding and liquidity trading in Investor & Treasury Services and increased average fee-based client assets resulting from capital appreciation and net sales and improved transaction volumes in Wealth Management also contributed to the increase. These factors were partially offset by higher PCL in Capital Markets reflecting a single account and our Canadian business lending portfolio and higher costs in support of business growth.

Total revenue increased $826 million or 12%, mainly due to higher fixed income trading revenue in Capital Markets, solid volume growth across all of our Canadian banking businesses, higher funding and liquidity trading revenue in Investor & Treasury Services, and higher equity origination and loan syndication activities in Capital Markets. Higher average fee-based client assets and transaction volumes in Wealth Management, as well as a full quarter of revenue related to our additional 50% ownership of RBC Investor Services also contributed to the increase. These factors were partially offset by lower insurance revenue reflecting the change in fair value of investments backing our policyholder liabilities, largely offset in PBCAE.

Total PCL increased $86 million or 31% from a year ago, mainly due to increased provisions in Capital Markets and our Canadian business lending portfolios, partially offset by lower PCL in our Canadian credit card portfolio.

PBCAE decreased $97 million or 11%, mainly due to the change in fair value of investments backing our policyholder liabilities, largely offset in revenue. This factor was partially offset by higher costs due to volume growth across most products.

Non-interest expense increased $343 million or 10%, primarily reflecting increased variable compensation in Capital Markets and Wealth Management commensurate with higher revenue. A full quarter of costs related to our additional 50% ownership of RBC Investor Services and higher costs in support of business growth, including increased staff costs, also contributed to the increase. These factors were partially offset by our ongoing focus on cost management.

Discontinued operations
We no longer have discontinued operations as the sale of our U.S. regional retail banking operations closed in the second quarter of 2012. Net loss from discontinued operations was $38 million in the prior year, primarily related to our U.S. builder finance loans portfolio and U.S. regional retail banking operations.

Results and trend analysis

Our quarterly earnings, revenue and expenses are impacted by a number of trends and recurring factors, which include seasonality, general economic and market conditions, and fluctuations in foreign exchange rates. The following table summarizes our results for the last eight quarters (the period):

Quarterly results (1) **Table 32**

	2012				2011			
(Millions of Canadian dollars, except per share and percentage amounts)	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Continuing operations								
Net interest income	$ 3,175	$ 3,289	$ 3,031	$ 3,003	$ 2,957	$ 2,889	$ 2,716	$ 2,795
Non-interest income	4,343	4,467	3,893	4,571	3,735	4,008	4,115	4,423
Total revenue	$ 7,518	$ 7,756	$ 6,924	$ 7,574	$ 6,692	$ 6,897	$ 6,831	$ 7,218
PCL	362	324	348	267	276	320	273	264
PBCAE	770	1,000	640	1,211	867	1,081	843	567
Non-interest expense	3,873	3,759	3,857	3,671	3,530	3,417	3,551	3,669
Net income before income taxes	$ 2,513	$ 2,673	$ 2,079	$ 2,425	$ 2,019	$ 2,079	$ 2,164	$ 2,718
Income taxes	602	433	516	549	410	396	482	722
Net income from continuing operations	$ 1,911	$ 2,240	$ 1,563	$ 1,876	$ 1,609	$ 1,683	$ 1,682	$ 1,996
Net loss from discontinued operations	–	–	(30)	(21)	(38)	(389)	(51)	(48)
Net income	$ 1,911	$ 2,240	$ 1,533	$ 1,855	$ 1,571	$ 1,294	$ 1,631	$ 1,948
EPS – basic	$ 1.26	$ 1.49	$ 1.00	$ 1.23	$ 1.03	$ 0.84	$ 1.08	$ 1.30
– diluted	1.25	1.47	0.99	1.22	1.02	0.83	1.06	1.27
EPS from continuing operations – basic	$ 1.26	$ 1.49	$ 1.02	$ 1.24	$ 1.06	$ 1.11	$ 1.12	$ 1.34
– diluted	1.25	1.47	1.01	1.23	1.05	1.10	1.10	1.31
Segment net income (loss) from continuing operations								
Personal & Commercial Banking	$ 1,034	$ 1,102	$ 940	$ 1,012	$ 947	$ 882	$ 924	$ 987
Wealth Management	207	156	212	188	179	192	227	213
Insurance	194	179	151	190	200	141	123	136
Investor & Treasury Services	72	51	(121)	83	40	53	70	67
Capital Markets	410	429	371	371	125	230	353	584
Corporate Support	(6)	323	10	32	118	185	(15)	9
Net income from continuing operations	$ 1,911	$ 2,240	$ 1,563	$ 1,876	$ 1,609	$ 1,683	$ 1,682	$ 1,996
Net income – total	$ 1,911	$ 2,240	$ 1,533	$ 1,855	$ 1,571	$ 1,294	$ 1,631	$ 1,948
Effective income tax rate	24.0%	16.2%	24.8%	22.6%	20.3%	19.0%	22.3%	26.6%
Period average US$ equivalent of C$1.00	$ 1.011	.982	1.008	.987	.992	1.039	1.039	.992

(1) Fluctuations in the Canadian dollar relative to other foreign currencies have affected our consolidated results over the period.

Seasonality

Seasonal factors impact our results in most quarters. The first quarter is seasonally stronger for our capital markets businesses. The second quarter has fewer days than the other quarters, generally resulting in a decrease in net interest income and certain expense items. The third and fourth quarters include the summer months during which market activity generally tends to slow, negatively impacting the results of our capital markets, investor services, brokerage and investment management businesses.

Notable items affecting our consolidated results

- In the third quarter of 2012, our results included a release of $128 million of tax uncertainty provisions and interest income of $72 million ($53 million after-tax) related to a refund of taxes paid due to the settlement of several tax matters with the CRA.
- In the third quarter of 2012, our results included an adjustment related to a change in estimate of mortgage prepayment interest of $125 million ($92 million after-tax).
- In the second quarter of 2012, our results included a loss of $212 million ($202 million after-tax) related to the acquisition of the remaining 50% stake in RBC Dexia. The third quarter of 2012 included an additional loss related to the acquisition of $12 million ($11 million after-tax).
- In the third quarter of 2011, our results included a net loss of $389 million from discontinued operations largely related to our U.S. regional retail banking operations. This was comprised of the loss on sale of those operations of $310 million and a net operating loss of $79 million. The sale closed on March 2, 2012.
- In the first quarter of 2011, our results included a gain of $102 million ($49 million after-tax and compensation adjustments) due to a legal settlement with MBIA on the termination of our direct monoline insurance protection with them.

Continuing operations
Trend analysis

Economic conditions in Canada and U.S. moderately improved over the period, although capital market conditions remained uncertain, reflecting continued European sovereign debt concerns and weakening global growth prospects.

Earnings were solid over the last eight quarters mainly reflecting strong volume growth in Canadian Banking as well as solid results in our capital markets businesses, mainly in 2012. Results in Wealth Management fluctuated over the period as they were impacted by lower transaction volumes reflecting investor uncertainty over the last several quarters.

Revenue generally trended up with some fluctuations over the past eight quarters. Trading revenue fluctuated over the period with solid results experienced in 2012. Over the period revenue was positively impacted by solid volume growth in our Canadian banking businesses, improvement in our corporate and investment banking businesses and higher average fee-based client assets in Wealth Management. Changes to the fair value of investments backing our policyholder liabilities in Insurance, largely offset in PBCAE, contributed to fluctuations in revenue. Net interest income generally trended up over the period, mainly due to strong volume growth across most of our Canadian banking businesses, although it was unfavourably impacted by spread compression in our banking and wealth management businesses due to the continued low interest rate environment.

PCL has been generally stable throughout the period, although trended upward in the last three quarters mainly due to higher provisions related to Capital Markets and our Canadian business lending and Caribbean portfolios, while PCL in our Canadian retail portfolio decreased in the last two quarters due to lower write-offs in our credit card portfolio.

PBCAE has been subject to quarterly fluctuations. Over the period there have been changes to the fair value of investments backing our policyholder liabilities, largely offset in revenue. PBCAE has also been impacted by higher costs due to volume growth as well as actuarial liability adjustments and generally lower claims costs.

Non-interest expense generally trended upward mainly due to higher costs in support of business growth and overall higher variable compensation driven by improved results in Capital Markets and increased commission-based revenue in Wealth Management. Generally the growth rate of non-interest expense was favourably impacted by our cost management program.

Our effective income tax rate fluctuated over the period, reflecting a varying portion of income being reported by our subsidiaries operating in jurisdictions with differing income tax rates, a fluctuating level of income from tax-advantaged sources (Canadian taxable corporate dividends), and various tax adjustments. The reduction in statutory Canadian corporate income tax rates over the period generally lowered our effective tax rate. In the third quarter of 2012, our effective income tax rate decreased significantly, as it was impacted by certain items as mentioned above.

Results by geographic segment (1)

Table 33

	IFRS								Canadian GAAP			
.	2012				2011				2010			
(Millions of Canadian dollars)	Canada	U.S.	Other International	Total	Canada	U.S.	Other International	Total	Canada	U.S.	Other International	Total
Continuing operations												
Net interest income	$ 10,413	$ 1,308	$ 777	$ 12,498	$ 9,641	$ 1,091	$ 625	$ 11,357	$ 8,417	$ 1,106	$ 815	$ 10,338
Non-interest income	9,378	3,564	4,332	17,274	9,270	2,815	4,196	16,281	8,910	3,080	3,754	15,744
Total revenue	$ 19,791	$ 4,872	$ 5,109	$ 29,772	$ 18,911	$ 3,906	$ 4,821	$ 27,638	$ 17,327	$ 4,186	$ 4,569	$ 26,082
PCL	1,021	90	190	1,301	1,016	(12)	129	1,133	1,026	57	157	1,240
PBCAE	2,320	16	1,285	3,621	2,124	21	1,213	3,358	2,343	20	1,183	3,546
Non-interest expense	8,809	3,404	2,947	15,160	8,376	3,159	2,632	14,167	7,981	3,211	2,277	13,469
Non-controlling interest in net income of subsidiaries	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	96	2	1	99
Income taxes	1,600	519	(19)	2,100	1,728	259	23	2,010	1,640	266	90	1,996
Net income from continuing operations	$ 6,041	$ 843	$ 706	$ 7,590	$ 5,667	$ 479	$ 824	$ 6,970	$ 4,241	$ 630	$ 861	$ 5,732
Net loss from discontinued operations	–	(51)	–	(51)	–	(526)	–	(526)	–	(509)	–	(509)
Net income	$ 6,041	$ 792	$ 706	$ 7,539	$ 5,667	$ (47)	$ 824	$ 6,444	$ 4,241	$ 121	$ 861	$ 5,223

(1) For geographic reporting, our segments are grouped into Canada, U.S. and Other International. For further details, refer to Note 30 of our 2012 Annual Consolidated Financial Statements.

Continuing operations
2012 vs. 2011

Net income in Canada was up $374 million or 7% from the prior year, mainly due to strong volume growth across most of our Canadian banking businesses, a settlement of several tax matters with the CRA which resulted in the release of $128 million of tax uncertainty provisions and interest income of $72 million ($53 million after-tax), a lower effective tax rate due to a reduction in statutory Canadian corporate income tax rates, and a favourable adjustment related to a change in estimate of mortgage prepayment interest of $125 million ($92 million after-tax). These factors were partially offset by increased costs in support of business growth partially offset by cost reductions resulting from our cost management program, an impairment loss related to our acquisition of the remaining 50% stake in RBC Dexia of which $105 million (before- and after-tax) was recorded in our Canadian operations.

U.S. net income was up $364 million or 76% from the prior year, largely due to higher trading results, reflecting improved market conditions as compared to the challenging market conditions in the latter half of the prior year. Strong growth in our corporate and investment banking results driven by client growth in our lending, loan syndication and origination businesses also contributed to the increase. These factors were partially offset by higher PCL in Capital Markets.

Other International net income was down $118 million or 14% from the previous year, largely due to the impairment loss related to RBC Dexia as noted above of which $63 million (before- and after-tax) was recorded in our Other International operations, and higher PCL in Caribbean banking. These factors were partially offset by higher fixed income trading results in Capital Markets. In addition, the prior year included a gain related to MBIA which favourably impacted results in that year.

U.S. net loss from discontinued operations
2012 vs. 2011

Net loss from discontinued operations was $51 million compared to a net loss of $526 million a year ago, primarily related to a loss on sale of our U.S. regional retail banking operations. The current year also included only four months of operating losses related to our U.S. regional retail banking operations compared to a full year in 2011.

Continuing operations
2011 vs. 2010
Net income in Canada for 2011 was higher as compared to 2010, largely due to solid volume growth across most of our Canadian banking businesses and higher average-fee based client assets in Wealth Management. Strong growth in origination and M&A activity in Capital Markets and a lower effective tax rate also contributed to the increase. These factors were partially offset by increased staff costs and higher costs in support of business growth.

Net income in the U.S. for 2011 was lower as compared to 2010, primarily due to significantly lower trading results in our fixed income businesses. The unfavourable impact of a stronger Canadian dollar and higher costs in support of infrastructure investments and business growth in Capital Markets also contributed to the decrease. These factors were partially offset by strong growth in our corporate and investment banking businesses including higher M&A activity and lower PCL.

Other International net income for 2011 was lower as compared to 2010, mainly due to higher costs in support of business growth and lower trading results in our fixed income businesses. These factors were mostly offset by higher earnings in Investor Services driven by increased transaction volumes and higher average fee-based client assets, strong growth in our corporate and investment banking businesses including higher M&A activity. Lower reinsurance claim costs and lower PCL in Caribbean banking also contributed to the increase.

For further details on the differences between IFRS and Canadian GAAP, refer to Note 3 of our Annual Consolidated Financial Statements.

U.S. net loss from discontinued operations
2011 vs. 2010
In 2011, net loss from discontinued operations increased from 2010, primarily reflecting a loss on sale of our U.S. regional retail banking operations largely offset by a loss on sale related to Liberty Life in 2010 and lower write-offs in our U.S. commercial and builder finance portfolios.

Financial condition

Condensed balance sheets (1) — Table 34

As at October 31 (Millions of Canadian dollars)	2012	2011
Assets		
Cash and due from banks	$ 12,617	$ 12,428
Interest-bearing deposits with banks	10,255	6,460
Securities	161,611	167,022
Assets purchased under reverse repurchase agreements and securities borrowed	112,257	84,947
Loans		
Retail	301,185	284,745
Wholesale	79,056	64,752
Allowance for loan losses	(1,997)	(1,967)
Investments for account of segregated fund holders	383	320
Other – Derivatives	91,293	99,650
– Assets of discontinued operations (2)	–	27,152
– Other	58,440	48,324
Total assets	$ 825,100	$ 793,833
Liabilities		
Deposits	$ 508,219	$ 479,102
Insurance and investment contracts for account of segregated fund holders	383	320
Other – Derivatives	96,761	100,522
– Liabilities of discontinued operations (2)	–	20,076
– Other	165,194	142,707
Subordinated debentures	7,615	8,749
Trust capital securities	900	894
Total liabilities	779,072	752,370
Equity attributable to shareholders	44,267	39,702
Non-controlling interests	1,761	1,761
Total equity	46,028	41,463
Total liabilities and equity	$ 825,100	$ 793,833

(1) Foreign currency-denominated assets and liabilities are translated to Canadian dollars.
(2) Balance sheet adjustments related to discontinued operations are made prospectively from the date of classification as discontinued operations. The classification of our U.S. retail banking operations as discontinued operations was reflected beginning the third quarter ending July 31, 2011. Effective the third quarter of 2012, we have no more discontinued operations due to the sale of our U.S. regional retail banking operations which closed on March 2, 2012.

2012 vs. 2011
Total assets were up $31 billion or 4% from the previous year.

Interest-bearing deposits with banks increased by $4 billion or 59% largely reflecting the acquisition of the remaining 50% stake in RBC Dexia.

Securities were down $5 billion or 3% compared to the prior year, primarily due to a reduction in our government and corporate debt instruments as part of our management of market and interest rate risk, partially offset by an increase in certain equity trading positions.

Assets purchased under reverse repurchase agreements (reverse repos) and securities borrowed increased by $27 billion or 32%, mainly attributable to higher client activity and new business activity.

Loans were up $31 billion or 9%, predominantly due to strong volume growth in Canadian home equity products and growth in wholesale loans.

Derivative assets were down $8 billion or 8%, mainly attributable to higher netting of interest rate swaps and foreign exchange forward contracts. Lower fair values on foreign exchange forward contracts and cross currency interest rate swaps also contributed to the decrease. These factors were partially offset by higher fair values on interest rate swaps.

Other assets were up $10 billion or 21%, primarily reflecting an increase in cash collateral requirements due to market volatility.

Total liabilities were up $27 billion or 4% from the previous year.

Deposits increased $29 billion or 6%, mainly reflecting growth in business deposits and demand for our high-yield savings accounts and other product offerings in our retail business. These factors were partially offset by a decrease in fixed term deposits due to the use of business deposits for internal funding.

Derivative liabilities were down $4 billion or 4%, primarily attributable to higher netting of interest rate swaps and foreign exchange forward contracts. This was partially offset by higher fair values on interest rate swaps and cross currency interest rate swaps.

Other liabilities increased by $22 billion or 16%, mainly resulting from an increase in repurchase agreements due to an increase in funding requirements related to higher reverse repo activity as described above. This was partially offset by a decrease in obligations related to securities sold short.

Total equity increased by $5 billion or 11%, largely reflecting earnings, net of dividends.

Off-balance sheet arrangements

In the normal course of business, we engage in a variety of financial transactions that, for accounting purposes, are not recorded on our Consolidated Balance Sheets. Off-balance sheet transactions are generally undertaken for risk, capital and funding management purposes which benefit us and our clients. These include transactions with SPEs, may include issuance of guarantees, and give rise to, among other risks, varying degrees of market, credit, liquidity and funding risk, which are discussed in the Risk management section.

We use SPEs to securitize our financial assets as well as assist our clients in securitizing their financial assets. These entities are not operating entities, typically have no employees, and may or may not be recorded on our Consolidated Balance Sheets.

Securitizations of our financial assets

Securitization can be used as a cost-effective fund raising technique compared to the relative cost of issuing unsecured wholesale debt.

We periodically securitize our credit card receivables, residential and commercial mortgage loans and bond participation certificates primarily to diversify our funding sources, enhance our liquidity position and for capital purposes. We also securitize residential and commercial mortgage loans for sales and trading activities.

Under IFRS, the majority of our securitization activities are recorded on our Consolidated Balance Sheets. We securitize our credit card receivables, on a revolving basis, through a consolidated SPE. We securitize residential mortgage loans under the National Housing Act Mortgage-Backed Securities (NHA MBS) program and the mortgages transferred under this program are not derecognized from our Consolidated Balance Sheets. For details of our residential mortgage and credit card securitization activities, including the nature of our financial interests and the related risks, refer to Note 7 and Note 8 to our 2012 Annual Consolidated Financial Statements.

We also securitize residential mortgage loans through the Canadian social housing program which are derecognized from our Consolidated Balance Sheets when sold to third party investors. During 2012, we securitized and sold $21 million of Canadian social housing mortgages.

In prior years, we securitized commercial mortgages by selling them in collateral pools, which met certain diversification, leverage and debt coverage criteria, to SPEs, one of which is sponsored by us. We also participated in bond securitization activities where we purchased government, government related and corporate bonds and repackaged those bonds in participation certificates, which were sold to third party investors. Securitized commercial mortgage loans and bond participation certificates are derecognized from our Consolidated Balance Sheets as we have transferred substantially all of the risk and rewards of ownership of the securitized assets. Our continuing involvement with the transferred assets is limited to servicing the underlying bonds and the commercial mortgages sold to our sponsored SPE. As at October 31, 2012, there were $1.4 billion of commercial mortgages (2011 – $1.5 billion) and $661 million of bond participation certificates (2011 – $735 million) outstanding related to these prior period securitization activities. We did not securitize commercial mortgages or bond participation certificates during the year.

Involvement with unconsolidated special purpose entities

In the normal course of business, we engage in a variety of financial transactions with SPEs to support our customers' financing and investing needs, including securitization of client financial assets, creation of investment products, and other types of structured financing. Refer to Note 8 to 2012 Annual Consolidated Financial Statements for a description of the activities of significant unconsolidated SPEs, the nature of our financial interests and the associated risks. The following table summarizes SPEs in which we have significant financial interests, but have not consolidated.

Special Purpose Entities — Table 35

	2012												2011	
			Total assets by credit ratings			Total assets by average maturities				Total assets by geographic location of borrowers				
As at October 31 (Millions of Canadian dollars)	Total assets (1)	Maximum exposure (1)(2)	Investment grade (3)	Non-investment grade (3)	Not Rated	Under 1 year	1 to 5 years	Over 5 years	Not applicable	Canada	U.S.	Other International	Total assets (1)	Maximum exposure
Unconsolidated SPEs														
Multi-seller conduits (4)	$ 29,582	$ 30,029	$ 29,422	$ 160	$ –	$ 4,167	$ 23,198	$ 2,217	$ –	$ 5,021	$ 21,990	$ 2,571	$ 24,271	$ 24,614
Structured finance	4,840	1,663	4,253	584	3	–	–	4,840	–	–	4,840	–	4,988	1,340
SPEs Investment funds	1,584	1,082	–	–	1,584	–	–	–	1,584	27	68	1,489	1,374	1,125
Credit investment product SPEs	146	17	–	146	–	–	–	146	–	–	–	146	253	17
Third party securitization vehicles	5,429	1,266	–	574	4,855	–	–	1,511	3,918	–	1,614	3,815	1,090	214
Other	368	103	–	–	368	–	–	–	368	46	303	19	242	60
	$ 41,949	$ 34,160	$ 33,675	$ 1,464	$6,810	$ 4,167	$ 23,198	$ 8,714	$ 5,870	$ 5,094	$ 28,815	$ 8,040	$ 32,218	$ 27,370

(1) Total assets and maximum exposure to loss correspond to disclosures provided in Note 8 to our 2012 Annual Consolidated Financial Statements. Total asset amounts may differ from those presented in Note 8 due to certain entities, primarily mutual and pooled funds, which we sponsor but where we do not hold a significant financial interest.

(2) The maximum exposure to loss resulting from significant financial interests in these SPEs consists mostly of investments, loans, liquidity and credit enhancement facilities and fair value of derivatives. The maximum exposure to loss may exceed the total assets in the multi-seller conduits, as our liquidity facilities may sometimes be extended for up to 102% of the total value of the assets in the conduits.

(3) Our internal risk ratings for major counterparty types approximate those of public rating agencies. Ratings of AAA, AA, A, and BBB represent investment grade ratings and ratings of BB or lower represent non-investment grade ratings.

(4) Represents multi-seller conduits that we administer.

We have the ability to use credit mitigation tools such as third party guarantees, credit default swaps, and collateral to mitigate risks assumed through securitization and re-securitization exposures. The process in place to monitor the credit quality of our securitization and re-securitization exposures involves, among other things, reviewing the performance data of the underlying assets. We affirm our ratings each quarter and formally confirm or assign a new rating at least annually. For further details on our activities to manage risks, refer to the Risk management section.

Approximately 81% of assets in unconsolidated SPEs in which we have significant financial interests were internally rated A or above, compared to 91% in the prior year. The decrease compared to the prior year is primarily related to our investments in certain third party securitization vehicles whose underlying assets are not individually rated. For multi-seller conduits, 99% of assets were internally rated A or above, consistent with the prior year. All transactions funded by the unconsolidated multi-seller conduits are internally rated using a rating system which is largely consistent with that of the external rating agencies.

The assets in unconsolidated SPEs as at October 31, 2012 have varying maturities and a remaining expected weighted average life of approximately 3.7 years.

RBC-administered multi-seller conduits

We administer multi-seller conduits which are used primarily for the securitization of our clients' financial assets. We are involved in these conduit markets because our clients value these transactions. Our clients primarily utilize multi-seller conduits to diversify their financing sources and to reduce funding costs by leveraging the value of high-quality collateral. The conduits offer us a favourable revenue stream, risk-adjusted return and cross-selling opportunities.

We provide services such as transaction structuring, administration, backstop liquidity facilities and partial credit enhancements to the multi-seller conduits. Fee revenue for all such services amounted to $146 million during the year (2011 – $147 million). We do not maintain any ownership or retained interests in these multi-seller conduits and have no rights to, or control of, their assets.

Our total commitment to the conduits in the form of backstop liquidity and credit enhancement facilities is shown below. The total committed amount of these facilities exceeds the total amount of the maximum assets that may have to be purchased by the conduits under the purchase agreements. As a result, the maximum exposure to loss attributable to our backstop liquidity and credit enhancement facilities is less than the total committed amounts of these facilities.

Liquidity and credit enhancement facilities **Table 36**

	2012				2011			
As at October 31 (Millions of Canadian dollars)	**Notional of committed amounts (1)**	**Allocable notional amounts**	**Outstanding loans (2)**	**Total maximum exposure to loss**	Notional of committed amounts (1)	Allocable notional amounts	Outstanding loans (2)	Total maximum exposure to loss
Backstop liquidity facilities	$ 30,143	$ 25,935	$ 1,391	$ 27,326	$ 24,726	$ 20,874	$ 1,413	$ 22,287
Credit enhancement facilities	2,703	2,703	–	2,703	2,327	2,327	–	2,327
Total	$ 32,846	$ 28,638	$ 1,391	$ 30,029	$ 27,053	$ 23,201	$ 1,413	$ 24,614

(1) Based on total committed financing limit.
(2) Net of allowance for loan losses and write-offs.

As at October 31, 2012, the notional amount of backstop liquidity facilities we provide increased by $5.4 billion or 22% from the prior year. Total loans extended to the multi-seller conduits under the backstop liquidity facilities decreased by $22 million from the prior year primarily due to principal repayments. The partial credit enhancement facilities we provide increased by $376 million from the prior year. The increase in the amount of backstop liquidity facilities and partial credit enhancement facilities provided to the multi-seller conduits compared to the prior year primarily reflects an expansion of the outstanding securitized assets of the multi-seller conduits in support of our clients' securitization needs.

Maximum exposure to loss by client type **Table 37**

	2012			2011		
As at October 31 (Millions)	**(US$)**	**(C$)**	**Total ($C)**	(US$)	(C$)	Total ($C)
Outstanding securitized assets						
Credit cards	$ 7,410	$ 510	$ 7,912	$ 5,898	$ 510	$ 6,389
Auto loans and leases	7,903	2,193	10,087	6,596	1,668	8,242
Student loans	2,429	–	2,427	2,435	–	2,427
Trade receivables	2,290	112	2,400	2,188	112	2,293
Asset-backed securities	1,454	–	1,453	1,601	–	1,596
Equipment receivables	1,275	–	1,274	1,020	–	1,017
Consumer loans	1,020	–	1,019	765	–	762
Electricity market receivables	–	255	255	–	255	255
Dealer floor plan receivables	587	561	1,147	586	576	1,160
Fleet finance receivables	310	265	575	225	122	346
Insurance premiums	87	–	87	–	–	–
Corporate loan receivables	101	–	101	127	–	127
Residential mortgages	–	1,020	1,020	–	–	–
Transportation finance	272	–	272	–	–	–
Total	$ 25,138	$ 4,916	$ 30,029	$ 21,441	$ 3,243	$ 24,614
Canadian equivalent	$ 25,113	$ 4,916	$ 30,029	$ 21,371	$ 3,243	$ 24,614

Our overall exposure increased 22% compared to the prior year reflecting improved business conditions which led to an expansion of the outstanding securitized assets of the multi-seller conduits. Correspondingly, total assets of the multi-seller conduits increased by $5.4 billion or 22% over the prior year, primarily in the Credit cards, Auto loans and leases, and Residential mortgages asset classes.

Multiple independent debt rating agencies review all of the transactions in the multi-seller conduits. Transactions financed in the U.S. multi-seller conduits are reviewed by Moody's Investors Service (Moody's), Standard & Poor's (S&P) and Fitch Ratings (Fitch). Transactions in the Canadian multi-seller conduits are also reviewed by Dominion Bond Rating Services (DBRS). Each applicable rating agency also reviews ongoing transaction performance on a monthly basis and may publish reports detailing portfolio and program information related to the conduits.

As at October 31, 2012, the total asset-backed commercial paper (ABCP) issued by the conduits amounted to $17.1 billion, an increase of $820 million or 5% since the prior year. The rating agencies that rate the ABCP rated 71% of the total amount issued within the top ratings category and the remaining amount in the second highest ratings category compared with 68% in the prior year. The increase in the amount of ABCP issued by the multi-seller conduits compared to the prior year is primarily due to increased client usage.

We sometimes purchase ABCP issued by the multi-seller conduits in our capacity as a placement agent in order to facilitate overall program liquidity. As at October 31, 2012, the fair value of our inventory was $26 million, a decrease of $85 million from the prior year. The fluctuations in inventory held reflect normal trading activity. This inventory is classified as Securities – Trading on our Consolidated Balance Sheets.

Structured finance SPEs

We invest in ARS of entities which fund their long-term investments in student loans by issuing short-term senior and subordinated notes. As at October 31, 2012, the total assets of the unconsolidated ARS trusts in which we have significant investments were $3.9 billion (2011 – $4.9 billion). Our maximum exposure to loss in these ARS trusts as at October 31, 2012 was $1.1 billion (2011 – $1.3 billion). The decrease in total assets and our maximum exposure to loss is primarily related to the sale, redemption or defeasement of the underlying ARS investment securities. As at October 31, 2012, approximately 75% of these investments were AAA rated. Interest income from the ARS investments, which is reported in Net-interest income was $19 million during the year (2011 – $24 million).

We also provide liquidity facilities to certain municipal bond Tender Option Bond (TOB) programs in which we have a significant interest but do not consolidate because the residual certificates are held by third parties. As at October 31, 2012, the total assets of these unconsolidated municipal bond TOB trusts were $856 million (2011 – $67 million) and our maximum exposure to loss was $552 million (2011 – $35 million). The increase in total assets of these TOB trusts and our maximum exposure to loss is primarily related to our investor base increasing their exposure to leverage in their funds by utilizing our TOB program and an increase in our TOB Funding Limits. Fee revenue from provision of liquidity facilities to these entities reported in Non-interest income was $2 million during the year (2011 – $nil).

Investment funds

We enter into fee-based equity derivative transactions with third parties including mutual funds, unit investment trusts and other investment funds. These transactions provide their investors with the desired exposure to the referenced funds, and we economically hedge our exposure from these derivatives by investing in those third party managed referenced funds. Our maximum exposure as at October 31, 2012, which is primarily related to our investments in the reference funds, decreased by $43 million relative to the prior year due to a reduction in derivative positions and transactions. The total assets held in the unconsolidated reference funds as at October 31, 2012 increased by $210 million due to certain unconsolidated reference funds taking a greater ownership interest in underlying investment funds, causing our financial interest to become significant.

Third-party securitization vehicles

We hold significant interests in certain unconsolidated third-party securitization vehicles, which are SPEs. We, as well as other financial institutions, are obligated to provide funding to these SPEs up to our maximum commitment level and are exposed to credit losses on the underlying assets after various credit enhancements. Total assets of these funds increased by $4.3 billion and our maximum exposure to loss increased by $1.1 billion relative to the prior year primarily due to new investments made during the first two quarters of 2012. Interest income earned in respect of these investments reported in Net-interest income was $25 million.

Credit investment product SPEs and Others

We use SPEs to create customized credit products to meet investors' specific requirements and created tax credit funds. Refer to Note 8 to our 2012 Annual Consolidated Financial Statements for more detail on these SPEs.

Guarantees, retail and commercial commitments

We provide guarantees and commitments to our clients that expose us to liquidity and funding risks. Our maximum potential amount of future payments in relation to our commitments and guarantee products as at October 31, 2012 amounted to $204 billion compared to $170 billion in the prior year. The increase compared to the prior year relates primarily to higher backstop liquidity facilities and other commitments to extend credit. Refer to Liquidity and Funding Management and Note 27 to our 2012 Annual Consolidated Financial Statements for details regarding our guarantees and commitments.

Risk management

Overview

Our diversified business activities expose us to a wide variety of risks in virtually all aspects of our operations. Our ability to manage these risks is a key competency within RBC, and is supported by a strong risk management culture and an effective risk management approach.

We manage our risks by seeking to ensure that business activities and transactions provide an appropriate balance of return for the risks assumed and remain within our Risk Appetite, which is collectively managed throughout RBC, through adherence to our Enterprise Risk Appetite Framework. These risks include credit, market and liquidity and funding risk. In addition, we are faced with risks that we consider top and emerging. Other risks that may impact our business include operational, legal and regulatory compliance, insurance, reputation, and strategic risk. For further details, refer to the respective risk sections.

Top and emerging risks

Our view of risks is not static. An important component of our enterprise risk management approach is to ensure that top risks which are evolving or emerging risks are appropriately identified, managed, and incorporated into existing enterprise risk management assessment, measurement, monitoring and escalation processes.

These practices ensure management is forward-looking in its assessment of risks to the organization. Identification of top and emerging risks occurs in the course of businesses developing and pursuing approved strategies and as part of the execution of risk oversight responsibilities by Group Risk Management (GRM), Finance, Corporate Treasury, Global Compliance and other control functions.

Risk oversight activities which can lead to identification of new, evolving or emerging risks include control mechanisms (e.g. approval of new products, transactions, projects or initiatives), business strategy development, stress testing, portfolio level measurement, monitoring and reporting activities, and the ongoing assessment of industry and regulatory developments.

Details of the top and emerging risks we are facing are discussed below.

Regulatory developments

Certain regulatory reforms have the potential to impact the way in which we operate, both in Canada and abroad. We continue to respond to these and other developments and are working to minimize any potential business or economic impact.

Dodd-Frank – Volcker rule

Implementation rules relating to the proposed Volcker rule have not yet been finalized by U.S. federal financial regulators. In anticipation of final rule issuance, we continue to analyze our trading activities, compliance and risk management programs. However, the full extent to which we will be affected remains unclear. As currently drafted, the rule's extraterritorial reach will impact our capital markets activities and will apply globally to the bank and each of our subsidiaries and affiliates. Under the proposal, certain activities may be permitted to continue in their current form, while others may be permitted if conducted in accordance with certain prescriptive exemptions from the regulation. Some activities may not be permitted to continue. Depending on the manner in which the Volcker Rule is ultimately implemented, these prohibitions may have an adverse impact on our results of operations.

Basel Committee on Banking Supervision global standards for capital and liquidity reform (Basel III)

The Basel Committee's new standards for capital and liquidity establish minimum requirements for common equity, increased capital requirements for counterparty credit exposures, a new global leverage ratio and measures to promote the build up of capital that can be drawn down in periods of stress. Banks around the world are preparing to implement these new standards (commonly referred to as Basel III).

In Canada, the Office of the Superintendent of Financial Institutions Canada (OSFI) expects deposit-taking institutions to meet the minimum 2019 Basel III capital requirements for Common Equity Tier 1 (CET 1) in the first quarter of 2013. We continue to be well capitalized by global standards and our capital ratios remain strong. For further details, refer to the Capital management section.

While the Basel III liquidity standards have not been finalized, we continue to measure our liquidity position and make adjustments that we believe are appropriate in anticipation of the Basel Committee's implementation schedule.

Domestic-Systemically Important Banks (D-SIBs)

The Financial Stability Board and the Basel Committee on Banking Supervision have finalized a principles-based framework to guide national authorities in establishing principles for dealing with D-SIBs. National authorities will begin to apply minimum requirements to banks identified as D-SIBs beginning January 2016. OSFI has not communicated formally on a Canadian D-SIB regime, although we expect one to be put forward. The implementation of a D-SIB regime in Canada may result in us being subject to additional capital and disclosure requirements.

Over-the-Counter Derivatives Reform

Reforms in the over-the-counter (OTC) derivatives markets continue on a global basis, with the governments of the G20 nations proceeding with plans to transform the capital regimes, national regulatory frameworks and infrastructures in which we and other market participants operate. We, along with other Canadian banks, will experience changes in our wholesale banking business, some of which will impact our client- and trading-related derivatives revenues in Capital Markets.

In July 2012, the U.S. Commodity Futures Trading Commission (CFTC) released proposed cross-border guidance regarding the application of U.S. swaps rules to international banks, including requirements to register with the CFTC as a swap dealer. While it awaits finalization of the cross-border guidance and additional rules, the industry continues to urge the CFTC to provide much needed clarification of its rules prior to requiring any institution to register as a swap dealer. In addition, there is a lack of international coordination that may lead to duplication and confusion across the global swaps markets.

The Payments System in Canada

The independent task force appointed by the Federal government completed their review of Canada's payments system in the spring of 2012. Based on the recommendations of the Task Force, the Federal government has announced three initiatives: the establishment of an advisory committee to review payments systems issues; a review of the Code of Conduct for the credit and debit card industry in Canada to determine applicability to emerging mobile payment systems; and a review (over a longer time frame) of the governance framework for the payments sector. The eventual outcome of these reviews could alter the way in which we and other Canadian financial institutions process payment transactions on behalf of consumers. This carries implications for the use of technology, degree of regulatory oversight, and our interactions with global payment systems.

In addition, challenges to payment network rules before the Competition Tribunal, class actions in British Columbia and Ontario regarding the setting of interchange, and the class actions in Quebec regarding the application of Quebec's *Consumer Protection Act* to certain credit card practices continue to have the potential to negatively impact the business practices and revenues of Canadian financial institutions, and could have an adverse impact on our financial performance.

Consumer Protection Measures

Regulators continue to focus on enhancing consumer protection measures, such as increased disclosure requirements and regulation of fees and pricing. In Canada, changes to negative options billing, mortgage prepayment penalties, four day cheque holds, and current dispute resolution processes, along with expanded powers for the Financial Consumer Agency of Canada, were introduced as part of the 2010 Federal Budget. Further changes have been proposed to regulations for mortgage insurance, the Electronic Transaction Code, rules relating to insurance on bank websites, and electronic documents regulations. In addition, the 2011 Federal Budget included announcements about new rules for prepaid cards and for unsolicited credit card cheques. As will be the case for all of the Canadian banks, these and other developments are likely to impact current practices in Canadian Banking and Insurance, including disclosure, documentation, process and system changes.

Regulatory Reform in the U.K. and Europe

The regulatory framework in the U.K. and Europe continues to undergo significant reform and reorganization. Effective the spring of 2013, the Financial Policy Committee (FPC), within the Bank of England, will be responsible for protecting the stability of the financial system as a whole and for macro-prudential regulation. The new Prudential Regulation Authority (PRA), a subsidiary of the Bank of England, will prudentially supervise digital systems, deposit takers, insurers and a small number of significant investment firms. The Financial Conduct Authority (FCA) will be responsible for regulating conduct in retail and wholesale markets, supervising the trading infrastructure that supports those markets, and for the prudential regulation of firms not prudentially regulated by the PRA. As a result, there may be changes to our existing compliance and operating practices for certain of our regulated entities in the U.K.

We continue to monitor developments in connection with recommendations of the Independent Commission on Banking, endorsed by the U.K. government in June 2012. As currently proposed, our U.K. entities would be exempt from the requirement to separate our retail banking and investment banking activities, by virtue of meeting prescribed *de minimis* thresholds. We expect to be required to comply with the proposed 3% leverage ratio. Given the relatively small size of our U.K. retail banking operations, these changes are not expected to materially impact our global operations or financial results and may lead to some potential benefits for us as U.K. banks restructure and retrench from the investment banking business.

Reforms also continue throughout the European Union. Effective the first half of 2013, the European Market Infrastructure Regulation (EMIR) will require firms to clear certain OTC standardized derivative contracts through central counterparties, establish risk mitigation controls for OTC derivatives transactions that cannot be cleared, and report both cleared and non-cleared contracts to trade repositories. The review of Markets in Financial Instruments Directive (MiFID) is a key initiative seeking to achieve greater trade transparency, enhanced investor protection and more oversight of OTC derivatives and fixed income products, primarily through the introduction of new types of regulated trading platforms and increased governance over certain trading activities. At this time, we expect to incur higher operational and system costs and potential changes in the types of products and services we (and other firms) can offer to clients as a result of these reforms.

Other Dodd-Frank Initiatives

Subsequent to the 2008 financial crisis, U.S. regulators have been enhancing their approach to supervising the largest, most complex banking organizations. As a result, certain of the reforms introduced by Dodd-Frank, the "Enhanced Supervision Rules", set forth in Sections 165 and 166 of the statute, will when finalized, impose capital, liquidity, leverage and similar prudential requirements at the holding company level. Foreign banks, including RBC, which operate in the U.S., outside of a holding company structure, will also be subject to enhanced supervision rules still to be published by the Federal Reserve. The international banking community is emphasizing the appropriateness of deferring to home country prudential oversight.

European debt crisis

Continued instability in the Eurozone and the possibility for contagion from the peripheral to core Eurozone countries increases the risk of sovereign and counterparty default and of a Eurozone member departing the currency union. We continue to follow market events very closely, and manage our exposure accordingly. Compared to the prior year, our exposure to Europe did not change significantly as reductions primarily related to securities were largely offset by the acquisition of the remaining 50% stake in RBC Dexia. Overall, we continue to transact business in a prudent manner and remain comfortable with our exposures in Europe, which are with well-rated counterparties mainly located in core European countries. For further details, refer to the Credit risk section.

In addition to our net exposure to Europe mentioned above, we are also subject to indirect exposure. We have implemented processes to monitor and mitigate indirect credit risk including specific controls related to the management of derivative and repo-style transaction exposures. Indirect market risk related to increased volatility resulting from European sovereign debt concerns are monitored through regular market risk stress testing and hypothetical scenario analysis. From an operational risk perspective, we have implemented contingency planning in the event of a crisis in the Eurozone economy.

Given the potential for a country departing the currency union, we have carried out scenario analysis to assess the related redenomination risk. Potential impacts arising from contracts and balances with peripheral Eurozone countries have been assessed. We are progressing with action plans to mitigate these potential exposures.

Our analysis indicates that further deterioration in the Eurozone economies will result in adverse effects which are within our ability to manage as established through our stress testing, balance sheet analysis and operational assessments.

Business and economic conditions

Our earnings are significantly affected by the general business and economic conditions in the geographic regions in which we operate. These conditions include consumer saving and spending habits as well as consumer borrowing and repayment patterns, business investment, government spending, the level of activity and volatility of the capital markets and inflation. For example, an economic downturn may result in high unemployment and lower family income, corporate earnings, business investment and consumer spending, and could adversely affect the demand for our loan and other products and result in higher provision for credit losses. Given the importance of our Canadian operations, an economic downturn in Canada or in the U.S. impacting Canada would largely affect our personal and business lending activities in our Canadian banking businesses, and could significantly impact our results of operations.

Our earnings are also sensitive to changes in interest rates. A continued low interest rate environment in Canada, the U.S. and globally would result in net interest income being unfavourably impacted by spread compression largely in Personal & Commercial Banking and Wealth Management. While an increase in interest rates would benefit our businesses that are currently impacted by spread compression, a significant increase in interest rates could also adversely impact household balance sheets. This could result in credit deterioration which might negatively impact our financial results, particularly in some of our Personal & Commercial Banking businesses. For further details on economic and market factors which may impact our financial performance, refer to the Personal & Commercial Banking and Wealth Management sections.

Capital Markets and Investor & Treasury Services would be negatively impacted if global capital markets deteriorate resulting in lower client volumes and trading volatility. In Wealth Management, weaker investor confidence and weaker market conditions would lead to lower average fee-based client assets and transaction volumes. Worsening of financial and credit market conditions may adversely affect our ability to access capital markets on favourable terms and could negatively affect our liquidity, resulting in increased funding costs and lower transaction volumes in Capital Markets and Investor & Treasury Services. For further details on economic and market factors which may impact our financial performance, refer to the Wealth Management, Investor & Treasury Services and Capital Markets sections.

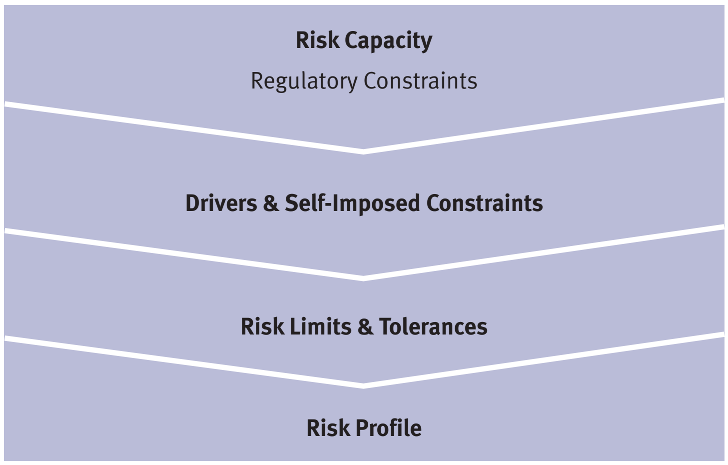
High levels of Canadian household debt

Growing Canadian household debt levels and elevated housing prices are resulting in increasing vulnerability to external risk factors. Growth in consumer debt has been driven by rising housing prices and high debt levels could amplify the effect of an external shock to the Canadian economy. When interest rates start increasing the debt service capacity of Canadian consumers will be negatively impacted. This will be more challenging for consumers with floating rate debt or impending mortgage renewals. The combination of increasing unemployment, rising interest rates, and a downturn in real estate markets would pose a risk to the credit quality of our retail lending portfolio. We actively manage our lending portfolios and stress test them against various scenarios. Our stress testing shows that the vast majority of our mortgage clients have sufficient capacity to absorb interest rate increases in the ranges currently forecast. For further discussion relating to our retail portfolio, refer to the Credit risk section.

Cybersecurity
Given our reliance on digital technologies to conduct our operations and grow digital interconnectedness around the globe, we are increasingly exposed to risks related to cybersecurity and cyber incidents. Such incidents may include unauthorized access to our digital systems for purposes of misappropriating assets, gaining access to sensitive information, corrupting data, or causing operational disruption. Although our computer systems continue to be subject to cyber attacks, we have not previously experienced a material breach of cybersecurity. Such an event could compromise our confidential information as well as that of our clients and third parties with whom we interact with and may result in negative consequences, including remediation costs, loss of revenue, additional regulatory scrutiny, litigation and reputational damage. We continue to focus on enhancing technologies, processes and practices designed to protect our networks, systems, computers and data from attack, damage or unauthorized access. We will continue to actively monitor developments, reviewing best practices and implementing additional controls to mitigate losses from these risks.

Risk framework

Risk Appetite
Our Risk Appetite is the amount and type of risk we are able and willing to accept in the pursuit of our business objectives. Our Risk Appetite Framework has four major components as illustrated below:



The framework provides a structured approach to:

1. Define our **Risk Capacity** by identifying regulatory constraints that restrict our ability to accept risk.
2. Establish and regularly confirm our Risk Appetite, comprised of **Drivers** that are the business objectives which include risks we must accept to generate desired financial returns, and **Self-Imposed Constraints** that limit or otherwise influence the amount of risk undertaken. Our Self-Imposed Constraints include:
   - maintaining a "AA" rating or better,
   - ensuring capital adequacy by maintaining capital ratios in excess of rating agency and regulatory thresholds,
   - maintaining low exposure to stress events,
   - maintaining stability of earnings,
   - ensuring sound management of liquidity and funding risk,
   - maintaining sound management of regulatory compliance risk and operational risk, and
   - maintaining a Risk Profile that is no riskier than that of our average peer.
3. Set **Risk Limits and Tolerances** to ensure that risk taking activities are within Risk Appetite.
4. Regularly measure and evaluate our **Risk Profile**, representing the risks we are exposed to, relative to our Risk Appetite, and ensure appropriate action is taken prior to Risk Profile surpassing Risk Appetite.

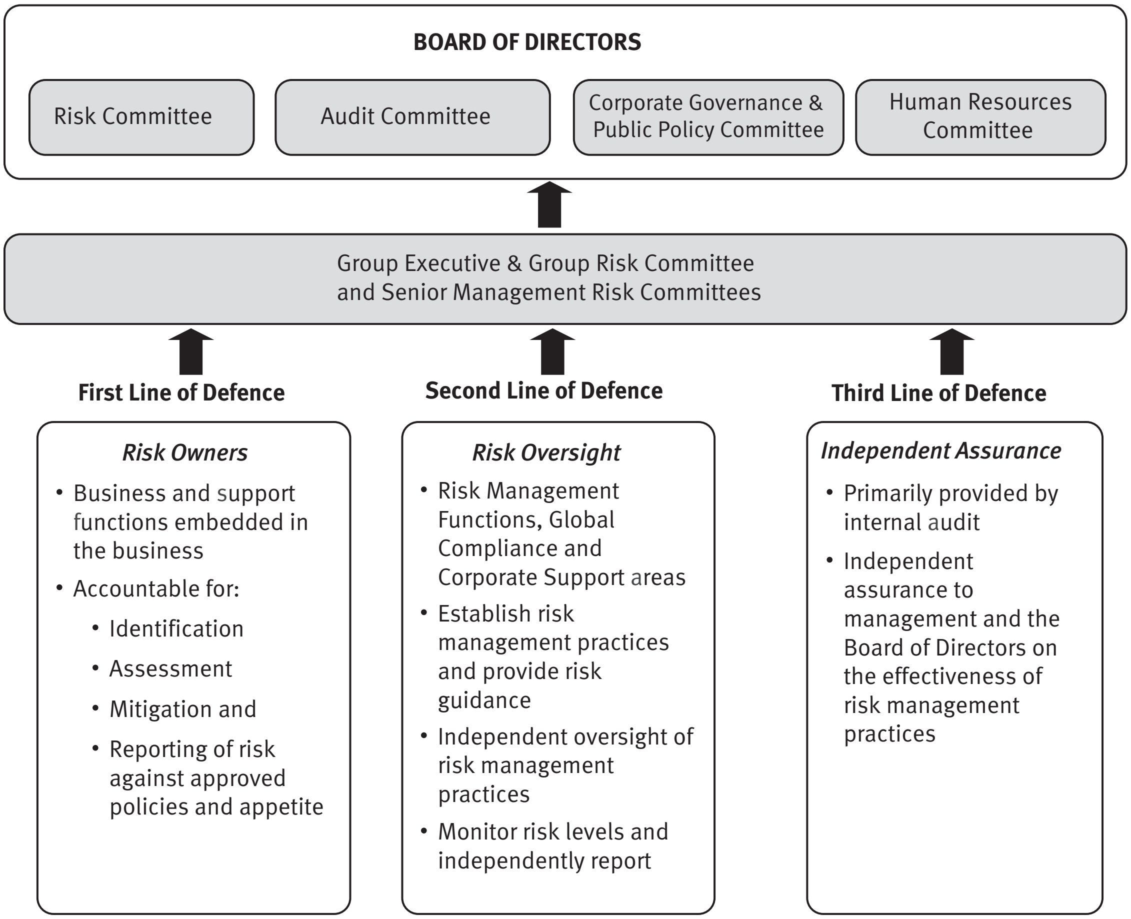
The Risk Appetite Framework is structured in such a way that it can be applied at the enterprise, business segment, business unit, and legal entity levels. Risk Appetite is integrated into our business strategies and capital plan. As part of strategic planning, each business segment's Risk Posture is assessed to anticipate the impact of strategic priorities and growth objectives on Risk Profile. We also ensure that the business strategy aligns with the enterprise and business segment level Risk Appetite.

Risk management principles
The following principles guide our enterprise-wide management of risk:

1. **Effective balancing of risk and reward** by aligning Risk Appetite with business strategy, diversifying risk, pricing appropriately for risk, mitigating risk through preventive and detective controls and transferring risk to third parties.
2. **Shared responsibility for risk management** as business segments are responsible for active management of their risks, with direction and oversight provided by GRM and other corporate functions groups.
3. **Business decisions are based on an understanding of risk** as we perform rigorous assessment of risks in relationships, products, transactions and other business activities.
4. **Avoid activities that are not consistent with our Values, Code of Conduct or Policies**, which contributes to the protection of our reputation.
5. **Proper focus on clients reduces our risks** by knowing our clients and ensuring that all products and transactions are suitable for, and understood by our clients.
6. **Use of judgment and common sense** in order to manage risk throughout the organization.

Risk governance

Our overall risk governance structure shown below illustrates our Three Lines of Defence governance model.



The Board of Directors provides oversight and carries out its risk management mandate primarily through its committees which include the Risk Committee, the Audit Committee, the Corporate Governance & Public Policy Committee and the Human Resources Committee. The Board of Directors has responsibility for approving our Risk Appetite.

The purpose of the Risk Committee is to oversee our risk management program. The Risk Committee's oversight role is designed to ensure that the risk management function is adequately independent from the businesses whose activities it reviews, and that the policies, procedures and controls used by management are sufficient to keep risks within our risk framework and appetite.

The Audit Committee also has a risk oversight role through its responsibilities to review our internal controls and the control environment, and to ensure that policies related to capital management and adequacy are in place and effective. The Audit Committee regularly reviews reporting on legal and regulatory compliance risks including significant litigation issues and regulatory compliance matters.

In addition, the following board committees have specific reputation risk oversight responsibilities:

- Corporate Governance & Public Policy Committee monitors the effectiveness of our corporate governance, reviews policies and programs, reviews our efforts to understand and meet changing public values and expectations, and identifies, assesses and advises management on public affairs issues related to our image and reputation.
- Human Resources Committee, along with the Risk Committee, is jointly responsible for our Code of Conduct, and actively oversees the design and operation of our compensation system.

The Group Executive (GE) is comprised of our senior management team and is led by the President and Chief Executive Officer (CEO). GE is responsible for our strategy and its execution and establishing the "tone at the top". The GE actively shapes and recommends our Risk Appetite for approval by the Risk Committee of the board. The GE's risk oversight role is executed primarily through the mandate of the Group Risk Committee (GRC). GRC with the assistance of its supporting senior management risk committees is responsible for ensuring that our overall Risk Profile is consistent with our strategic objectives and Risk Appetite and there is ongoing, appropriate and effective risk management processes.

The **First Line of Defence** is provided by the business as well as support functions embedded in the business. The First Line of Defence has ownership and accountability for:

- Risk identification, assessment, mitigation, control and reporting in accordance with established enterprise risk policies; and
- Alignment of business and operational strategies with corporate risk culture and Risk Appetite.

The **Second Line of Defence** is provided by functions with independent oversight accountabilities such as GRM, Global Compliance, and other corporate support areas. The Second Line of Defence:

- Establishes the enterprise level risk management frameworks and policies, and provides risk guidance,
- Provides oversight of the effectiveness of First Line risk management practices, and
- Monitors and independently reports on the level of risk against established appetite.

The Chief Risk Officer and GRM have overall responsibility for promoting our risk culture; monitoring our Risk Profile relative to our Risk Appetite; and maintaining our enterprise-wide program for identifying, measuring, controlling and reporting the significant risks that we face. The Chief Compliance Officer and Global Compliance are responsible for our policies and processes designed to mitigate and manage regulatory compliance risk. Corporate Treasury manages and oversees our capital position, structural interest rate risk and liquidity and funding risks.

The **Third Line of Defence** is primarily provided by internal audit. The Third Line of Defence provides independent assurance to senior management and the Board of Directors on the effectiveness of risk management policies, processes and practices in all areas of our organization.

The roles of the various stakeholders in our enterprise risk management program are described further in the discussion of specific risks in the following pages.

Risk measurement

Our ability to measure risks is a key component of our enterprise-wide risk and capital management processes. Certain measurement methodologies are common to a number of risk types, while others only apply to a single risk type. While quantitative risk measurement is important, we also place reliance on qualitative factors. Our measurement models and techniques are continually subject to independent assessment for appropriateness and reliability. For those risk types that are difficult to quantify, we place greater emphasis on qualitative risk factors and assessment of activities to gauge the overall level of risk to ensure that they are within our Risk Appetite.

Quantifying expected loss

Expected loss represents losses that are statistically expected to occur in the normal course of business in a given period of time. For credit risk, the key parameters used to measure our exposure to expected loss are probability of default, loss given default, and exposure at default. For market risk, a statistical technique known as Value-at-Risk (VaR) is used to measure losses under normal market conditions.

Quantifying unexpected loss and economic capital

Unexpected loss is a statistical estimate of the amount by which actual losses can exceed expected loss over a specified time horizon, measured at a specified level of confidence. We hold economic capital to withstand these unexpected losses, should they occur. For further information, refer to the Capital management section.

Stress testing as a risk measurement technique

Stress testing is a risk measurement technique that examines the potential effects on an organization's financial condition resulting from adverse economic, liquidity, credit and/or financial market developments. Stress testing supports overall risk management, capital adequacy assessment processes, and recovery and resolution planning.

Our enterprise-wide stress testing program utilizes stress scenarios featuring a range of severities based on exceptional but plausible adverse events. These stress scenarios are evaluated across the organization, and results are integrated to develop an enterprise-wide view of the impacts on our financial results and capital requirements. The exercise involves various teams, including GRM, Corporate Treasury, Finance and Economics. Scenarios may include events such as severe recession, real estate downturns, crisis in critical countries or geographies, and a sovereign debt crisis.

Enterprise-wide stress testing outcomes are reviewed by senior management and the Board of Directors and are used to enhance our understanding of our Risk Profile and its alignment with our Risk Appetite, and to support strategic decision making including planning. Results are explicitly incorporated into our Internal Capital Adequacy Assessment Process (ICAAP) and Capital Plan. This process ensures we are adequately capitalized given our Risk Profile.

In addition to the enterprise-wide program, we engage in a broad range of stress testing activities that are specific to a particular line of business, portfolio or risk type including market risk, liquidity risk, structural interest rate risk, retail and wholesale credit risk, and insurance risk. Test results may be used in a variety of decision-making processes including making adjustments to risk limits, portfolio composition, or business implementation strategies.

Validation of measurement models

We widely use models for many purposes, including validation of financial products and the measurement and management of different types of risk. Models are subject to validation by qualified employees that are sufficiently independent of model design and development, or by approved external parties. Model validation is a comprehensive independent review of a model that checks the applicability of the model's logic, its assumptions and theoretical underpinnings, the appropriateness of input data sources, and provides an interpretation of the model results and the strategic use of the model outputs. By reviewing and evaluating a model's assumptions as well as its limitations, initial and ongoing model validation help ensure the model incorporates current market developments and industry trends. Our model validation process is designed to ensure that all underlying model risk factors are identified and successfully mitigated.

Risk control

Our enterprise-wide risk management approach is supported by a comprehensive set of risk controls. The controls are anchored by our Enterprise Risk Management and Risk-Specific Frameworks. These frameworks lay the foundation for the development and communication of policies, establishment of formal risk review and approval processes, and the establishment of delegated authorities and limits. The implementation of robust risk controls enables the optimization of risk and return on both a portfolio and a transactional basis.

Our risk management frameworks and policies are organized into the following five levels:

Level 1: Enterprise Risk Management Framework provides an overview of our enterprise-wide program for identifying, measuring, controlling and reporting on the significant risks we face. The Risk Appetite Framework underpins this framework.

Level 2: Risk-Specific Frameworks elaborate on each specific risk type and the mechanisms for identifying, measuring, monitoring and reporting of risks; key policies; and roles and responsibilities.

Level 3: Enterprise Risk Policies articulate minimum requirements, within which businesses and employees must operate.

Level 4: "Multi-risk" Enterprise Risk Policies govern activities such as product risk review and approval, stress testing, risk limits, risk approval authorities and model risk management.

Level 5: Business Segments and Corporate Support; Specific Policies and Procedures are established to manage the risks that are unique to their operations.

Risk review and approval processes

Risk review and approval processes are established by GRM based on the nature, size, and complexity of the risk involved. In general, the risk review and approval process involves a formal review and approval by an individual, group or committee that is independent from the originator. The approval responsibilities are governed by delegated authorities based on the following categories: transactions, structured credit, projects and initiatives, and new products and services.

Authorities and limits
The Risk Committee of the Board of Directors delegates credit, market, and insurance risk authorities to the President and CEO and CRO. These delegated authorities allow these officers to approve single name, geographic (country and region) and industry sector exposures within defined parameters to reduce concentration risk, establish underwriting and inventory limits for trading and investment banking activities and set market risk tolerances.

The Board of Directors also delegates liquidity risk authorities to the President and CEO, Chief Administrative Officer and Chief Financial Officer, and the CRO. These limits act as a key risk control designed to ensure that reliable and cost-effective sources of cash are available to satisfy our current and prospective commitments.

Reporting
Enterprise level risk monitoring and reporting are critical components of our enterprise risk management program and support the ability of senior management and the Board of Directors to effectively perform their risk management and oversight responsibilities. On a quarterly basis, we provide to senior management and the Board of Directors the Enterprise Risk Report which includes a comprehensive review of our Risk Profile relative to our Risk Appetite and focuses on a range of risks we face along with analysis of the related issues and trends. In addition to our regular risk monitoring, other risk specific presentations are provided to and discussed with senior management and the Board of Directors on emerging risk issues or significant changes in our level of risk.

The shaded texts along with the tables specifically marked with an asterisk(*) in the following sections of the MD&A represent our disclosures on credit, market and liquidity and funding risks in accordance with IFRS 7*, Financial Instruments: Disclosures*, and include discussion on how we measure our risks and the objectives, policies and methodologies for managing these risks. Therefore, these shaded texts and tables represent an integral part of our 2012 Annual Consolidated Financial Statements for the years ended October 31, 2012 and October 31, 2011.

Credit risk

Credit risk is the risk of loss associated with an obligor's potential inability or unwillingness to fulfill their contractual obligations. Credit risk may arise directly from the risk of default of a primary obligor (e.g. issuer, debtor, counterparty, borrower or policyholder), or indirectly from a secondary obligor (e.g. guarantor or reinsurer).

The failure to effectively manage credit risk across all our products, services and activities can have a direct, immediate and material impact on our earnings and reputation.

We balance our risk and return by:
- Ensuring credit quality is not compromised for growth.
- Diversifying credit risks in transactions, relationships and portfolios.
- Using our credit risk rating and scoring systems or other approved credit risk assessment or rating methodologies, policies and tools.
- Pricing appropriately for the credit risk taken.
- Applying consistent credit risk exposure measurements.
- Mitigating credit risk through preventive and detective controls.
- Transferring credit risk to third parties, where appropriate, through approved credit risk mitigation techniques, including hedging activities and insurance coverage.
- Ongoing credit risk monitoring and administration.

Risk measurement

We quantify credit risk, at both the individual obligor and portfolio levels, to manage expected credit losses and minimize unexpected losses in order to limit earnings volatility.

We employ different risk measurement processes for our wholesale and retail credit portfolios. The wholesale portfolio comprises businesses, sovereigns, public sector entities, banks and other financial institutions, and certain individuals and small businesses that are managed on an individual client basis. The retail portfolio is comprised of residential mortgages and personal, credit card and small business loans, which are managed on a pooled basis. Credit risk rating systems are designed to assess and quantify the risk inherent in credit activities in an accurate and consistent manner.

In measuring credit risk and setting regulatory capital under Basel II, two principal approaches are available: Advanced Internal Ratings Based (AIRB) and Standardized. Most of our credit risk exposure is measured under the AIRB Approach.
Economic capital, which is our internal quantification of risks, is used extensively for performance measurement, limit setting and internal capital adequacy.

The key parameters that form the basis of our credit risk measures for both regulatory and economic capital are:
- Probability of default (PD): An estimated percentage that represents the likelihood of default within a one-year period of an obligor for a specific rating grade or for a particular pool of exposure.
- Exposure at default (EAD): An amount expected to be owed by an obligor at the time of default.
- Loss given default (LGD): An estimated percentage of EAD that is not expected to be recovered during the collections and recovery process.

These parameters are determined based on historical experience from internal credit risk rating systems in accordance with supervisory standards, and are independently validated and updated on a regular basis.

Under the Standardized Approach, used primarily for RBC Investor Services and our Caribbean and U.S. banking operations, risk weights prescribed by OSFI are used to calculate risk-weighted assets (RWA) for credit risk exposure.

Wholesale credit portfolio

The wholesale credit risk rating system is designed to measure the credit risk inherent in our wholesale lending activities along two dimensions.

First, each obligor is assigned a borrower risk rating (BRR), reflecting an assessment of the credit quality of the obligor. Each BRR has a PD assigned to it. The BRR differentiates the riskiness of obligors and represents our evaluation of the obligor's ability and willingness to meet its contractual obligations during adverse or stressed business conditions, troughs in the business cycle, economic downturns or unexpected events that may occur. The assignment of BRRs is based on the evaluation of obligors' business risk and financial risk based on fundamental credit analysis supplemented by quantitative models.

Our rating system is largely consistent with that of external rating agencies. The following table maps our 22-grade internal risk ratings compared to ratings by external rating agencies.

Internal ratings map **Table 38**

Ratings	Standard & Poor's (S&P)	Moody's Investors Service (Moody's)	Description
1 to 4	AAA to AA-	Aaa to Aa3	Investment Grade
5 to 7	A+ to A-	A1 to A3	
8 to 10	BBB+ to BBB-	Baa1 to Baa3	
11 to 13	BB+ to BB-	Ba1 to Ba3	Non-investment Grade
14 to 16	B+ to B-	B1 to B3	
17 to 20	CCC+ to CC	Caa1 to Ca	
21 to 22	D to Bankruptcy	C to Bankruptcy	Impaired/Default

Second, each credit facility is assigned an LGD rate. LGD rates are largely driven by factors such as seniority of debt, collateral security, product type, the industry sector in which the obligor operates and market environment.

EAD is estimated based on the current exposure to the obligor and the possible future changes of that exposure driven by factors such as credit quality of the obligor and type of credit commitment.

These ratings and risk measurements are used in the determination of our expected losses and unexpected losses as well as economic and regulatory capital, setting of risk limits, portfolio management and product pricing.

Retail credit portfolio

Credit scoring is the primary risk rating system for assessing obligor and transaction risk for retail exposures. Credit scores along with decision strategies are employed in the acquisition of new clients (acquisition) and management of existing clients (behavioural).

Criteria used to pool exposures for risk quantification include behavioural score, product type (mortgages, credit cards, lines of credit and instalment loans), collateral type (chattel, liquid assets and real estate), loan to value, and the delinquency status (performing, delinquent and default) of the exposure. Regular monitoring and periodic adjustments and alignments are conducted to ensure that this process provides for a meaningful differentiation of risk. Migration between the pools is considered when assessing credit quality.

The pools are also assessed based on credit risk parameters (PD, EAD and LGD) which consider borrower and transaction characteristics, including behavioural credit score, product type and delinquency status. The LGD is estimated based on transaction specific factors, including product, loan to value and collateral types. Our risk ratings are reviewed and updated on a regular basis.

The following table maps PD bands to various risk levels:

Internal ratings map **Table 39**

PD bands	Description
0.0% – 1.0%	Low Risk
1.1% – 6.4%	Medium Risk
6.5% – 99.99%	High Risk
100.00%	Impaired/Default

Risk control

The Board of Directors and its committees, GE, GRC and other senior management risk committees work together to ensure a Credit Risk Framework and supporting policies, processes and procedures exist to manage credit risk and approve related credit risk limits. Reports are distributed to the Board of Directors, GRC, and senior executives to keep them informed of our Risk Profile, including trending information and significant credit risk issues and shifts in exposures to ensure appropriate actions can be taken where necessary. Our enterprise-wide credit risk policies set out the minimum requirements for the management of credit risk in a variety of borrower, transactional and portfolio management contexts.

Credit policies are an integral component of our Credit Risk Management Framework and set out the minimum requirements for the management of credit risk as follows:

Credit risk assessment

- Mandatory use of credit risk rating and scoring systems.
- Consistent credit risk assessment criteria.
- Standard content requirements in credit application documents.

Credit risk mitigation
Structuring of transactions

- Specific credit policies and procedures set out the requirements for structuring transactions. Risk mitigants include the use of guarantees, seniority, loan-to-value requirements and covenants. Product-specific guidelines set out appropriate product structuring as well as client and guarantor criteria. The third-party guarantors that we deal with are primarily sovereign-sponsored agencies.

Collateral

- We often require obligors to pledge collateral as security when we advance credit. The extent of risk mitigation provided by collateral depends on the amount, type and quality of the collateral taken. Specific requirements relating to collateral valuation and management are documented in our credit risk management policies.

Credit derivatives

- Used as a tool to mitigate industry sector concentration and single-name exposure. For a more detailed description of the types of credit derivatives we enter into and how we manage related credit risk, refer to Note 9 of our 2012 Annual Consolidated Financial Statements.

Product approval

- Proposals for credit products and services are comprehensively reviewed and approved under a risk assessment framework.

Credit portfolio management

- Limits are used to ensure our portfolio is well diversified, reduce concentration risk and remain within our Risk Appetite. Limits are reviewed on a regular basis taking into account the business, economic, financial and regulatory environments.
- Our credit limits are established at the following levels: single name limits (notional and economic capital), underwriting risk limits, geographic (country and region) limits, industry sector limits (notional and economic capital), and product and portfolio limits, where deemed necessary.

Our credit risk objectives, policies, and methodologies have not changed materially from 2011.

Gross credit risk exposure
Gross credit risk exposure is calculated based on the definitions provided under the Basel II framework. Under this method, risk exposure is calculated before taking into account any collateral and inclusive of an estimate of potential future changes to that credit exposure. Gross credit risk is categorized into lending-related and other, and trading-related.

Lending-related and other includes:

- Loans and acceptances outstanding, undrawn commitments, and other exposures including contingent liabilities such as letters of credit and guarantees, AFS debt securities and deposits with financial institutions. Undrawn commitments represent an estimate of the contractual amount that may be drawn upon at the time of default of an obligor.

Trading-related credit includes:

- Repo-style transactions include repurchase and reverse repurchase agreements and securities lending and borrowing transactions. For repo-style transactions, gross exposure represents the amount at which securities were initially financed, before taking into account collateral.
- Over-the-counter (OTC) derivatives gross exposure amount represents the credit equivalent amount, which is defined by OSFI as the replacement cost plus an amount for potential future credit exposure.

Gross (excluding allowance for loan losses) credit risk exposure by portfolio and sector* — Table 40

	2012						2011					
	Lending-related and other			Trading-related			Lending-related and other			Trading-related		
	Loans and acceptances						Loans and acceptances					
(Millions of Canadian dollars)	Outstanding	Undrawn commitments	Other	Repo-style transactions	Over-the-counter derivatives (1)	Total exposure (2)	Outstanding	Undrawn commitments	Other	Repo-style transactions	Over-the-counter derivatives (1)	Total exposure (2)
Residential mortgages	$ 198,324	$ –	$ –	$ –	$ –	$ 198,324	$ 190,303	$ 13	$ 9	$ –	$ –	$ 190,325
Personal (3)	86,697	70,274	39	–	–	157,010	85,227	75,314	49	–	–	160,590
Credit cards	13,661	18,036	–	–	–	31,697	13,151	27,079	–	–	–	40,230
Small business (4)	2,503	3,933	40	–	–	6,476	2,481	4,168	42	–	–	6,691
Retail	$ 301,185	$ 92,243	$ 79	$ –	$ –	$ 393,507	$ 291,162	$ 106,574	$ 100	$ –	$ –	$ 397,836
Business (4)												
Agriculture	$ 5,202	$ 659	$ 29	$ –	$ 29	$ 5,919	$ 4,990	$ 609	$ 26	$ –	$ 19	$ 5,644
Automotive	3,585	3,219	240	–	546	7,590	3,344	2,500	176	–	380	6,400
Consumer goods	5,432	3,510	467	–	224	9,633	6,064	3,053	504	–	179	9,800
Energy	8,802	17,229	2,762	29	1,598	30,420	6,487	14,363	2,484	36	1,688	25,058
Non-bank financial services	3,895	6,954	11,149	124,925	6,051	152,974	2,103	6,100	10,371	88,900	7,383	114,857
Forest products	811	398	97	–	11	1,317	775	437	102	–	19	1,333
Industrial products	3,938	2,727	292	–	197	7,154	3,930	2,399	314	–	157	6,800
Mining & metals	965	2,630	681	91	113	4,480	1,152	1,880	667	114	109	3,922
Real estate & related	20,650	4,531	1,366	–	337	26,884	19,851	3,376	1,055	–	320	24,602
Technology & media	4,203	4,922	242	2	359	9,728	3,034	3,294	175	335	425	7,263
Transportation & environment	5,221	2,515	1,069	–	976	9,781	5,145	2,131	1,151	–	613	9,040
Other	20,554	8,575	7,783	25,807	3,964	66,683	21,034	7,226	5,965	15,030	5,235	54,490
Sovereign (4)	4,193	5,026	33,021	20,130	7,868	70,238	4,050	3,606	28,475	10,474	9,392	55,997
Bank (4)	990	406	66,878	85,164	21,868	175,306	1,324	398	52,656	75,582	32,043	162,003
Wholesale	$ 88,441	$ 63,301	$ 126,076	$ 256,148	$ 44,141	$ 578,107	$ 83,283	$ 51,372	$ 104,121	$ 190,471	$ 57,962	$ 487,209
Total exposure	$ 389,626	$ 155,544	$ 126,155	$ 256,148	$ 44,141	$ 971,614	$ 374,445	$ 157,946	$ 104,221	$ 190,471	$ 57,962	$ 885,045

* This table represents an integral part of our 2012 Annual Consolidated Financial Statements.
(1) Credit equivalent amount after factoring in master netting agreements. Derivative exposure is measured at fair value.
(2) Gross credit risk exposure is before allowance for loan losses and represents consolidated (combined continuing and discontinued) operations. Exposure under Basel II asset classes of qualifying revolving retail and other retail are largely included within Personal and Credit cards, while home equity lines of credit are included in Personal.
(3) Home equity lines of credit reported primarily in Canadian Banking comprised $44 billion or 51% of our outstanding personal loan portfolio as at October 31, 2012 (2011 – $41 billion or 48%). More than 97% of home equity lines of credit (2011 – 95%) are secured by a first lien on real estate. Of the clients that have home equity lines of credit, less than 7% (2011 – 7%), pay the scheduled interest payment only.
(4) Refer to Note 6 of our 2012 Annual Consolidated Financial Statements for the definition of these terms.

2012 vs. 2011

Total gross credit risk exposure increased $87 billion or 10% from the prior year, largely reflecting an increase related to repo-style transactions and the acquisition of the remaining 50% stake in RBC Dexia.

Retail exposure decreased $4 billion or 1%, largely driven by the implementation of updated risk parameters for undrawn commitments reflecting recent credit experience and the sale of our U.S. regional retail banking operations, partially offset by strong volume growth in Canadian residential mortgages. The use of guarantees and collateral represents an integral part of our credit risk mitigation in our retail portfolio. Insured mortgages accounted for 42% of our residential mortgage portfolio as at October 31, 2012, unchanged from the prior year. Secured personal lending represented 55% of personal loans outstanding as at October 31, 2012, compared to 56% in the prior year.

Wholesale exposure increased $91 billion or 19%, largely due to an increase in repo-style transactions resulting from higher client activity and new business activity, and the acquisition of the remaining 50% stake in RBC Dexia. Other exposure increased by $22 billion or 21%, primarily related to an increase in guarantees to banks provided in relation to our securities lending business, mainly due to the acquisition of RBC Dexia. Wholesale loans and acceptances outstanding increased by $5 billion or 6%, with the largest increases in the energy, non-bank financial services and technology & media sectors. Undrawn commitments increased by $12 billion or 23%, with the largest increase in the energy sector. Loan utilization is at 37%, a decrease from 40% in the prior year due to an increase in undrawn commitments.

Gross (excluding allowance for loan losses) credit risk exposure by geography* — Table 41

	2012						2011
	Lending-related and other			Trading-related			
	Loans and acceptances						
(Millions of Canadian dollars)	Outstanding	Undrawn commitments	Other	Repo-style transactions	Over-the-counter derivatives (1)	Total exposure (2)	Total exposure (2)
Canada	$ 346,834	$ 117,797	$ 55,548	$ 81,691	$ 9,820	$ 611,690	$ 561,269
U.S.	20,219	28,172	19,088	92,056	10,157	169,692	147,324
Europe	10,679	7,705	36,139	65,329	19,941	139,793	129,212
Other International	11,894	1,870	15,380	17,072	4,223	50,439	47,240
Total exposure (3)	$ 389,626	$ 155,544	$126,155	$ 256,148	$ 44,141	$ 971,614	$ 885,045

* This table represents an integral part of our 2012 Annual Consolidated Financial Statements.
(1) Credit equivalent amount after factoring in master netting agreements. Derivative exposure is measured at fair value.
(2) Gross credit risk exposure is before allowance for loan losses and represents consolidated (combined continuing and discontinued) operations. Exposure under Basel II asset classes of qualifying revolving retail and other retail are largely included within Personal and Credit cards, while home equity lines of credit are included in Personal.
(3) Geographic profile is based on country of residence of the borrower.

2012 vs. 2011

The geographic mix of our gross credit risk exposure did not change significantly from the prior year with Canada, U.S., Europe and Other International reflecting 63%, 18%, 14% and 5% of our exposure, respectively. The increase of $87 billion in our gross credit exposure reflected higher exposure in Canada, U.S., Europe and Other International of $51 billion, $22 billion, $11 billion and $3 billion, respectively. The increase in Canada largely related to increases in loans and acceptances outstanding, repo-style transactions and higher guarantee exposures related to our securities lending business. The increase in the U.S. was mainly due to repo-style transactions, partially offset by a reduction in loans and acceptances outstanding largely reflecting the sale of our U.S. regional retail banking operations. The increase in Europe mainly reflected higher guarantee exposures in our investor services business and repo-style transactions.

European exposure **Table 42**

	2012							2011
	Loans and acceptances		Other					
(Millions of Canadian dollars)	Outstanding	Undrawn commitments (1)	Securities (2)	Letters of credit and guarantees	Repo-style transactions	Over-the-counter derivatives (3)	Total European exposure	Total European exposure
Gross exposure to Europe	$ 10,679	$ 7,705	$ 16,063	$ 20,076	$ 65,329	$ 19,941	$ 139,793	$ 129,212
Less: Collateral held against repo-style transactions	–	–	–	–	63,887	–	63,887	58,379
Potential future credit exposure add-on amount	–	–	–	–	–	10,536	10,536	18,329
Undrawn commitments	–	7,705	–	20,076	–	–	27,781	15,616
Gross drawn exposure to Europe (4)	$ 10,679	$ –	$ 16,063	$ –	$ 1,442	$ 9,405	$ 37,589	$ 36,888
Less: Collateral applied against derivatives	–	–	–	–	–	6,495	6,495	5,461
Add: Trading securities	–	–	11,742	–	–	–	11,742	11,826
Net exposure to Europe (5), (6)	$ 10,679	$ –	$ 27,805	$ –	$ 1,442	$ 2,910	$ 42,836	$ 43,253

(1) Comprised of undrawn commitments of $5.8 billion to corporate entities, $1.5 billion to financial entities and $0.4 billion to sovereign entities. On a country basis, exposure is comprised of $3.3 billion to U.K., $1.7 billion to France, $0.6 billion to Germany, $139 million to Ireland, $98 million to Spain, with the remaining $1.9 billion related to Other Europe. Of the undrawn commitments, over 90% are to investment grade entities.

(2) Securities include $11.7 billion of trading securities (2011 – $11.8 billion), $9.3 billion of deposits (2011 – $10.4 billion) and $6.8 billion of AFS securities (2011 – $9.5 billion).

(3) Derivative exposures are measured at fair value.

(4) Based on our interpretation of gross funded exposures as reported by certain U.S. banks, which excludes undrawn commitments, potential future credit exposure amount and collateral.

(5) Excludes $0.6 billion (2011 – $1.5 billion) of exposures to supra-national agencies.

(6) Excludes $1.9 billion (2011 – $1.4 billion) of exposures to trade credit reinsurance.

As noted above, our gross credit risk exposure is calculated based on the definitions provided under the Basel II framework whereby risk exposure is calculated before taking into account any collateral and inclusive of an estimate of potential future changes to that credit exposure. On that basis, our total European exposure as at October 31, 2012 was $140 billion. Our gross drawn exposure to Europe was $38 billion, after taking into account collateral held against repo-style transactions of $64 billion, letters of credit and guarantees, and undrawn commitments for loans of $28 billion and potential future credit exposure to OTC derivatives of $10 billion. Our net exposure to Europe was $43 billion, after taking into account $7 billion of collateral, primarily in cash, we hold against OTC derivatives and the addition of trading securities of $12 billion held in our trading book. Our net exposure to Europe also reflected $0.2 billion of mitigation through credit default swaps, which are largely used to hedge single name exposures and market risk.

Net European exposure — Table 43

(Millions of Canadian dollars)	2012 Loans outstanding	2012 Securities (1)	2012 Repo-style transactions	2012 Over-the-counter derivatives (2)	2012 Total	2011 Total
U.K.	$ 6,469	$ 3,036	$ 981	$ 1,183	$ 11,669	$ 15,339
Germany	411	5,779	189	436	6,815	6,918
France	537	2,865	77	307	3,786	4,189
Total U.K., Germany, France	$ 7,417	$ 11,680	$ 1,247	$ 1,926	$ 22,270	$ 26,446
Greece	$ –	$ 14	$ –	$ –	$ 14	$ 13
Ireland	195	165	27	111	498	456
Italy	48	92	–	17	157	241
Portugal	–	–	–	1	1	28
Spain	393	386	12	12	803	701
Total Peripheral (3)	$ 636	$ 657	$ 39	$ 141	$ 1,473	$ 1,439
Luxembourg	$ 905	$ 5,911	$ –	$ 84	$ 6,900	$ 2,086
Netherlands	112	2,804	6	361	3,283	3,789
Norway	156	1,449	–	27	1,632	921
Sweden	–	1,265	61	45	1,371	2,260
Switzerland	652	2,478	70	33	3,233	2,787
Other	801	1,561	19	293	2,674	3,525
Total Other Europe	$ 2,626	$ 15,468	$ 156	$ 843	$ 19,093	$ 15,368
Total exposure to Europe (4), (5)	$ 10,679	$ 27,805	$ 1,442	$ 2,910	$ 42,836	$ 43,253

(1) Securities include $11.7 billion of trading securities (2011 – $11.8 billion), $9.3 billion of deposits (2011 – $10.4 billion) and $6.8 billion of AFS securities (2011 – $9.5 billion).
(2) Derivative exposure is measured at fair value.
(3) Gross credit risk exposure to peripheral Europe is comprised of $nil to Greece (2011 – $nil), Ireland $3.8 billion (2011 – $3.4 billion), Italy $0.2 billion (2011 – $0.6 billion), Portugal $0.1 billion (2011 – $0.1 billion), and Spain $1.1 billion (2011 – $1.2 billion).
(4) Excludes $0.6 billion (2011 – $1.5 billion) of exposures to supra-national agencies.
(5) Geographic profile is based on country of risk, which reflects our assessment of the geographic risk associated with a given exposure. Typically, this is the residence of the borrower.

2012 vs. 2011

Net credit risk exposure to Europe did not change significantly as reductions primarily related to securities were largely offset by the acquisition of the remaining 50% stake in RBC Dexia.

With respect to country exposure, our net exposure to peripheral Europe including Greece, Ireland, Italy, Portugal and Spain remained minimal with total outstanding exposure of $1 billion as at October 31, 2012, unchanged from the prior year. This exposure was predominantly investment grade, with limited direct sovereign exposure. Our net exposure to larger European countries including the U.K., Germany and France, primarily relate to our capital markets, wealth management and investor services businesses, particularly in fixed income, treasury services, derivatives, and corporate and individual lending. These are client-driven businesses where we transact with a range of European financial institutions, corporations and individuals. In addition, we engage in primary dealer activities in a number of jurisdictions, including the U.K., Germany and France, where we participate in auctions of government debt and act as a market maker and provide liquidity to clients. Exposures to other European countries are largely related to securities which include deposits, trading securities and AFS securities. The increase in our exposure to Luxembourg is largely due to increased deposits primarily related to the acquisition of the remaining 50% stake in RBC Dexia.

Securities consisted of $12 billion in trading securities, $9 billion in deposits, and $7 billion in AFS securities. Our trading securities are related to both client market making activities and our funding and liquidity management needs. All of our trading securities are marked-to-market on a daily basis. Deposits primarily included deposits with central banks or financial institutions and also included deposits related to our wealth management business in the Channel Islands. AFS securities largely comprised of Organization of Economic Co-operation and Development government and corporate debt. Our European corporate loan book is run on a global basis and the underwriting standards for this loan book reflect the same conservative approach to the use of our balance sheet as we have applied in both Canada and the U.S. The portfolio quality of this loan book remains sound and we had minimal credit losses of $34 million on this portfolio for the year ended October 31, 2012. The PCL on impaired loans as a percentage of average net loans and acceptances ratio and GIL ratio of this loan book were both at 0.39%.

Net European exposure by client type — Table 44

(Millions of Canadian dollars)	2012 U.K.	2012 Germany	2012 France	2012 Total U.K., Germany, France	2012 Greece	2012 Ireland	2012 Italy	2012 Portugal	2012 Spain	2012 Total Peripheral	2012 Other Europe	2012 Total Europe	2011 Total Europe
Financials	$ 5,140	$ 4,679	$ 2,180	$ 11,999	$ –	$ 147	$ 44	$ 1	$ 116	$ 308	$ 9,637	$ 21,944	$ 27,256
Sovereign	433	1,327	815	2,575	–	64	34	–	247	345	6,523	9,443	7,150
Corporate	6,096	809	791	7,696	14	287	79	–	440	820	2,933	11,449	8,847
Total (1)	$ 11,669	$ 6,815	$ 3,786	$ 22,270	$ 14	$ 498	$ 157	$ 1	$ 803	$ 1,473	$ 19,093	$ 42,836	$ 43,253

(1) Geographic profile is based on country of risk, which reflects our assessment of the geographic risk associated with a given exposure. Typically, this is the residence of the borrower.

2012 vs. 2011
Our net exposure to Financials decreased $5 billion, largely in the U.K. due to a reduction in securities. Our net exposure to Sovereign increased $2 billion primarily due to higher deposits resulting from the acquisition of the remaining 50% stake in RBC Dexia. These deposits largely relate to amounts placed with the central bank of Luxembourg. Our net exposure to Corporate increased $3 billion, partially reflecting increased exposure to loans in the U.K.

Credit quality performance – continuing operations basis

Provision for (recovery of) credit losses — **Table 45**

(Millions of Canadian dollars)	2012	2011
Personal & Commercial Banking	$ 1,167	$ 1,142
Capital Markets	135	(14)
Corporate Support and Other (1)	(1)	5
Total PCL	$ 1,301	$ 1,133
Canada (2)		
Residential mortgages	$ 34	$ 25
Personal	413	408
Credit cards	391	448
Small business	43	35
Retail	881	916
Wholesale	209	102
PCL on impaired loans	1,090	1,018
United States (2)		
Retail	$ 4	$ 4
Wholesale	29	(19)
PCL on impaired loans	33	(15)
Other International (2)		
Retail	$ 64	$ 43
Wholesale	116	85
PCL on impaired loans	180	128
Total PCL on impaired loans	1,303	1,131
PCL on loans not yet identified as impaired	(2)	2
Total PCL	$ 1,301	$ 1,133

(1) PCL in Corporate Support and Other primarily comprised of PCL from continuing operations for loans not yet identified as impaired. For further information, refer to the How we measure and report our business segments section
(2) Geographic information is based on residence of borrower.

2012 vs. 2011
Total PCL increased $168 million, or 15%, from a year ago.

PCL in Personal & Commercial Banking increased $25 million or 2%, mainly due to higher PCL in our Caribbean portfolio and higher PCL in our Canadian secured retail lending and business lending portfolios, partially offset by lower write-offs related to our credit card portfolio reflecting improved credit quality.

PCL in Capital Markets of $135 million compared to a recovery of $14 million in the prior year, mainly due to higher provisions on a few accounts, compared to recoveries in the prior year.

Gross impaired loans (GIL) — **Table 46**

(Millions of Canadian dollars)	2012	2011
Personal & Commercial Banking	$ 1,820	$ 2,055
Capital Markets	389	230
Corporate Support and Other	41	42
Total GIL	$ 2,250	$ 2,327
Canada (1)		
Retail	$ 715	$ 795
Wholesale	641	513
GIL	1,356	1,308
United States (1)		
Retail	$ 7	$ 6
Wholesale	162	116
GIL	169	122
Other International (1)		
Retail	$ 258	$ 247
Wholesale	467	650
GIL	$ 725	$ 897
Total GIL	$ 2,250	$ 2,327

(1) Geographic information is based on residence of borrower.

2012 vs. 2011
Total GIL decreased $77 million or 3% from a year ago.

GIL in Personal & Commercial Banking decreased $235 million or 11%, mainly due to lower impaired loans in our Caribbean, Canadian residential mortgage and business lending portfolios.

GIL in Capital Markets increased $159 million or 69%, primarily due to higher impaired loans in the technology & media sectors, partially offset by lower impaired loans in the energy and transportation & environment sectors.

Retail GIL in Canada decreased $80 million, primarily due to lower impaired loans in our residential mortgage portfolio while wholesale GIL increased $128 million mainly due to higher impaired loans in the technology & media sector, partially offset by lower impaired loans in the energy and automotive sectors. U.S. wholesale GIL increased $46 million mainly due to higher impaired loans in the industrial products sector. Other International wholesale GIL decreased $183 million mainly due to lower impaired loans in the real estate & related sectors.

Allowance for credit losses (ACL) — **Table 47**

(Millions of Canadian dollars)	2012	2011
Allowance for impaired loans		
Personal & Commercial Banking	$ 507	$ 500
Capital Markets	126	70
Corporate Support and Other	4	35
Total allowance for impaired loans	637	605
Canada (1)		
Retail	$ 142	$ 150
Wholesale	239	179
Allowance for impaired loans	381	329
United States (1)		
Retail	$ 1	$ 1
Wholesale	38	25
Allowance for impaired loans	39	26
Other International (1)		
Retail	$ 96	$ 80
Wholesale	121	170
Allowance for impaired loans	217	250
Total allowance for impaired loans	637	605
Allowance for loans not yet identified as impaired	1,451	1,453
Total ACL	$ 2,088	$ 2,058

(1) Geographic information is based on residence of borrower.

2012 vs. 2011
Total ACL increased $30 million or 1% from a year ago, mainly related to the increase in ACL in Capital Markets.

Market risk

Market risk is defined as the potential loss in value of the firm due to changes in market prices and rates including interest rates, credit spreads, equity prices, foreign exchange rates and commodity prices. Market risk has a direct impact on earnings for those positions that are marked-to-market for financial reporting purposes and impacts the economic value of the firm for structural interest rate risk and banking book assets.

At RBC, most of the market risk that has a direct impact on earnings results from our trading activities. In our trading operations, RBC acts primarily as a market maker, executing transactions that meet the financial requirements of our clients and transferring the market risks to the broad financial market. Our trading activities are conducted over-the-counter and on exchanges in the spot, forward, futures and options markets, and we offer structured derivative transactions.

The Board of Directors, upon the recommendation of the Risk Committee, approves the overall market risk appetite for RBC. Group Risk Management (GRM) creates and manages the control structure that ensures that business is conducted consistent with Board requirements. The Market and Trading Credit Risk function within GRM is responsible for creating and managing the controls and governance procedures for managing market risk at RBC. These controls include limits on:

- Market risk positions;
- Probabilistic measures of potential loss such as Value-at-Risk (VaR) and Stressed Value-at-Risk defined below, and;
- Scenario based stress tests which utilize both actual historical market scenarios such as the global financial crisis of 2008 and hypothetical scenarios designed to be more forward looking. These stress tests use severe and long duration market stresses.

Value-at-Risk (VaR) – VaR is a statistical measure of potential loss for a financial portfolio computed at a given level of confidence and over a defined holding period. We measure VaR at the 99th percentile confidence level for price movements over a 1 day holding period using historic simulation of the last two years of equally weighted historic market data. These calculations are updated daily with current risk positions with the exception of CVA and certain other positions which are updated weekly.

To ensure VaR effectively captures our market risk, we continuously monitor and enhance our methodology. Daily back-testing serves to compare profit or loss against the VaR to monitor the statistical validity of 99% confidence level of the daily VaR measure. VaR models and market risk factors are independently reviewed periodically to further ensure accuracy and reliability.

Stressed Value-at-Risk (SVaR) – is calculated in an identical manner as VaR with the exception that a fixed historical one year period of extreme volatility and its inverse are used rather than the last two year history. The stress period used is the interval from September 2008 through August 2009. Stressed VaR is calculated weekly for all portfolios.

VaR and SVaR are statistical measures based on historical market events and will not be predictive of future losses if future market movements differ significantly from those historical periods used to compute them. As a result, VaR and Stressed VaR are not estimates of the worst case one day trading loss. Furthermore, the use of a one-day horizon VaR for risk measurement implies that the position could be unwound or hedged within a day, but this may be unrealistic for positions that are significantly larger than daily market liquidity. For this reason, we have an active and well-developed stress testing program.

Stress Tests – Our stress testing program is meant to identify and control risk from large changes in market prices and rates. We employ historical and hypothetical scenarios and we invest considerable effort in the creation and examination of our scenarios. Our historical scenarios are taken from actual market events over the last 30 years and range in duration up to 90 days. Examples include the equity market crash of 1987 and the global financial crisis of 2008. Hypothetical scenarios are designed to be forward looking at potential future market stresses, and are designed to be severe but plausible. We are constantly evaluating and refining these scenarios as market conditions change. Stress results are calculated assuming an instantaneous revaluation of our positions.

These key risk control measures are applied to all positions which are marked-to-market for financial reporting purposes, with the exception of those in a designated hedging relationship and certain others (1). Prior to June 2012, we applied these measures separately to positions in the trading book, and positions not considered part of the trading book (2) such as Credit Valuation Adjustments (CVA), Credit Default swap hedges on the loan book and the risk associated with fair valued liabilities. In June of 2012, we enhanced our limit structure to combine both sources of fair value market risk under these measures. This change was made in order to have greater consistency between the positions subject to market risk controls and the positions whose market risk directly impacts our revenues. The key risk measures (Market Risk VaR) reported in the tables and charts below reflect this change.

(1) Committed loan syndications which are derivatives under IFRS, and certain positions held within RBC insurance are not included in these measures.
(2) The trading book as defined in Section 8.5 of OSFI's Capital Adequacy Requirements (January 2012).

VaR and Stress VaR (2012)

The table below presents our Market risk VaR and Market risk Stressed VaR figures for 2012.

Market risk VaR* **Table 48**

(Millions of Canadian dollars)	2012 As at Oct. 31	For the year ended October 31 Average	High	Low
Equity	$ 10	$ 11	$ 21	$ 5
Foreign exchange	2	4	7	1
Commodities	3	2	4	1
Interest rate	50	50	65	34
Credit specific (1)	10	9	12	7
Diversification	(28)	(24)	(41)	(13)
Market risk VaR (2)	$ 47	$ 52	$ 66	$ 43
Market risk Stressed VaR	$ 79	$ 78	$ 107	$ 62

* This table represents an integral part of our 2012 Annual Consolidated Financial Statements.
(1) General credit spread risk is measured under interest rate VaR while credit specific risk captures issuer-specific credit spread volatility.
(2) Market risk VaR results from prior to June 2012 have been estimated.

Average Market risk VaR of $52 million in 2012 was down $1 million compared to Management VaR in the prior year. We lowered average VaR through the ongoing risk reduction activities that began last year, particularly in our credit trading portfolio. The decrease in average VaR was also driven by the decrease in credit specific risk largely as a result of a methodology change related to Basel 2.5 used to capture single name credit spread risk, which was implemented in the first quarter of 2012. The decrease in average VaR was offset by the inclusion of positions that were formerly not included in our VaR measure as described above. Prior periods were not restated to reflect this change.

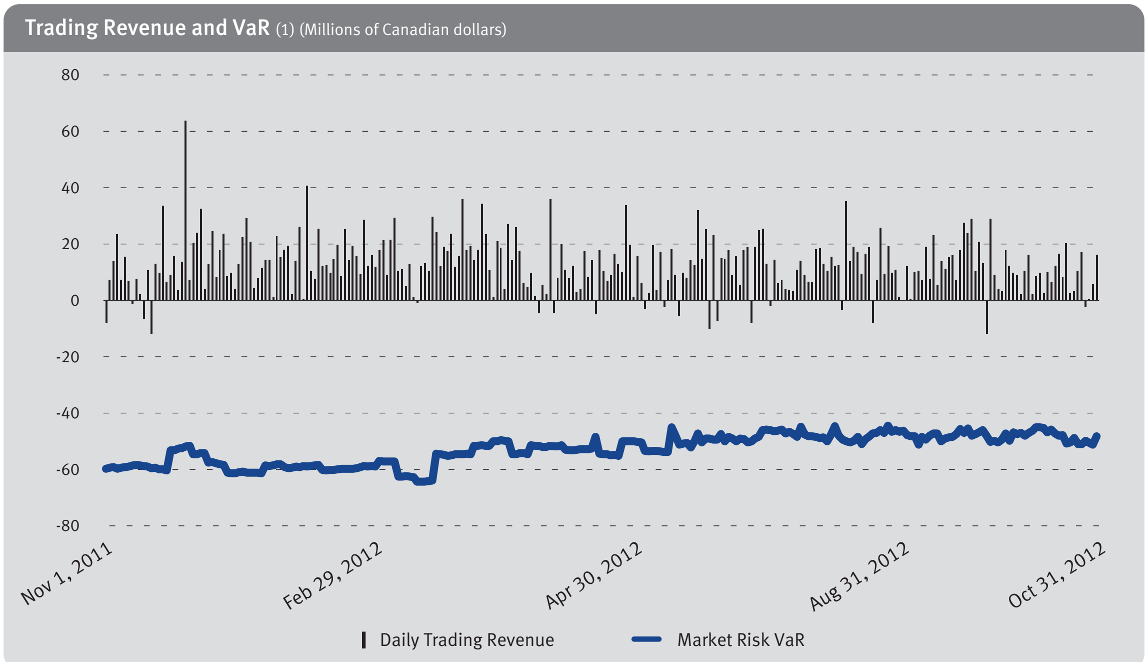
In order to present a comparison between Market risk VaR and Management VaR, the following table contains the 2012 VaR figures as though the enhancements to our limit structure described above had not been made. As at October 31, 2012, the addition of the positions not included in the trading book increased VaR by $10 million while Stressed VaR increased by $3 million. On average for 2012, the addition of these positions increased VaR by $15 million and Stress VaR by $17 million, with the credit valuation adjustment risk being the most significant contribution to the increase. The impact in 2011 would have been similar to that experienced in 2012 if we had made these changes in the prior year, with overall levels of risk as measured by Market risk VaR declining from the average levels in 2011, through the ongoing risk reductions that began last year, particularly in our credit trading portfolio.

Management VaR (1) **Table 49**

(Millions of Canadian dollars)	2012 As at Oct. 31	2012 For the year ended October 31 Average	High	Low	2011 As at Oct. 31	2011 For the year ended October 31 Average	High	Low
Equity	$ 10	$ 11	$ 21	$ 5	$ 7	$ 11	$ 21	$ 5
Foreign exchange	2	4	7	1	5	2	8	1
Commodities	3	2	4	1	3	3	6	1
Interest rate	36	34	45	29	36	45	61	32
Credit specific	10	9	12	7	15	19	24	15
Diversification	(24)	(23)	(36)	(13)	(22)	(27)	(40)	(20)
Management VaR	$ 37	$ 37	$ 48	$ 31	$ 44	$ 53	$ 67	$ 36
Management Stressed VaR (2)	$ 76	$ 61	$ 77	$ 48	n.a.	n.a.	n.a.	n.a.

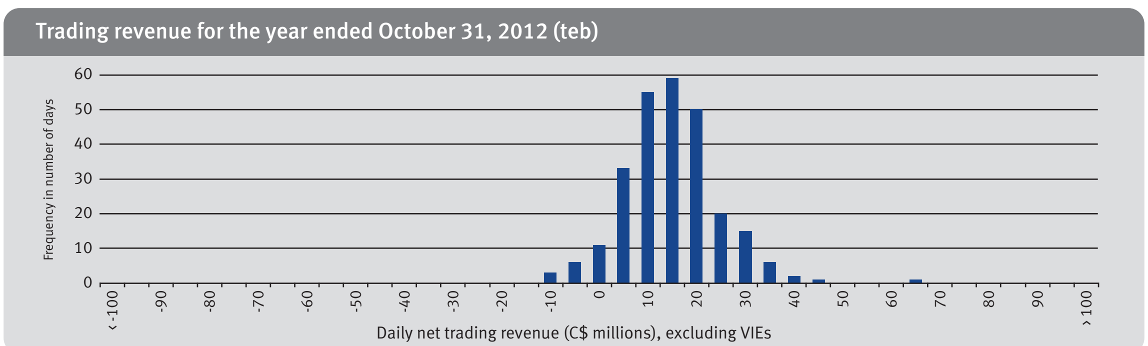
(1) Management VaR includes all positions in the trading book. CVA and products that are not considered part of the trading book are not captured under the Management VaR.
(2) Stressed VaR was implemented in the first quarter of 2012 and hence prior year information is not available.

The following chart graphically displays a bar chart of our daily trading profit and loss and a line chart of our daily Market risk VaR for 2012. We incurred net trading losses on 20 days in the course of the year and none of the losses exceeded VaR. This is down from 2011, when there were 48 days with net trading losses, largely due to the more favourable trading environment in 2012.



(1) Market Risk VaR results from prior to June 2012 have been estimated.

The following chart displays the distribution of daily trading profit and loss in 2012. The largest daily reported loss was $12 million and largest reported profit was $64 million with an average daily profit of $12 million. The largest loss of $12 million was largely due to the narrowing of credit spreads on RBC debt. The largest gain of $64 million was driven by month-end credit valuation adjustments, including tighter counterparty credit spreads and a widening in RBC credit spread. The gain was also due to a favourable foreign exchange impact and movements in interest rates.



Market risk measures – Non-trading banking activities

Traditional non-trading banking activities, such as deposit taking and lending, expose us to market risk, of which interest rate risk is the largest component.

Our goal is to manage the interest rate risk of the non-trading balance sheet to a target level. We modify the risk profile of the balance sheet through proactive hedging to achieve the target level. Key sources of interest rate risk include exposures due to maturity and re-pricing characteristics of bank loans, investments, liabilities, derivatives and off-balance sheet items, as well as embedded options such as interest rate caps and floors, and prepayment options in products.

For additional information regarding interest rate risk and the use of derivatives in asset and liability management, refer to the Off-balance sheet arrangements section and Notes 9 and 28 of our 2012 Annual Consolidated Financial Statements.

Risk measurement

We continually evaluate opportunities to adopt leading practices in instrument valuation, econometric modelling and hedging techniques. Assessment of our practices range from the evaluation of traditional asset/liability management processes to implementation of recent developments in quantitative methods. Risk positions are measured daily, weekly or monthly depending on the size and complexity of the portfolio. Measurement of risk is based on rates charged to clients as well as funds transfer pricing rates. Key rate analysis is performed to provide us with an assessment of the sensitivity of the exposure of our economic value of equity to instantaneous changes in individual points on the yield curve. The economic value of equity is equal to the net present value of our assets, liabilities and off-balance sheet instruments.

We supplement our assessment by measuring interest rate risk for a range of dynamic and static market scenarios. Dynamic scenarios simulate our interest income in response to various combinations of business and market factors. Business factors include assumptions about future pricing strategies and volume and mix of new business, whereas market factors include assumed changes in interest rate levels and changes in the shape of the yield curve. Static scenarios supplement dynamic scenarios and are employed for assessing the risks to the value of equity and net interest income.

As part of our monitoring process, the effectiveness of our interest rate risk mitigation activity is assessed on value and earnings bases, and model assumptions are validated against actual client behaviour.

Risk control

The Asset Liability Committee (ALCO) provides oversight over non-trading market risk policies, limits, and operating standards. Interest rate risk reports are reviewed regularly by ALCO, GRC, the Risk Committee of the Board and the Board of Directors. The structural interest rate risk policy defines the management standards and approved limits within which risks to net interest income over a 12-month horizon, and the economic value of equity, are to be contained. These ranges are based on immediate and sustained ±100 basis points (bps) parallel shifts of the yield curve. The limit for net interest income risk is 3.50% of projected net interest income, and for economic value of equity risk, the limit is 3.25% of shareholder's equity. Interest rate risk limits are reviewed and approved annually by the Board of Directors.

The following table provides the potential before-tax impact of an immediate and sustained 100 basis point and 200 basis point increase or decrease in interest rates on net interest income and economic value of equity of our non-trading portfolio, assuming that no further hedging is undertaken. These measures are based upon assumptions made by senior management and validated by empirical research. All interest rate risk measures are based upon interest rate exposures at a specific time and continuously change as a result of business activities and our risk management actions. Over the course of 2012, our interest rate risk exposure was well within our target level.

Market risk measures – Non-trading banking activities* **Table 50**

	IFRS								Canadian GAAP	
	2012						2011		2010	
	Economic value of equity risk			Net interest income risk (2)						
(Millions of Canadian dollars)	Canadian dollar impact	U.S. dollar impact (1)	Total	Canadian dollar impact	U.S. dollar impact (1)	Total	Economic value of equity risk	Net interest income risk (2)	Economic value of equity risk	Net interest income risk (2)
Before-tax impact of:										
100bp increase in rates	$ (497)	$ –	$ (497)	$ 387	$ 10	$ 397	$ (454)	$ 307	$ (484)	$ 93
100bp decrease in rates	406	(1)	405	(322)	–	(322)	412	(161)	425	(98)
Before-tax impact of:										
200bp increase in rates	(1,001)	(4)	(1,005)	818	24	842	(925)	708	(1,003)	232
200bp decrease in rates	651	–	651	(370)	–	(370)	615	(189)	735	(95)

* This table represents an integral part of our 2012 Annual Consolidated Financial Statements.
(1) Represents the impact on the non-trading portfolios held in our U.S. banking operations.
(2) Represents the 12-month Net interest income exposure to an instantaneous and sustained shift in interest rates.

Non-trading foreign exchange rate risk

Foreign exchange rate risk is the potential adverse impact on earnings and economic value due to changes in foreign currency rates. Our revenue, expenses and income denominated in currencies other than the Canadian dollar are subject to fluctuations as a result of changes in the value of the average Canadian dollar relative to the average value of those currencies. Our most significant exposure is to the U.S. dollar due to our level of operations in the U.S., and other activities conducted in U.S. dollars. Other significant exposures are to the British pound and the Euro due to our activities conducted internationally in these currencies. A strengthening or weakening of the Canadian dollar compared to the U.S. dollar, British pound and the Euro could reduce or increase, as applicable, the translated value of our foreign currency denominated revenue, expenses and earnings and could have a significant effect on the results of our operations. We are also exposed to foreign exchange rate risk arising from our investments in foreign operations. For un-hedged equity investments, when the Canadian dollar appreciates against other currencies, the unrealized translation losses on net foreign investments decreases our shareholders' equity through the other components of equity and decreases the translated value of the RWA of the foreign currency-denominated operations. The reverse is true when the Canadian dollar depreciates against other currencies. Consequently, we consider these impacts in selecting an appropriate level of our investments in foreign operations to be hedged.

Our overall trading and non-trading market risk objectives, policies and methodologies have not changed significantly from 2011.

Liquidity and funding management

Liquidity and funding risk (liquidity risk) is the risk that we may be unable to generate or obtain sufficient cash or its equivalent in a timely and cost-effective manner to meet our commitments as they come due. The nature of banking services inherently exposes us to various types of liquidity risk. The most common sources of liquidity risk arise from mismatches in the timing and value of cash inflows and outflows, both from on and off-balance sheet exposures.

Our liquidity position is established to satisfy our current and prospective commitments in normal business conditions while also contributing, in conjunction with our capital position, to our safety and soundness in times of stress. To achieve these goals, we operate under a comprehensive liquidity management framework and employ key liquidity risk mitigation strategies that include the maintenance of:

- An appropriate balance between the level of exposure allowed under our risk appetite and the cost of its mitigation, taking into account the potential impact of extreme but plausible events.
- Broad funding access, including preserving and promoting a reliable base of core client deposits, continual access to diversified sources of wholesale funding and demonstrated capacities to monetize specific asset classes.
- A comprehensive enterprise-wide liquidity contingency plan that is supported by unencumbered marketable securities, including an earmarked contingency pool that provides assured access to cash and is available to supplement other sources of cash in a crisis.
- Appropriate and transparent liquidity transfer pricing and cost allocation.

Our liquidity management policies, practices and processes reinforce these risk mitigation strategies. In managing liquidity risk, we favour a centralized management approach but various considerations outlined in this section influence the extent to which this can be pursued.

In 2010, OSFI introduced a regulatory enterprise liquidity metric, Net Cumulative Cash Flow. Limits are applicable for both Canadian dollars and foreign currencies and on an all currency basis and we submit a formal compliance report on a monthly basis. We also continue to prepare for prospective regulatory reforms (Basel III) led by the Basel Committee on Banking Supervision (BCBS) and supported by OSFI. Guidelines for liquidity risk include two new regulatory measures, the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) scheduled for implementation in 2015 and 2018 respectively. We currently monitor LCR and NSFR for internal and regulatory reporting purposes. We submit regular reports to OSFI and these submissions include a list of various asset and liability-driven action plans we could implement to ensure compliance with the LCR metric by 2015. Updates from the BCBS related to LCR rules are expected by early calendar 2013.

Our liquidity and funding risk objectives, policies and methodologies have not changed materially from 2011. However, certain limits and risk practices have been modified as a result of market conditions and to align with local regulatory developments and to position ourselves for the prospective Basel III regulatory liquidity standards. We continue to maintain liquidity and funding that is appropriate for the execution of our strategy. Liquidity and funding risk remain well within our risk appetite. However, as regulatory requirements continue to evolve, our liquidity management policies, practices and processes will be modified if and when appropriate.

Risk measurement

A variety of limit-based measures and metrics have been established to monitor and control risk within appropriate tolerances using a variety of time horizons and severity of stress levels. Risk methodologies and underlying assumptions are periodically reviewed and validated to ensure alignment with our operating environment, expected economic and market conditions, rating agency preferences, regulatory requirements and accepted practices. We measure and manage our liquidity position from three risk perspectives as follows:

Structural (longer-term) liquidity risk
We use cash capital and other structural metrics, which focus on mismatches in effective maturity between all assets and liabilities, to measure and control balance sheet risk and to assist in the determination of our term funding strategy. Stressed conditions are considered, including a protracted loss of unsecured wholesale deposits that fund illiquid assets.

Tactical (shorter-term) liquidity risk
We apply net cash flow limits in Canadian dollar and foreign currencies for key short-term time horizons (overnight to nine weeks) under various stages of stress and assign a risk-adjusted limit to our aggregate pledging exposure and individual limits by types of pledging activities to measure our shorter-term liquidity exposures. Net cash flow positions reflect known and anticipated cash flows for all material unencumbered assets, liabilities and off-balance sheet activities. Pledged assets are not considered a source of available liquidity. We also control this risk by adhering to various group-wide and unit-specific prescribed regulatory standards.

Contingency liquidity risk
Contingency liquidity risk management assesses the impact of and our intended responses to sudden stressful events. Our liquidity contingency plan, maintained and administered by Corporate Treasury, guides our actions and responses to liquidity crises. The Liquidity Crisis Team, consisting of senior representatives with relevant subject matter expertise from key business segments and Corporate Support, contributes to the development of stress tests and funding plans and meets regularly to assess our liquidity status, conduct stress tests and review liquidity contingency preparedness.

Our stress testing exercises, which include elements of scenario and sensitivity testing, are based on models that measure our potential exposure to global, country-specific or RBC-specific events (or a combination thereof), consider both historical and hypothetical events and cover a nine week period consistent with our key tactical liquidity risk measure and our view of the most critical time span for such events. Different levels of severity are considered for each type of crisis with some scenarios including multiple notch downgrades to our credit ratings. Key tests are run monthly, while others are run quarterly. The frequency of review is determined by considering a combination of likelihood and impact.

In a particularly acute short-term crisis or if a crisis was to extend over a number of months, actions would be taken to supplement liquidity available from our earmarked contingency asset pool by limiting cash and collateral outflows and by accessing new sources of liquidity and funding; for example, through sales of liquid assets and securitization and/or sales of core assets. As well, in light of our current credit ratings and well-developed market relationships and access, it is expected that even under extreme but plausible scenarios, we would continue to be able to access wholesale funding markets, albeit possibly at reduced overall capacity, higher costs and for shorter average maturities.

While we also have potential access to various normal course and emergency central bank lending facilities in Canada, the U.S. and Europe, such facilities are not considered a source of funding in our contingency planning for scenarios identified as extreme but plausible.

After reviewing test results, the liquidity contingency plan and other liquidity and funding risk management practices and limits may be modified accordingly. The risk of more prolonged crises is addressed through our measures of structural liquidity risk that assume a stressed environment.

Our liquid assets are primarily a diversified pool of highly rated and liquid marketable securities and include segregated portfolios (in both Canadian and U.S. dollars) of contingency liquidity assets to address potential on- and off-balance sheet liquidity exposures (such as deposit erosion, loan drawdowns and higher collateral demands), that have been sized through models we have developed or by the scenario analyses and stress tests we conduct periodically. These portfolios are subject to minimum asset quality levels and, as appropriate, other strict eligibility guidelines (e.g., maturity, diversification and eligibility for central bank advances) to maximize ready access to cash in emergencies. Examples of assets held in these portfolios include U.S. and Canadian federal government treasury bills and bonds, U.S. Agency bonds, U.S. and Canadian government guaranteed and sponsored entity bonds, other highly rated foreign sovereign bonds and their guaranteed debt, supranational bonds and Canadian provincial bonds. These assets represent a small portion of the total pool of liquid assets on our balance sheet, which would also be available during times of crisis as sources of liquidity, either via outright sale or using them to obtain secured funding, whether these other liquid assets are held as supplemental liquidity resources for more normal business conditions, or for investment or trading purposes.

Risk Profile

Liquid assets comprise 37% of our total assets and include cash, reverse repos and securities. Of the total liquid assets of $309 billion, $276 billion are highly liquid, consisting predominantly of Canadian, U.S. and Other OECD government securities, retained NHA MBS and cash equivalents. The remaining liquid assets are mostly hedged equities and high grade corporate debt with good market liquidity and secured funding markets. Refer to Note 4 of our 2012 Annual Consolidated Financial Statements for the balances of these securities and Note 7 for the securitization of our own assets for funding purposes.

As at October 31, 2012 and throughout the quarter ended October 31, 2012, we held $5.3 billion in US dollar and $4.5 billion in Canadian dollar earmarked contingency liquidity assets, respectively. We also held a derivatives pledging liquid asset buffer of US $1.3 billion as at October 31, 2012 to mitigate the volatility of our net pledging requirements for derivatives trading. This buffer averaged US $1.2 billion during the quarter ended October 31, 2012.

Relationship-based deposits constitute 54% of total funding or $329 billion out of $613 billion as at October 31, 2012 and are the primary source of funding for retail loans and mortgages. Our main source of funding for highly liquid assets consists primarily of short term wholesale funding that matches the expected monetization period of these assets. This wholesale funding is comprised of unsecured and secured (repurchase agreements and short sales) liabilities, and respectively represented 14% and 17% of total funding or $84 billion and $105 billion as at October 31, 2012. Long term wholesale funding is mostly utilized to fund less liquid wholesale assets. Additional quantitative information is provided in the Funding section below.

For more details on the maturity of our assets and liabilities, refer to Note 33 of our 2012 Annual Consolidated Financial Statements.

Risk control

The Board of Directors annually approves delegation of liquidity risk authorities to senior management. The Risk Committee of the Board annually approves the liquidity management framework and is responsible for its oversight. The Board of Directors and the Risk Committee also review, on a regular basis, reporting on our enterprise-wide liquidity position and status. Group Risk Committee (GRC) and ALCO share management oversight responsibility and review all liquidity documents prepared for the Board of Directors or its committees. ALCO annually approves the liquidity management framework's key supporting documents and provides strategic direction and primary management oversight to Corporate Treasury, GRM, other functions and business platforms in the area of liquidity risk management. To maximize funding and operational efficiencies, we monitor and manage our liquidity position on a consolidated basis and for key units while considering market, legal, regulatory, tax, operational and any other applicable restrictions that may impede transferability of liquidity between RBC units. This includes analyzing our ability to lend or borrow funds between branches and subsidiaries, and converting funds between currencies. The outcome of this analysis is considered, as applicable, in liquidity metrics and our Recovery Plan.

Policies

Our principal liquidity policies define risk tolerance parameters. They authorize senior management committees or Corporate Treasury to approve more detailed policies and limits that govern management, measurement and reporting requirements for specific businesses and products.

Authorities and limits

Limits for our structural liquidity risk positions are approved at least annually and monitored regularly. Net cash flow limits are approved at least annually. Depending on the significance of each reporting entity, net cash flow limits are monitored daily or weekly by major currency, branches, subsidiaries and geographic locations. Any potential exceptions to established limits are reported immediately to Corporate Treasury and GRM, who provide or arrange for approval after reviewing remedial action plans.

The liquidity factors for cash flow assets and liabilities under varying conditions are reviewed periodically by Corporate Treasury, GRM and the business segments to determine if they remain valid or changes to assumptions and limits are required. Through this process, we ensure that a close link is maintained between the management of liquidity and funding risk, market liquidity risk and credit risk, including GRM approval of credit lines between entities. In response to our experience during the volatile markets of the past five years, we have modified the liquidity treatment of certain asset classes to reflect that market liquidity for these products has significantly changed. Where required, limits have been reduced in consideration of the results of updated stress tests.

Funding

Funding strategy

Core funding, comprising capital, longer-term wholesale liabilities and a diversified pool of personal and, to a lesser extent, commercial and institutional deposits, is the foundation of our structural liquidity position.

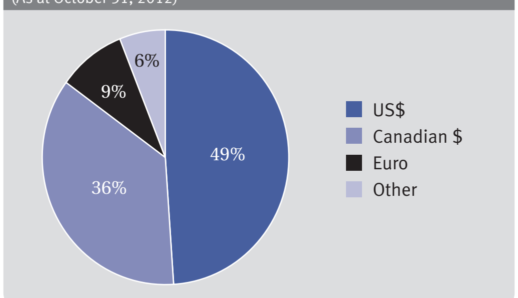
Our wholesale funding activities are well diversified by geographic origin, investor segment, instrument, currency, structure and maturity. We maintain an ongoing presence in different funding markets, which allows us to constantly monitor market developments and trends, identify opportunities and risks and take appropriate and timely actions. We operate longer-term debt issuance registered programs. The following table summarizes these programs with their authorized limits by geography.

Programs by geography — **Table 51**

Canada	U.S.	Europe/Asia
• Canadian Shelf – $15 billion	• SEC Registered – US$25 billion	• European Debt Issuance Program – US$40 billion
	• SEC Registered Covered Bonds – US$12 billion	• Covered Bond Program – EUR 15 billion
		• Japanese Issuance Programs – JPY 1 trillion

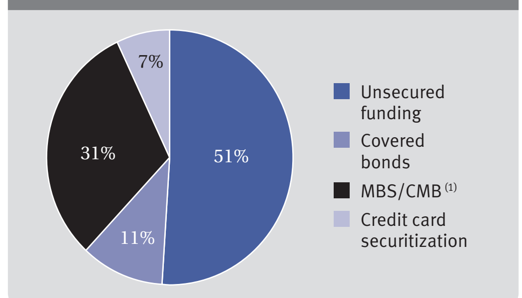
We also raise long term funding using Canadian Deposit Notes, Canadian National Housing Act Mortgage-Backed Securities, Canada Mortgage Bonds, credit card receivable backed securities, Kangaroo Bonds (issued in the Australian domestic market by foreign firms) and Yankee Certificates of Deposit (issued in the US domestic market by foreign firms). We continuously evaluate expansion into new markets and untapped investor segments against relative issuance costs since diversification expands our wholesale funding flexibility and minimizes funding concentration and dependency, and generally reduces financing costs. As presented in the following charts, our current long term debt profile is well diversified by geography as well as by type of long term funding products. Maintaining competitive credit ratings is also critical to cost-effective funding.

Long term debt – funding mix by currency of issuance (1)
(As at October 31, 2012)



(1) Includes unsecured term funding and Covered Bonds.

Funding mix by product (As at October 31, 2012)



(1) Mortgage-backed securities and Canadian Mortgage Bonds.

Credit ratings

Our ability to access unsecured funding markets and to engage in certain collateralized business activities on a cost-effective basis is primarily dependent upon maintaining competitive credit ratings. A lowering of our credit rating may have potentially adverse consequences for our funding capacity or access to the capital markets, may also affect our ability, and the cost, to enter into normal course derivative or hedging transactions and may require us to post additional collateral under certain contracts. However, we estimate, based on periodic reviews of ratings triggers embedded in our existing businesses and of our funding capacity sensitivity, that a minor downgrade would not significantly influence our liability composition, funding access, collateral usage and associated costs.

On June 21, 2012, Moody's revised our senior long-term debt rating to Aa3 from Aa1. This action was expected, consistent with the Moody's announcement in February 2012 that it was reviewing the ratings of 17 firms with global capital markets activities, including RBC. On October 26, 2012, Moody's placed under review for possible downgrade our subordinated debt ratings, along with all other Canadian banks. Moody's reaffirmed all our other ratings as they were addressed by the rating actions in June 2012. During this review Moody's will consider the removal of systematic support from the ratings of all Canadian bank's subordinated debt instruments.

On July 27, 2012, S&P revised its outlook of seven Canadian financial institutions, including RBC, to negative from stable. The outlook revisions are linked to S&P's evolving view of economic risk and industry risk for banks operating in Canada. Systemic factors are incorporated into S&P's rating methodology primarily through its Banking Industry Country Risk Assessment (BICRA). While S&P affirmed the ratings of RBC and the other six financial institutions on July 27, 2012, should their review result in a lowering of Canada's BICRA score, this could result in a downgrade to RBC and the other financial institutions.

The following table presents our major credit ratings and outlooks as at November 28, 2012:

Credit ratings **Table 52**

	As at November 28, 2012 (1)		
	Short-term debt	Senior long-term debt	Outlook
Moody's	P-1	Aa3	stable
Standard & Poor's	A-1+	AA-	negative
Fitch Ratings	F1+	AA	stable
Dominion Bond Rating Services	R-1(high)	AA	stable

(1) Credit ratings are not recommendations to purchase, sell or hold a financial obligation inasmuch as they do not comment on market price or suitability for a particular investor. Ratings are determined by the rating agencies based on criteria established from time to time by them, and are subject to revision or withdrawal at any time by the rating organization.

Deposit profile

We continued to focus on aggressively building our core deposit base in Canada.

Our personal deposit franchise constitutes our principal source of reliable funding while certain commercial and institutional client groups also maintain relational balances with low volatility profiles. Taken together, these clients represent a highly stable supply of core deposits in most conceivable environments as they typically are less responsive to market developments than transactional lenders and investors due to the impact of deposit insurance and extensive and, at times, exclusive relationships with us. Core deposits, consisting of our own statistically derived estimates of the highly stable portions of all of our relational personal, commercial and institutional balances (demand, notice and fixed-term) together with wholesale funds maturing beyond one year have increased by 20% during the year and represent 68% of our total deposits, up from 62% last year. The increase of 20% largely reflected the impact of our adoption of IFRS which resulted in securitized assets and associated liabilities that were previously off-balance sheet being recorded on balance sheet. The remaining increase in core deposits of 4% partially reflected the acquisition of the remaining 50% stake in RBC Dexia.

During 2012, we continued to experience more favourable wholesale funding access and pricing compared to global peers. RBC issued the first SEC-registered covered bond in September 2012.

Term funding sources* **Table 53**

	IFRS		
(Millions of Canadian dollars)	2012	2011	2010
Unsecured long-term funding	$ 59,661	$ 56,523	$ 56,008
Secured long-term funding (1)	50,321	46,165	36,676
Commercial mortgage-backed securities sold	1,434	1,531	1,705
Subordinated debentures	7,416	8,429	7,323
	$ 118,832	$ 112,648	$ 101,712

* This table represents an integral part of our 2012 Annual Consolidated Financial Statements.

(1) Secured long-term funding includes credit card receivables financed through notes issued by a securitization special purpose entity (SPE), covered bonds and secured borrowing that relates to NHA MBS transferred to a SPE.

During 2012, we continued to expand our long-term funding base by selectively issuing, either directly or through our subsidiaries, $30.1 billion of term funding in various currencies and markets. Total long-term funding outstanding increased by $6.2 billion. There is no outstanding senior debt containing ratings triggers.

Other liquidity and funding sources

We use residential mortgage and credit card receivable-backed securitization programs as alternative sources of funding and for liquidity and asset/liability management purposes. We hold retained interests in our residential mortgage and credit card securitization programs. Our total outstanding mortgage backed securities sold increased year over year by $2.1 billion. Our credit card receivables, which are financed through notes issued by a securitization special purpose entity increased year over year by $3.3 billion. For further details, refer to the Off-balance sheet arrangements section.

Contractual obligations

In the normal course of business, we enter into contracts that may give rise to commitments of future minimum payments that would affect our liquidity. Depending on the nature of these commitments, the obligation may be recorded on- or off-balance sheet. The following table provides a summary of our potential future funding commitments for these contractual obligations. Details of contractual maturities and commitments to extend funds form an important source of information for the management of liquidity risk since it is used (among other purposes) as the basis for modelling a behavioural balance sheet based on effective maturities and estimates for extension of funds as discussed above in the 'Risk Measurement' section.

Contractual obligations* — Table 54

As at October 31, 2012	On demand	Within 1 year	1 to 3 years	3 to 5 years	Over 5 years	Total
Financial liabilities						
Deposits (1)	$ 237,109	$ 136,778	$ 73,722	$ 39,326	$ 19,902	$ 506,837
Other						
Acceptances	–	5,198	1,907	2,167	113	9,385
Obligations related to securities sold short	–	40,756	–	–	–	40,756
Obligations related to assets sold under repurchase agreements and securities loaned	–	64,032	–	–	–	64,032
Other liabilities	1,876	32,596	869	117	3,465	38,923
Subordinated debentures	–	–	199	–	7,217	7,416
Trust capital securities	–	–	900	–	–	900
	238,985	279,360	77,597	41,610	30,697	668,249
Off balance sheet items						
Financial guarantees (2)	11,406	2,965	291	20	1	14,683
Operating leases	–	688	1,246	856	1,258	4,048
Commitments to extend credit (2)	128,239	170	–	–	–	128,409
	139,645	3,823	1,537	876	1,259	147,140
Total financial liabilities and off balance-sheet items	$ 378,630	$ 283,183	$ 79,134	$ 42,486	$ 31,956	$ 815,389

As at October 31, 2011	On demand	Within 1 year	1 to 3 years	3 to 5 years	Over 5 years	Total
Financial liabilities						
Deposits (1)	$ 209,826	$ 128,837	$ 78,614	$ 42,097	$ 18,173	$ 477,547
Other						
Acceptances	–	4,756	1,717	1,149	67	7,689
Obligations related to securities sold short	–	44,284	–	–	–	44,284
Obligations related to assets sold under repurchase agreements and securities loaned	–	42,752	–	–	–	42,752
Other liabilities	1,627	31,454	649	72	3,655	37,457
Subordinated debentures	–	–	–	200	8,229	8,429
Trust capital securities	–	–	894	–	–	894
	211,453	252,083	81,874	43,518	30,124	619,052
Off balance sheet items						
Financial guarantees (2)	9,000	3,042	96	1	–	12,139
Operating leases	–	586	924	629	1,027	3,166
Commitments to extend credit (2)	100,326	159	–	–	–	100,485
	109,326	3,787	1,020	630	1,027	115,790
Total financial liabilities and off balance-sheet items	$ 320,779	$ 255,870	$ 82,894	$ 44,148	$ 31,151	$ 734,842

As at November 1, 2010	On demand	Within 1 year	1 to 3 years	3 to 5 years	Over 5 years	Total
Financial liabilities						
Deposits (1)	$ 196,674	$ 140,940	$ 71,526	$ 40,624	$ 17,134	$ 466,898
Other						
Acceptances	–	4,547	2,552	217	55	7,371
Obligations related to securities sold short	–	46,597	–	–	–	46,597
Obligations related to assets sold under repurchase agreements and securities loaned	–	36,006	–	–	–	36,006
Other liabilities	1,465	32,035	502	40	2,536	36,578
Subordinated debentures	–	–	–	199	7,124	7,323
Trust capital securities	–	727	–	900	–	1,627
	198,139	260,852	74,580	41,980	26,849	602,400
Off balance sheet items						
Financial guarantees (2)	8,506	2,971	118	15	7	11,617
Operating leases	–	616	969	691	1,124	3,400
Commitments to extend credit (2)	80,620	213	–	–	–	80,833
	89,126	3,800	1,087	706	1,131	95,850
Total financial liabilities and off balance-sheet items	$ 287,265	$ 264,652	$ 75,667	$ 42,686	$ 27,980	$ 698,250

* This table represents an integral part of our 2012 Annual Consolidated Financial Statements.

(1) A major portion of relationship-based deposits are repayable on demand or at short notice on a contractual basis while, in practice, these customer balances form a core base, as explained in the preceding Deposit Profile section, for our operations and liquidity needs.

(2) We believe that it is highly unlikely that all or substantially all of these guarantees and commitments will be drawn or settled within one year, and contracts may expire without being drawn or settled. The management of the liquidity risk associated with potential extensions of funds is outlined in the preceding Contingency liquidity risk section.

Operational risk

Operational risk is the risk of loss or harm resulting from inadequate or failed internal processes, people and systems or from external events.

Operational risk is embedded in all our activities, including the practices and controls used to manage other risks. Failure to manage operational risk can result in direct or indirect financial loss, reputational impact, regulatory censure, or failure in the management of other risks such as credit or market risk.

We have put in place an Operational Risk Framework which is founded on the principles of our Enterprise Risk Management Framework and sets out the elements that support these principles with respect to the management of operational risk. This framework is dynamic, articulating our strategy regarding management, measurement and reporting of operational risk. Its foundation is the Three Lines of Defence risk governance model as responsibility for risk management is shared across the organization. This model encompasses the practices, requirements, roles and responsibilities for a fully comprehensive, coordinated enterprise-wide approach for the management of operational risk.

Operational risk is difficult to measure in a complete and precise manner, given that exposure to operational risk is often implicit, bundled with other risks, or otherwise not taken on intentionally. In the banking industry, measurement tools and methodologies continue to evolve. The two options available to us under Basel II are the Advanced Measurement Approach and the Standardized Approach. We continue to adopt the Standardized Approach for operational risk and expect to implement the Advanced Measurement Approach in 2013.

Operational risk is managed through our infrastructure, controls, systems and people, complemented by central groups focusing on enterprise-wide management of specific operational risks such as fraud, privacy, outsourcing, and business disruption, as well as people and systems risks. Specific programs, policies, standards and methodologies have been developed to support the management of Operational risk. These programs are (i) Risk and Control Assessment and monitoring of business environment and control factors with Key Risk indicators, (ii) Operational Risk Event data collection and analysis, (iii) External Event – Industry loss analysis, and (iv) Scenario Analysis.

Legal and regulatory compliance risk

Legal and regulatory compliance risk is the risk of potential non-conformance with laws, rules, regulations, prescribed practices, or ethical standards in any jurisdiction in which we operate. Issues regarding compliance with laws and regulations can arise in a number of areas in a large complex financial institution like us, and are often the result of inadequate or failed internal processes, people or systems.

Laws and regulations are in place to protect the financial and other interests of our clients, investors and the public. Changes to laws, including tax laws, regulations or regulatory policies, as well as the changes in how they are interpreted, implemented or enforced, could adversely affect us, for example by lowering barriers to entry in the businesses in which we operate or increasing our costs of compliance. Further, there is no assurance that we always will be or will be deemed to be in compliance with laws, regulations or regulatory policies. Accordingly, it is possible that we could receive a judicial or regulatory judgment or decision that results in fines, damages, and other costs or injunctions or loss of licenses or registrations that would damage our reputation and negatively impact our earnings. In addition, we are subject to litigation arising in the ordinary course of our business and the adverse resolution of any litigation could have a material adverse effect on our results or could give rise to significant reputational damage, which in turn could impact our future business prospects.

Compliance has developed an internal risk management framework, (the Regulatory Compliance Management Framework) consistent with regulatory expectations from OSFI and other regulators. The framework is designed to manage and mitigate the risks associated with failing to comply with, or adapt to, current and changing laws and regulations in the jurisdictions in which we operate. Within the framework there are five elements that form a cycle by which all regulatory compliance risk management programs are developed, implemented and maintained. The first element ensures our regulatory compliance programs evolve alongside our business activities and operations. The second element ensures regulatory compliance risks are identified and assessed appropriately so regulatory compliance programs are designed in a manner to most effectively meet regulatory requirements. The third element relates to the design and implementation of specific controls. The fourth element ensures appropriate monitoring and oversight of the effectiveness of the controls. Lastly, the fifth element ensures the timely escalation and resolution of issues, and clear and transparent reporting. This is a critical step in enabling senior management and the Board of Directors to effectively perform their management and oversight responsibilities.

We have a strong ethical culture of compliance grounded in our Code of Conduct. The Code of Conduct broadly addresses a variety of ethical and legal concerns that face our employees on a daily basis. We regularly review and update the Code of Conduct to ensure that it continues to meet the expectations of regulators and other stakeholders. All our employees must reconfirm their understanding of and commitment to comply with the Code of Conduct at least every two years, and employees in certain key roles, such as GE members and others in financial oversight roles, must do so annually.

Our Code of Conduct is supported by a number of global and regional compliance policies, training programs, online tools, job aids, and new employee orientation materials, as well as direction of senior management. We also have several other core ethics and compliance courses that apply across the organization to a significant number of businesses globally including but not limited to anti-money laundering and anti-terrorist financing, anti-bribery and anti-corruption, and privacy and information risk management.

Insurance risk

Insurance risk refers to the potential financial loss that may arise where the amount, timing and/or frequency of benefit payments under insurance contracts is different than expected. Insurance risk does not include other risks covered by other parts of our risk management framework (e.g., credit, market and operational risk) where those risks are ancillary to the risk transfer.

We have put in place an Insurance Risk Framework designed to identify, manage, and report on the insurance risks that face the organization. Insurance risk is managed through our infrastructure, systems, controls, and monitoring. Specific risk management policies, methodologies, and programs have been developed to support the management of risk including: delegated risk approval authorities and limits, a product risk review and approval process, and experience study analysis.

Reputation risk

Reputation risk is the risk that an activity undertaken by an organization or its representatives will impair its image in the community or lower public confidence in it, resulting in the loss of business, legal action or increased regulatory oversight.

Reputation risk can arise from a number of events and primarily occurs in connection with credit risk, regulatory, legal and operational risks. Operational failures and non-compliance with laws and regulations can have a significant reputational impact on us.

We have put in place a Reputation risk framework which provides an overview of our approach to the management of this risk. It focuses on our organizational responsibilities, and controls in place to mitigate reputation risks.

The following principles guide our management of reputation risk:

- We must operate with integrity at all times in order to sustain a strong and positive reputation.
- Protecting our reputation is the responsibility of all our employees, including senior management and extends to all members of the Board of Directors.

Strategic risk

Strategic risk is the risk that the enterprise or particular business areas will make inappropriate strategic choices, or will be unable to successfully implement selected strategies or related plans and decisions.

Responsibility for selecting and successfully implementing business strategies is mandated to the individual heads of the businesses. Oversight of strategic risk is the responsibility of the heads of the business segments, the Enterprise Strategy Office, GE, and the Board of Directors. Management of strategic risk is supported by the Enterprise Strategy Group through the use of an enterprise strategy framework.

Overview of other risks

In addition to the risks described in the Risk Management section, there are other risk factors, described below, which may adversely affect our businesses and financial results. The following discussion is not exhaustive as other factors could also adversely affect our results.

Government fiscal, monetary and other policies
Our businesses and earnings are affected by the fiscal, monetary or other policies that are adopted by the Bank of Canada and various other Canadian regulatory authorities, the Board of Governors of the Federal Reserve System in the U.S. and other U.S. government authorities, as well as those adopted by international regulatory authorities and agencies, in jurisdictions in which we operate. As well, such policies can adversely affect our clients and counterparties in Canada, the United States and internationally, which may increase the risk of default by such clients and counterparties.

Level of competition
The competition for clients among financial services companies in the markets in which we operate is intense. Client loyalty and retention can be influenced by a number of factors, including new technology used or services offered by our competitors, relative service levels, the prices and attributes of our products or services, our reputation and actions taken by our competitors. Other financial services companies, such as insurance companies and non-financial companies, are increasingly offering services traditionally provided by banks. Such competition could also reduce net interest income, fee revenue and adversely affect our earnings.

Ability to attract and to retain employees
Competition for qualified employees is intense within the financial services industry and from non-financial industries looking to recruit. Although our goal is to retain and attract qualified employees, there is no assurance that we will be able to do so.

Accuracy and completeness of information on clients and counterparties
When deciding to extend credit or enter into other transactions with clients and counterparties, we may rely on information provided by or on behalf of clients and counterparties, including audited financial statements and other financial information. We also may rely on representations of clients and counterparties as to the completeness and accuracy of that information. Our financial results could be adversely impacted if the financial statements and other financial information relating to clients and counterparties on whom we rely do not comply with GAAP or are materially misleading.

Development and integration of our distribution networks
Although we regularly explore opportunities to expand our distribution networks, either through acquisitions or organically by adding, for example, new bank branches, insurance offices, online savings accounts and ATMs in high-growth, receptive markets, if we are not able to develop or integrate these distribution networks effectively, our results of operations and financial condition may be negatively affected.

Environmental risk
Environmental risk is the risk of loss to financial, operational or reputational value resulting from the impact of environmental issues. It arises from our business activities and our operations. For example, the environmental issues associated with our clients' purchase and sale of contaminated property or development of large-scale projects may give rise to credit and reputation risk. Operational and legal risks may arise from environmental issues at our branches, offices or data processing centers.

Corporate Environmental Affairs (CEA) sets enterprise-wide policy requirements for the identification, assessment, control, monitoring and reporting of environmental risk. Oversight is provided by GE and the CG&PPC of the Board of Directors. Business segments and Corporate Functions are responsible for incorporating environmental risk management requirements and controls within their operations. The CEA Group also provides advisory services and support to business segments on the management of specific environmental risks in business transactions.

Periodically, we verify that our environmental risk management policies and processes are operating as intended. On an annual basis, and more frequently as required, environmental risk management activities, issues, and trends are reported to GE and to the CG&PPC of the Board of Directors. Failure to adequately manage environmental risk could adversely impact our results and/or significantly impact our reputation.

We report on the full extent of environmental management annually in the Corporate Responsibility Report and Public Accountability Statements.

Other factors
Other factors that may affect actual results include changes in government trade policy, changes in accounting standards, including their effect on our accounting policies, estimates and judgements, the timely and successful development of new products and services, our ability to cross-sell more products to customers, technological changes and our reliance on third parties to provide components of our business infrastructure, the failure of third parties to comply with their obligations to us and our affiliates as such obligations relate to the handling of personal information, fraud by internal or external parties, the possible impact on our business from disease or illness that affects local, national or global economies, disruptions to public infrastructure, including transportation, communication, power and water, international conflicts and other political developments including those relating to the war on terrorism, and our success in anticipating and managing the associated risks.

We caution that the foregoing discussion of risk factors, many of which are beyond our control, is not exhaustive and other factors could also adversely affect our results. Forward-looking statements in this document include, but are not limited to, statements relating to our financial performance objectives, our vision and strategic goals, the Economic, market and regulatory review and outlook for the Canadian, U.S. and European economies, the outlook and priorities for each of our business segments and in our Liquidity and funding risk section. When relying on our forward-looking statements to make decisions with respect to us, investors and others should carefully consider the foregoing factors and the other factors discussed in the Risk Management section , other uncertainties and potential events, and other industry- and bank-specific factors that may adversely affect our future results and the market valuation placed on our common shares. Unless required by law, we do not undertake to update any forward-looking statement, whether written or oral, that may be made from time to time by us or on our behalf.

Capital management

We actively manage our capital to maintain strong capital ratios and high ratings while providing strong returns to our shareholders. We consider the regulators' requirements, the expectation of rating agencies, depositors and shareholders, as well as our business plans, stress tests, peer comparisons and our internal capital ratio targets. Our goal is to optimize our capital usage and structure, and provide support for our business segments and clients and better returns for our shareholders, while protecting depositors and senior creditors.

Capital management framework

Our capital management framework provides the policies and processes for defining, measuring, raising and investing all types of capital in a co-ordinated and consistent manner. We manage and monitor capital from several perspectives, including regulatory capital, economic capital and subsidiary capital.

Within our capital management framework, we have an internal capital adequacy assessment process (ICAAP) that sets internal capital targets and defines strategies for achieving those targets consistent with our risk appetite, business plans and operating environment.

As part of this process, we have implemented a program of enterprise-wide stress testing to evaluate the income and capital (economic and regulatory) impacts of several potential stress events. This exercise involves various teams, including GRM, Corporate Treasury, Finance and Economics. Results are a key input into our capital planning process and are used in setting appropriate internal capital targets.

The Board of Directors is responsible for the ultimate oversight of capital management, including the annual review and approval of our Capital Plan and ICAAP. The Audit Committee is responsible for the governance of capital management, which includes approval of capital management policies, regular review of our capital position and management processes, approval of ICAAP, as well as ongoing review of internal controls over financial reporting.

The Asset and Liability Committee (ALCO) and Group Executive (GE) share management oversight responsibility for capital management and receive regular reports detailing compliance with established limits and guidelines.

Basel II

The top corporate entity to which Basel II applies at the consolidated level is Royal Bank of Canada.

Under Basel II, banks select from among alternative approaches to calculate their minimum regulatory capital required to underpin credit, market and operational risks.

Effective November 1, 2007, we adopted the Basel II Advanced Internal Ratings Based (AIRB) approach to calculate credit risk capital for consolidated regulatory reporting purposes. While the majority of our credit risk exposures are reported under the Basel II AIRB Approach for regulatory capital purposes, certain portfolios considered non-material from a consolidated perspective continue to use the Basel II Standardized Approach for credit risk (for example, our Caribbean banking operations). For consolidated regulatory reporting of operational risk capital, we continue to use the Standardized Approach. For consolidated regulatory reporting of market risk capital, we use both Internal Models-based and Standardized Approaches.

Commencing the first quarter of 2012, OSFI implemented changes to the market risk framework as outlined in the Basel Committee on Banking Supervision (BCBS), *"Revisions to the Basel II market risk framework (July 2009)"*. OSFI also implemented capital requirements for securitization transactions as outlined in the BCBS *"Enhancements to the Basel II framework (July 2009)"*. These regulatory capital changes, commonly referred to as Basel 2.5, contributed to higher RWA and lower capital ratios.

Also effective the first quarter of 2012 was the application of the Basel II 50% Tier 1 and 50% Tier 2 capital deduction for investments in insurance entities that have been held since prior to January 1, 2007. As a Basel II transition measure, OSFI delayed the implementation of this rule change until 2012 and prior to this change had allowed banks to deduct investments in insurance from Tier 2 capital only.

Basel III

Following the revisions to the Basel II market risk framework in 2009, the BCBS issued "*Basel III: A global regulatory framework for more resilient banks and banking systems"* in December 2010, with the objective of promoting financial stability and sustainable economic growth. The Basel III capital rules, which aim to raise the quality, consistency and transparency of the capital base across banks, strengthen the risk coverage of the capital framework, limit the build up of excessive leverage and reduce procyclicality in the banking sector, will be phased in over the period from 2013 to 2019. The BCBS also released non-viability contingent capital (NVCC) requirements in January 2011 to ensure loss absorbency of regulatory capital instruments at the point of non-viability. In addition, the BCBS issued the frameworks for dealing with global systemically important banks (G-SIBs) in November 2011 and domestic systemically important banks (D-SIBs) in October 2012 with an effort to limit unintended consequences on the global/domestic financial systems and economies associated with systemic banking institutions.

To provide Basel III implementation guidance, OSFI published the draft revised version of "*Capital Adequacy Requirements (CAR) Guidelines"* in August 2012, where it sets the "all-in" Common Equity Tier 1 (CET1) ratio at a 4.5% minimum, but is expecting Canadian banks to meet the "all-in" target CET1 ratio of at least 7% by the first quarter of 2013. In addition, OSFI expects banks to meet the "all-in" target Tier 1 capital ratio of 8.5% and Total capital ratio of 10.5% by the first quarter of 2014. The "all-in" methodology is defined as capital calculated to include all regulatory adjustments that will be required by 2019 but retaining the phase-out rules for non-qualifying capital instruments. OSFI also issued an advisory on NVCC in August 2011 that outlines NVCC principles and requirements, which become effective the first quarter of 2013.

We expect the Basel III rules will result in lower CET1 capital and higher RWA as compared to Basel II. As at October 31, 2012, our estimated pro-forma Basel III CET1 ratio on an "all-in" basis would be approximately 8.4%. We will meet the "all-in" target Tier 1 and Total capital ratios requirements under Basel III for the first quarter of 2014. Our pro-forma estimations assume full implementation of Basel III 2019 capital requirements, while the current non-qualifying Tier 1 and Tier 2 capital instruments are included in total regulatory capital and phased out over a ten-year period starting in 2013.

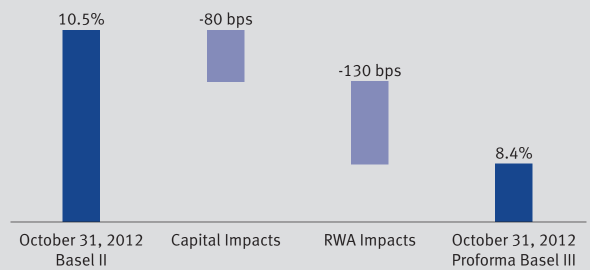
The following table provides a summary of OSFI regulatory target ratios under Basel III and our proforma ratios as at October 31, 2012.

Basel III – Proforma ratios **Table 55**

Basel III Capital Ratios	OSFI regulatory targets under Basel III			Proforma as of October 31, 2012	OSFI target requirements as of
	Minimum	Capital Conservation Buffer	Minimum including Capital Conservation Buffer		
Common Equity Tier 1 (%)	>4.5%	2.5%	>7.0%	**8.4%**	**2013**
Tier 1 capital (%)	>6.0%	2.5%	>8.5%	**10.7%**	**2014**
Total capital (%)	>8.0%	2.5%	>10.5%	**13.1%**	**2014**

Compared to Basel II, our pro-forma Basel III CET1 capital as at October 31, 2012 would be lower by approximately $2 billion primarily reflecting full deduction of intangibles, defined benefit pension fund assets and other adjustments, which would reduce the CET1 capital ratio by approximately 80 bps based on our current estimates. Our pro-forma Basel III RWA as of October 31, 2012 would increase by approximately $43 billion mainly reflecting higher counterparty credit risk RWA and risk weighting of securitization exposures, which would lower the CET1 ratio by approximately 130 basis points.

Impact of Basel III on Common Equity Tier 1 Ratio



The following provides a discussion on our Basel II regulatory capital, RWA and capital ratios on a consolidated basis.

Basel II – regulatory capital, risk-weighted assets (RWA) and capital ratios **Table 56**

	IFRS	Canadian GAAP
As at October 31 (Millions of Canadian dollars, except percentage and multiple amounts)	**2012**	2011
Capital		
Tier 1 capital	**$ 36,807**	$ 35,713
Total capital	**42,347**	41,021
Risk-weighted assets		
Credit risk	**$209,559**	$ 205,182
Market risk	**30,109**	21,346
Operational risk	**40,941**	40,283
Transitional adjustment prescribed by OSFI (1)	**–**	969
Total risk-weighted assets	**$280,609**	$ 267,780
Capital ratios and multiples		
Tier 1 capital ratio	**13.1%**	13.3%
Total capital ratio	**15.1%**	15.3%
Assets-to-capital multiple (2)	**16.7X**	16.1X
Gross-adjusted assets ($ billions) (2)	**740.8**	684.6
Tier 1 common ratio (3)	**10.5%**	10.6%

(1) Transitional adjustment as prescribed by OSFI Capital Adequacy Requirements guideline Section 1.7. For further details, refer to Note 32 of our 2012 Annual Consolidated Financial Statements.

(2) As part of the IFRS transition, for the Assets-to-capital multiple (ACM) calculation, Gross-adjusted assets (GAA) excludes mortgages sec uritized through the CMHC program up to and including March 31, 2010 as approved by OSFI.

(3) Tier 1 common ratio does not have a standardized meaning under GAAP and may not be comparable to similar measures disclosed by other financial institutions. For further details, refer to the Key performance and non-GAAP measures section.

Basel II regulatory capital and capital ratios

Capital levels for Canadian banks are regulated pursuant to guidelines issued by OSFI, based on standards issued by the Bank for International Settlements. Regulatory capital is allocated into two tiers: Tier 1 and Tier 2. Tier 1 capital is comprised of high quality capital and is a core measure of a bank's financial strength. It consists of more permanent components of capital, is free of mandatory fixed charges against earnings and has a subordinate legal position to the rights of depositors and other creditors of the financial institution. Tier 2 capital is composed of supplementary capital instruments that contribute to the overall strength of a financial institution as a going concern. Total capital is defined as the sum of these two tiers. The components of Tier 1 and Tier 2 capital are listed in Table 57. For further details on the terms and conditions of the various capital components, refer to the Selected share data section and Notes 20, 21 and 22 of our 2012 Annual Consolidated Financial Statements.

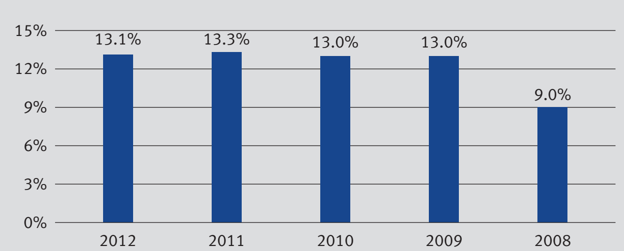
Regulatory capital ratios are calculated by dividing Tier 1 and Total capital by RWA. OSFI formally establishes risk-based capital targets for deposit-taking institutions in Canada. These targets are Tier 1 capital ratio greater than or equal to 7% and a Total capital ratio of greater than or equal to 10%. Canadian banks are also required to ensure that their assets-to-capital multiple, which is calculated by dividing gross adjusted assets by Total capital, does not exceed a maximum level prescribed by OSFI.

Basel II – Regulatory Capital **Table 57**

	IFRS	Canadian GAAP
As at October 31 (Millions of Canadian dollars, except percentage and multiple amounts)	**2012**	2011
Tier 1 common and Tier 1 regulatory capital		
Common shares	**$14,354**	$ 13,977
Contributed surplus (1)	**n.a.**	212
Retained earnings	**24,270**	24,282
Adjustment for transition to IFRS	**444**	n.a.
Net after tax fair value losses arising from changes in institutions' own credit risk	**(30)**	(47)
Foreign currency translation adjustments	**195**	(1,663)
Net after-tax unrealized loss on available-for-sale equity securities	**–**	–
Goodwill	**(7,485)**	(7,703)
Substantial investments	**(52)**	(101)
Securitization-related deductions	**(448)**	(517)
Investment in insurance subsidiaries	**(1,562)**	(67)
Expected loss in excess of allowance – AIRB Approach	**(306)**	(72)
Other	**(1)**	(10)
Total Tier 1 common	**29,379**	28,291
Non-cumulative preferred shares	**4,814**	4,810
Innovative Capital Instruments	**2,580**	2,582
Other non-controlling interests in subsidiaries	**34**	30
Total Tier 1 regulatory capital	**36,807**	35,713
Tier 2 regulatory capital		
Permanent subordinated debentures	**809**	837
Non-permanent subordinated debentures (2)	**6,686**	6,832
Innovative Capital Instruments (excess over 15% of Tier 1)	**–**	–
Excess of non-cumulative preferred shares	**–**	–
Net after-tax unrealized gain on available-for-sale equity securities	**221**	11
Trust subordinated notes	**–**	1,027
Allowance against non-impaired loans	**191**	430
Excess allowance (re IRB Approach)	**–**	–
Substantial investments	**(52)**	(101)
Investment in insurance subsidiaries	**(1,561)**	(3,154)
Securitization-related deductions	**(449)**	(490)
Expected loss in excess of allowance – AIRB approach	**(305)**	(72)
Other	**–**	(12)
Total Tier 2 regulatory capital	**$ 5,540**	$ 5,308
Total regulatory capital	**$42,347**	$ 41,021

(1) Under IFRS, we record items related to Contributed surplus directly to Retained earnings.
(2) Subordinated debentures that are within five years of maturity are subject to straight-line amortization to zero during their remaining term and, accordingly, are included at their amortized value.

Basel II – Tier 1 Capital Ratio



2012 vs. 2011
Our capital position remained strong throughout the year and our capital ratios remain well above OSFI regulatory targets.

As at October 31, 2012, our Tier 1 capital ratio was 13.1% and our Total capital ratio was 15.1%.

Our Tier 1 capital ratio was down 20 bps from last year largely due to higher RWA partially offset by an increase in Tier 1 capital.

Tier 1 capital was up $1,094 million largely due to internal capital generation, partially offset by a higher Tier 1 deduction for investments in insurance entities compared to last year, and the phase-in of the transition impact of IFRS.

Our Total capital ratio was down 20 bps from last year largely due to higher RWA partially offset by the increase in Total capital.

Total capital was up $1,326 million mainly due to internal capital generation, partially offset by the phase-in of IFRS and the redemption of $1 billion of Innovative Tier 2 capital instruments (Trust Subordinated Notes Series A) in the second quarter of 2012.

As at October 31, 2012, our Assets-to-capital multiple was 16.7 times compared to 16.1 times a year ago largely due to higher gross adjusted assets from business growth and the inclusion of the 100% ownership of RBC Investor Services, partially offset by the sale of our U.S. regional retail operations and an increase in Total Capital.

Basel II RWA

Under Basel II, OSFI requires banks to meet minimum risk-based capital requirements for exposures to credit risk, operational risk, and, where they have significant trading activity, market risk. RWA is calculated for each of these risk types and added together to determine total RWA. Moreover, as a Basel II transitional arrangement, OSFI requires the minimum risk-based capital to be no less than 90% of the capital requirements as calculated under the Basel I standards. If the capital requirement is less than 90%, a transitional adjustment to RWA must be applied as prescribed by OSFI Capital Adequacy Requirements.

Basel II – Risk-weighted assets **Table 58**

	IFRS						Canadian GAAP
	2012						2011
			Risk-weighted assets				
As at October 31 (Millions of Canadian dollars, except percentage amount)	Exposure (1)	Average of risk weights (2)	Standardized approach	Advanced approach	Other	Total	Total
Credit risk							
Lending-related and other							
Residential mortgages	$ 173,207	5%	$ 978	$ 7,735	$ –	$ 8,713	$ 6,869
Other retail	199,820	19%	2,104	36,529	–	38,633	42,429
Business	173,652	58%	16,509	83,848	–	100,357	92,250
Sovereign	49,355	7%	1,324	1,942	–	3,266	1,799
Bank	73,314	7%	2,169	2,632	–	4,801	4,723
Total lending-related and other	$ 669,348	23%	$ 23,084	$132,686	$ –	$155,770	$ 148,070
Trading-related							
Repo-style transactions	$ 256,148	1%	$ 78	$ 2,157	$ –	$ 2,235	$ 2,309
Over-the-counter derivatives	44,141	27%	1,221	10,687	–	11,908	15,986
Total trading-related	$ 300,289	5%	$ 1,299	$ 12,844	$ –	$ 14,143	$ 18,295
Total lending-related and other and trading-related	$ 969,637	18%	$ 24,383	$145,530	$ –	$169,913	$ 166,365
Bank book equities	1,211	100%	–	1,206	–	1,206	1,336
Securitization exposures	41,664	16%	206	6,378	–	6,584	6,951
Regulatory scaling factor	n.a.	n.a.	n.a.	9,187	–	9,187	7,982
Other assets	36,038	63%	n.a.	n.a.	22,669	22,669	22,548
Total credit risk	$ 1,048,550	20%	$ 24,589	$162,301	$ 22,669	$209,559	$ 205,182
Market risk							
Interest rate			$ 4,646	$ 1,901	$ –	$ 6,547	$ 4,358
Equity			482	1,434	–	1,916	1,650
Foreign exchange			1,634	70	–	1,704	866
Commodities			833	11	–	844	896
Specific risk			5,903	3,792	–	9,695	13,576
Incremental risk charge			–	9,403	–	9,403	–
Total market risk			$ 13,498	$ 16,611	$ –	$ 30,109	$ 21,346
Operational risk			$ 40,941	n.a.	n.a.	$ 40,941	$ 40,283
Transitional Adjustment prescribed by OSFI					$ –	$ –	$ 969
Total risk-weighted assets	$ 1,048,550		$ 79,028	$178,912	$ 22,669	$280,609	$ 267,780

(1) Total exposure represents exposure at default which is the expected gross exposure upon the default of an obligor. This amount is before any allowance against impaired loans or partial write-offs and does not reflect the impact of credit risk mitigation and collateral held.
(2) Represents the average of counterparty risk weights within a particular category.

2012 vs. 2011

During the year, RWA increased by $12.8 billion, mainly due to increases in wholesale and retail exposures, the impact of Basel 2.5 implementation, the inclusion of the 100% ownership of RBC Investor Services in the third quarter of 2012, partially offset by the sale of our U.S. regional retail operations which closed in the second quarter of 2012.

The following table provides our selected capital management activity for the year ended October 31, 2012.

Selected capital management activity — **Table 59**

As at October 31 (Millions of Canadian dollars, except number of amounts)	2012 Issuance or redemption date	Number of shares (000s)	Amount
Tier 1			
Common shares issued			
Dividend reinvestment plan (DRIP) (1)		3,752	$ 187
Stock options exercised (2)		3,175	126
Tier 2			
Redemption of April 30, 2017 Trust Subordinated Notes – Series A (3)	April 30, 2012		1,000

(1) The requirements of our DRIP were satisfied through treasury shares for the first three quarters of 2012 and through open market share purchases for the last quarter of 2012.
(2) Amounts include cash received for stock options exercised during the period and the fair value adjustments to stock options.
(3) For further details, refer to Note 21 of our 2012 Annual Consolidated Financial Statements.

Dividends
Our common share dividend policy reflects our earnings outlook, payout ratio objective and the need to maintain adequate levels of capital to fund business opportunities. Our dividend payout ratio target is 40% to 50%. In 2012, on a continuing operations basis, our dividend payout ratio was 45%, which met our dividend payout ratio target. The dividend payout ratio on a consolidated basis was 46%, down from 49% in 2011. In the second quarter of 2012, we increased our common share dividend by 3 cents per share or 6% to $0.57 per share, and in the fourth quarter of 2012, we further increased our common share dividend by 3 cents per share or 5% to $0.60 per share. Common share dividends paid during the year were $3.3 billion.

Selected share data (1) — **Table 60**

(Millions of Canadian dollars, except number of shares)	2012 Number of shares (000s)	2012 Amount	2012 Dividends declared per share	2011 Number of shares (000s)	2011 Amount	2011 Dividends declared per share	2010 Number of shares (000s)	2010 Amount	2010 Dividends declared per share
Common shares outstanding	1,445,303	$14,323	$ 2.28	1,438,376	$14,010	$ 2.08	1,424,922	$13,378	$ 2.00
First preferred shares outstanding									
Non-cumulative Series W (2)	12,000	300	1.23	12,000	300	1.23	12,000	300	1.23
Non-cumulative Series AA	12,000	300	1.11	12,000	300	1.11	12,000	300	1.11
Non-cumulative Series AB	12,000	300	1.18	12,000	300	1.18	12,000	300	1.18
Non-cumulative Series AC	8,000	200	1.15	8,000	200	1.15	8,000	200	1.15
Non-cumulative Series AD	10,000	250	1.13	10,000	250	1.13	10,000	250	1.13
Non-cumulative Series AE	10,000	250	1.13	10,000	250	1.13	10,000	250	1.13
Non-cumulative Series AF	8,000	200	1.11	8,000	200	1.11	8,000	200	1.11
Non-cumulative Series AG	10,000	250	1.13	10,000	250	1.13	10,000	250	1.13
Non-cumulative Series AH	8,500	213	1.41	8,500	213	1.41	8,500	213	1.41
Non-cumulative Series AJ (3)	16,000	400	1.25	16,000	400	1.25	16,000	400	1.25
Non-cumulative Series AL (3)	12,000	300	1.40	12,000	300	1.40	12,000	300	1.40
Non-cumulative Series AN (3)	9,000	225	1.56	9,000	225	1.56	9,000	225	1.56
Non-cumulative Series AP (3)	11,000	275	1.56	11,000	275	1.56	11,000	275	1.56
Non-cumulative Series AR (3)	14,000	350	1.56	14,000	350	1.56	14,000	350	1.56
Non-cumulative Series AT (3)	11,000	275	1.56	11,000	275	1.56	11,000	275	1.56
Non-cumulative Series AV (3)	16,000	400	1.56	16,000	400	1.56	16,000	400	1.56
Non-cumulative Series AX (3)	13,000	325	1.53	13,000	325	1.53	13,000	325	1.53
Treasury shares – preferred	42	1		(6)	–		(86)	(2)	
Treasury shares – common	543	30		146	8		(1,719)	(81)	
Exchangeable shares of RBC PH&N Holdings Inc. (4)	–	–		–	–		6,750	324	
Stock options									
Outstanding	12,304			14,413			15,659		
Exercisable	6,544			8,688			10,170		
Dividends									
Common		3,291			2,979			2,843	
Preferred		258			258			258	

(1) For further details about our capital management activity, refer to Note 22 of our Annual Consolidated Financial Statements.
(2) Effective February 24, 2010, we have the right to convert into common shares at our option, subject to certain restrictions.
(3) Dividend rate will reset every five years.
(4) On May 2, 2011, we exercised our call right on the Class B exchangeable shares of RBC PH&N Holdings Inc. and issued RBC common shares in exchange.

On October 26, 2012, we announced that the Toronto Stock Exchange approved our normal course issuer bid ("NCIB") to purchase up to 30 million of our common shares. Purchases were permitted to commence on November 1, 2012 and may continue until October 31, 2013. Purchases may be made through the Toronto Stock Exchange as well as through other designated exchanges and published markets, in both Canada and the U.S. The price paid for any repurchased shares will be the prevailing market price at the time of acquisition. We determine the amount and timing of the purchases under the NCIB, subject to prior consultation with OSFI. As at November 23, 2012, we have not purchased any shares under the NCIB.

As at November 23, 2012, the number of outstanding common shares and stock options was 1,445,335,492 and 12,271,263, respectively. As at November 23, 2012, the number of Treasury shares – preferred and Treasury shares – common was (26,105) and (913,862), respectively.

Attributed capital

Effective the first quarter of 2012, we prospectively revised our capital allocation methodology to further align our allocation processes with evolving increased regulatory capital requirements. For further details, refer to the How we measure and report our business segments section.

Our attributed capital methodology is based on the alignment of Economic Capital to Basel III Regulatory requirements; where Economic Capital is our internal quantification of risks associated with business activities which is the capital required to remain solvent under extreme market conditions, reflecting our objective to maintain a debt rating of at least AA. The aligned Economic and Regulatory capital is attributed to each business segment in proportion to management's assessment of the risks. It allows for comparable performance measurements among our business segments through ROE as described in the Key performance and non-GAAP measures section, and also aids senior management in determining resource allocation in conjunction with other factors.

Attributed capital is also used to assess the adequacy of our capital base. Our policy is to maintain a level of available capital, defined as common equity and other capital instruments with equity-like permanence and loss absorption features such as preferred shares and Innovative Tier 1 instruments that exceed Economic capital with a comfortable cushion.

Attributed capital is calculated and attributed on a wider array of risks than those for Basel II Pillar I regulatory capital, which is calibrated predominantly to target credit, market (trading) and operational risk measures. Economic capital is calculated based on credit, market (trading and non-trading), operational, business and fixed asset, and insurance risks and includes capital attribution for goodwill and other intangibles. The common risks between the two frameworks are aligned to reflect increased regulatory requirements.

- Business risk is the risk of loss or harm due to variances in volumes, prices and costs caused by competitive forces, regulatory changes, reputation and strategic risks.
- Fixed asset risk is defined as the risk that the value of fixed assets will be less than their book value at a future date.

For further discussion on credit, market, operational and insurance risks, refer to the Risk management section.

The calculation and attribution of attributed capital involves a number of assumptions and judgments by management which are monitored to ensure that the economic capital framework remains comprehensive and consistent. The models are benchmarked to leading industry practices via participation in surveys, reviews of methodologies and ongoing interaction with external risk management industry professionals.

The following provides a discussion of our attributed capital from continuing operations.

Attributed capital **Table 61**

	IFRS	
(Millions of Canadian dollars)	**2012**	2011
Credit risk	**$ 9,550**	7,800
Market risk (trading and non-trading)	**3,800**	3,200
Operational risk	**3,750**	3,400
Business and fixed asset risk	**2,750**	2,400
Insurance risk	**450**	400
Goodwill and intangibles	**9,800**	9,450
Regulatory capital allocation	**4,100**	2,400
Attributed capital	**$34,200**	29,050
Under attribution of capital	**2,550**	750
Average common equity from discontinued operations	**400**	2,800
Average common equity	**$37,150**	32,600

2012 vs. 2011

Attributed capital increased $5.2 billion, largely due to an increase in credit risk as the result of business growth, higher market risk, operational risk and business and fixed asset risk due to an increase in revenue growth. A higher allocation of capital to align with regulatory capital also contributed to the increase. Goodwill and intangibles risk increased due to the acquisition of the remaining 50% stake in RBC Dexia. These factors were partially offset by the sale of our U.S. regional retail operations on March 2, 2012.

We remain well capitalized with current levels of available capital exceeding the attributed capital required to underpin all of our material risks. Unattributed capital increased from the prior year as we consider the potential additional capital requirements by OSFI for D-SIB.

Subsidiary capital

Our capital management framework includes the management of our subsidiary capital. We invest capital across the enterprise to meet local regulators' capital adequacy requirements and maximize returns to our shareholders. We invest in our subsidiaries as appropriate during the year. We set guidelines for defining capital investments in our subsidiaries and manage the relationship between capital invested in subsidiaries and our consolidated capital base to ensure that we can access capital recognized in our consolidated regulatory capital measurements.

Each of our subsidiaries has responsibility for maintaining its compliance with local regulatory capital adequacy requirements, which may include restrictions on the transfer of assets in the form of cash, dividends, loans or advances. Concurrently, Corporate Treasury provides centralized oversight and consolidated capital management across all subsidiary entities.

Other considerations affecting capital

Capital treatment for equity investments in other entities is determined by a combination of accounting and regulatory guidelines based on the size or nature of the investment. Three broad approaches apply as follows:

- Consolidation: entities in which we have a controlling interest are fully consolidated on our Consolidated Balance Sheets, and joint ventures are consolidated on a pro rata basis.
- Deduction: certain holdings are deducted in full from our regulatory capital. These include all unconsolidated "substantial investments," as defined by the *Bank Act* (Canada), as well as all investments in insurance subsidiaries.
- Risk weighting: unconsolidated equity investments that are not deducted from capital are risk weighted at a prescribed rate for determination of capital charges.

Regulatory capital approach for securitization exposures
For our securitization exposures, we use an internal assessment approach (IAA) for exposures related to our asset-backed commercial paper (ABCP) business, and for other securitization exposures we use a combination of approaches including a ratings-based approach and the standardized approach.

While our IAA rating methodologies are based in large part on criteria that are published by External Credit Assessment Institutions (ECAIs) such as S&P and therefore are similar to the methodologies used by these institutions, they are not identical. Our ratings process includes a comparison of the available credit enhancement in a securitization structure to a stressed level of projected losses. The stress level used is determined by the desired risk profile of the transaction. As a result, we stress the cash flows of a given transaction at a higher level in order to achieve a higher rating. Conversely, transactions that only pass lower stress levels achieve lower ratings.

Most of the other securitization exposures (non-ABCP) carry external ratings and we use the lower of our own rating or the lowest external rating for determining the proper capital allocation for these positions. We periodically compare our own ratings to the ECAIs ratings to ensure that the ratings provided by ECAIs are reasonable.

Group risk management (GRM) has responsibility for providing risk assessments for capital purposes in respect of all our banking book exposures. GRM is independent of the business originating the securitization exposures and performs its own analysis, sometimes in conjunction with but always independent of the applicable business. GRM has developed asset class specific criteria guidelines which provide the rating methodologies for each asset class. The guidelines are reviewed periodically and are subject to the ratings replication process mandated by Pillar I of Basel II rules.

Regulatory capital approach for market risk (Internal models-based approach)
The following table shows VaR and stressed VaR for trading activities that have a capital requirement under the Basel II internal models-based approach, for which we have been granted approval by OSFI. Regulatory capital for market risk is allocated based on VaR and stressed VaR only for those trading positions that have approval to use the internal models based approach.

Internal models-based approach **Table 62**

	2012				2011			
		For the year ended October 31				For the year ended October 31		
(Millions of Canadian dollars)	As at Oct. 31	Average	High	Low	As at Oct. 31	Average	High	Low
Equity	$ 6	$ 8	$ 16	$ 4	$ 4	$ 16	$ 28	$ 3
Foreign exchange	1	3	6	1	5	2	8	1
Commodities	1	2	3	–	3	2	4	–
Interest rate	19	19	24	12	22	27	41	19
Credit specific	11	9	13	7	15	19	24	15
Diversification	(17)	(22)	(32)	(14)	(23)	(30)	(52)	(21)
VaR	$ 21	$ 19	26	$ 14	$ 26	$ 36	$ 49	$ 22
Stressed VaR	$ 36	$ 34	45	$ 23	$ n.a.	$ n.a.	$ n.a.	$ n.a.

Incremental risk charge (IRC)
Effective in the first quarter of 2012, as part of the revisions to the Basel 2.5 framework, we implemented a market risk capital requirement based on the IRC. The IRC is a supplemental market risk capital charge that is intended to capture the credit rating migration and default risk of held for trading positions. We calculate the IRC for all cash and credit derivative positions that attract models-based regulatory capital including sovereign issuers. The implementation of the IRC increased RWA and reduced capital ratios compared to the prior year.

Incremental risk capital charge **Table 63**

	2012			
		For the year ended October 31		
(Millions of Canadian dollars)	As at Oct. 31	Average	High	Low
Internal models-based approach	$ 753	$ 731	$ 1,022	$ 517

Exposures to selected financial instruments

Net exposure to U.S. subprime and Alt-A through RMBS, CDOs and mortgages — Table 64

As at October 31 (Millions of Canadian dollars)	2012				2011			
	Subprime RMBS	Alt-A RMBS	CDOs that may contain subprime or Alt-A	Total	Subprime RMBS	Alt-A RMBS	CDOs that may contain subprime or Alt-A	Total
Fair value of securities before hedging	$ 467	$ 119	$ 17	$603	$ 279	$ 285	$ 17	$ 581
Fair value of securities net of hedging by rating								
AAA	$ 48	$ –	$ –		$ 7	$ 45	$ –	
AA	52	26	–		50	14	–	
A	42	5	–		27	40	–	
BBB	17	–	–		18	27	–	
Below BBB-	308	88	17		177	159	17	
Total	$ 467	$ 119	$ 17	$603	$ 279	$ 285	$ 17	$ 581
Fair value of securities net of hedging by vintage								
2003 (or before)	$ 8	$ 11	$ –		$ 23	$ 7	$ –	
2004	43	15	–		58	62	–	
2005	149	48	17		157	82	17	
2006	161	14	–		41	36	–	
2007 and greater	106	31	–		–	98	–	
Total	$ 467	$ 119	$ 17	$603	$ 279	$ 285	$ 17	$ 581
Amortized cost of subprime/Alt-A mortgages (whole loans)	$ 7	46	$ –	$ 53	$ 161	$ 664	$ –	$ 825
Total subprime and Alt-A exposures, net of hedging	$ 474	$ 165	$ 17	$656	$ 440	$ 949	$ 17	$1,406

Sensitivities of fair value of securities, net of hedging, to changes in assumptions:

100bp increase in credit spread	$ (14)	$ (3)
100bp increase in interest rates	5	(2)
20% increase in default rates	(20)	(7)
25% decrease in prepayment rates	(3)	(1)

Exposure to U.S. subprime and Alt-A residential Mortgage-backed securities (RMBS), and Collateralized Debt Obligations (CDOs) and mortgages

Certain activities and transactions we enter into expose us to the risk of default of U.S. subprime and Alt-A residential mortgages. Our net exposures to U.S. subprime and Alt-A residential mortgages represented 0.1% of our total assets as at October 31, 2012, compared to 0.2% in the prior year due to the sale of our U.S. regional retail banking operations which closed in the second quarter of 2012.

2012 vs. 2011

Our total holdings of RMBS may be exposed to U.S. subprime risk. As at October 31, 2012, our U.S. subprime RMBS exposure increased $188 million or 67% compared to the prior year, primarily due to the purchase of certain securities reflecting anticipated improvements in the U.S. housing market. Of the exposure, over 30% of our related holdings are rated A and above, relatively unchanged from the prior year. As at October 31, 2012, U.S. subprime RMBS holdings rated AAA, comprised of 10% of total U.S. subprime RMBS holdings compared with 3% in the prior year. As at October 31, 2012, our exposure to U.S. subprime loans of $7 million decreased $154 million compared to the prior year, primarily reflecting the sale of our U.S. regional retail banking operations which closed in the second quarter of 2012.

Of our total holdings of RMBS, holdings with a fair value of $119 million may be exposed to U.S. Alt-A risk. U.S. Alt-A exposures decreased $166 million from the prior year mainly due to the sale of certain holdings during 2012. Approximately 38% of these RMBS were issued during 2006 and onwards, compared to 47% in the prior year. As at October 31, 2012, our exposure to U.S. Alt-A loans of $46 million decreased $618 million compared to the prior year, reflecting the sale of our U.S. regional retail banking operations.

Of our total holdings of CDOs, holdings of $17 million may be exposed to U.S. subprime or Alt-A risk, which is unchanged from the prior year. As at October 31, 2012, the fair value of our Corporate CDOs, which are predominately comprised of Corporate Collateralized Loan Obligations, of $2.1 billion decreased $0.2 billion compared to the prior year.

Off-balance sheet arrangements

For our off-balance sheet arrangements including multi-seller conduits, structured investment vehicles and other variable interest entities as at October 31, 2012, refer to the Off-balance sheet arrangements section.

Leveraged finance

Leveraged finance comprises infrastructure finance, essential services and other types of finance. It excludes investment grade financing and non-investment grade financing where there is no private equity sponsor involvement. As at October 31, 2012, our total commitments, combined funded and unfunded of $12.1 billion, increased $6.0 billion compared to the prior year, reflecting an increase in client volumes. As at October 31, 2012, our total commitments, combined funded and unfunded represented 1.5% of our total assets compared to 0.8% in the prior year.

Commercial mortgage-backed securities disclosure
The fair value of our total direct holdings of commercial mortgage-backed securities was $120 million as at October 31, 2012.

Assets and liabilities measured at fair value
There were significant transfers in or out of levels 1, 2 or 3 in the current year, as classified by the fair value hierarchy set out in IFRS 7, *Financial Instruments – Disclosures*.

For further details, refer to Note 4 of our 2012 Annual Consolidated Financial Statements.

Assets and liabilities measured at fair value — **Table 65**

	As at October 31, 2012				
(Millions of Canadian dollars, except percentage amounts)	Fair value (1)	Level 1 (1)	Level 2 (1)	Level 3 (1)	Total
Financial assets					
Securities at FVTPL	$ 120,783	43%	56%	1%	100%
Available-for-sale	40,302	17%	66%	17%	100%
Loans – Wholesale	1,232	0%	67%	33%	100%
Derivatives	123,262	1%	98%	1%	100%
Other assets	705	56%	42%	2%	100%
Financial liabilities					
Deposits	$ 59,027	0%	84%	16%	100%
Derivatives	128,549	1%	96%	3%	100%

(1) Fair value of assets and liabilities as a percentage of total assets and liabilities measured at fair value on a recurring basis for categories presented in the table above and does not reflect the impact of netting.

Accounting and control matters

Critical accounting policies and estimates

Application of critical accounting policies and estimates
Our significant accounting policies are described in Note 2 to our 2012 Annual Consolidated Financial Statements. Certain of these policies, as well as estimates made by management in applying such policies, are recognized as critical because they require us to make particularly subjective or complex judgments about matters that are inherently uncertain and because of the likelihood that significantly different amounts could be reported under different conditions or using different assumptions. Our critical accounting policies and estimates relate to the fair value of financial instruments, allowance for credit losses, goodwill and other intangible assets, employee benefits, special purpose entities, derecognition of financial assets, and income taxes. Our critical accounting policies and estimates have been reviewed and approved by our Audit Committee, in consultation with management, as part of their review and approval of our significant accounting policies, estimates and judgments.

Fair value of financial instruments
Financial instruments classified or designated as at FVTPL and AFS are measured at fair value. Unrealized gains and losses on the instruments classified or designated as at FVTPL are recorded as Trading revenue in Non-interest income, and those of the AFS securities are included in Other components of equity. Changes in foreign exchange rates for AFS equity securities are recognized in Other components of equity, while changes in foreign exchange rates for AFS debt securities are recognized in Foreign exchange revenue, other than trading in Non-interest income. For actively traded financial instruments, including derivative instruments, fair value is determined based on quoted market prices or readily observable model input parameters that require minimal subjectivity. For financial instruments with no active market, fair values are determined using valuation models that require the use of inputs which are either observable or unobservable. Observable inputs to valuation models include certain prices and rates for shorter dated G7 (Canada, U.S., U.K., Italy, France, Germany and Japan) and non-G7 interest-rate-yield curves, currency rates and price and rate volatilities. Unobservable inputs include certain prices and rates for longer dated G7 and non-G7 interest-rate-yield curves, prepayment rates, credit spreads, probability of defaults, recovery rates, equity volatility and correlations of probability of defaults or baskets of common stock.

Significant judgment is required in determining fair value for financial instruments where an active market does not exist. The valuation techniques, input selected and models employed may not fully reflect the amount we expect to realize on sale. Valuations are therefore adjusted, where appropriate, to allow for additional factors, including model risk, liquidity risk and credit risk. For models where unobservable inputs are selected, model and parameter valuation adjustments are made to reflect the valuation uncertainty in order to determine fair value based on the assumptions that market participants would use in pricing the financial instrument. For some securities that are not traded in an active market, we may record valuation adjustments for liquidity when we believe that the amount realized on sale may be less than the estimated fair value due to insufficient liquidity in the market . For our derivative portfolios, credit valuation adjustments are made to account for our own creditworthiness and that of our counterparties, the current and potential future mark-to-market of the transactions, and the effects of credit mitigants such as master netting agreements and collateral agreements.

In determining fair value, management judgment is required in the selection and application of inputs and assumption, in particular, when no market data is available. Inputs and assumptions are determined by assessing historical data, interpolation and proxy information gained from transactions with similar risk profile.

Our valuation methodologies and the calculation of valuation adjustments are reviewed by GRM and Finance on an ongoing basis, to ensure appropriateness of valuation methodologies. All significant financial valuation models are also strictly controlled and regularly recalibrated and vetted to provide an independent perspective.

IFRS requires us to classify our financial instruments measured at fair value into three levels based on the transparency of the inputs used to measure the fair values of the instruments. As at October 31, 2012, we have $302 billion of financial assets (80.9% of our total financial assets at fair value) (2011 – $291 billion and 80.2%) and $246 billion of financial liabilities (85.5% of our total financial liabilities at fair value) (2011 – $219 billion and 83.4%), which fair values are based on observable inputs (Level 2 instruments). We also have $10 billion of financial assets (2.7% of our total financial assets at fair value) (2011 – $11 billion and 3.1%) and $13 billion of financial liabilities (4.5% of our total financial liabilities at fair value) (2011 – $10 billion and 3.9%), which valuations include significant unobservable inputs (Level 3 instruments).

At each reporting date or more frequently when conditions warrant, we evaluate our AFS securities to determine whether there is any objective evidence of impairment, such as a significant or prolonged decline in the fair value of the security below its cost or when an adverse effect on future cash flows from the security can be reliably estimated. When assessing impairment for debt instruments we primarily considered counterparty ratings and security-specific factors, including collateral, external ratings, subordination and other market factors. For complex debt instruments including U.S. non-agency MBS, ABS and other structured products, we also use cash flow projection models which incorporate actual and projected cash flows for each security using a number of assumptions and inputs that are based on security specific factors. The inputs and assumptions used such as default, prepayment and recovery rates are based on updated market data. For U.S. non-agency MBS, recovery rates are largely dependent upon forecasted property prices which were assessed at the municipal level, provided by a third-party vendor. In addition, we also consider the transaction structure and credit enhancement for the structured securities. If the result indicates that we will not be able to recover the entire principal and interest amount, we do a further review of the security in order to assess whether a loss would ultimately be realized. As equity securities do not have contractual cash flows, they are assessed differently than debt securities. In assessing whether there is any objective evidence that suggests that the security is impaired we consider factors which include the length of time and extent the fair value has been below the cost and the financial condition and near term prospects of the issuer. We also consider the estimated recoverable value and the period of recovery. We conduct further analysis for securities where the fair value had been below cost for greater than twelve months. If an AFS security is impaired, the cumulative unrealized losses previously recognized in Other components of equity are recognized directly in income under Non-interest income. As at October 31, 2012, our gross unrealized losses on AFS securities were $359 million (2011 – $487 million). Refer to Note 5 to our 2012 Annual Consolidated Financial Statements for more information.

Allowance for credit losses

We maintain allowance for credit losses relating to on-balance sheet exposures, such as loans and acceptances, and off-balance sheet items such as letters of credit, guarantees and unfunded commitments, at levels that management considers appropriate to cover credit related losses incurred as at the balance sheet date.

Allowances are determined individually for loans that are individually significant, and collectively for loans that are not individually significant and loans which are significant but for which there is no objective evidence of impairment, using current and historical credit information in both quantitative and qualitative assessments. For further information on allowance for credit losses, refer to Note 6 to our 2012 Annual Consolidated Financial Statements.

Individually assessed loans

Loans which are individually significant are assessed individually for objective indicators of impairment. A loan is considered impaired when management determines that it will not be able to collect all amounts due according to the original contractual terms or the equivalent value.

Credit exposures of individually significant loans are evaluated based on factors including the borrower's overall financial condition, resources and payment record, and where applicable, the realizable value of any collateral. If there is evidence of impairment leading to an impairment loss, then the amount of the loss is recognized in income and is determined as the difference between the carrying amount of the loan, including accrued interest, and the estimated recoverable amount. The estimated recoverable amount is measured as the present value of expected future cash flows discounted at the loan's original effective interest rate, including cash flows that may result from the realization of collateral less costs to sell.

Collectively assessed loans

Loans which are not individually significant, or which are individually assessed and not determined to be impaired, are collectively assessed for impairment. For the purposes of a collective evaluation of impairment, loans are grouped on the basis of similar risk characteristics, taking into account loan type, industry, geographic location, collateral type, past due status and other relevant factors.

The collective impairment allowance is determined by reviewing factors including: (i) historical loss experience in portfolios of similar credit risk characteristics, and (ii) management's judgment on the level of impairment losses based on historical experience relative to the actual level as reported at the balance sheet date, taking into consideration the current portfolio credit quality trends, business and economic and credit conditions, the impact of policy and process changes, and other supporting factors. Future cash flows for a group of loans are collectively evaluated for impairment on the basis of the contractual cash flows of the assets in the group and historical loss experience for assets with credit risk characteristics similar to those in the group. Historical loss experience is adjusted based on current observable data to reflect the effects of current conditions that did not affect the period on which the historical loss experience is based and to remove the effects of conditions in the historical period that do not currently exist. The methodology and assumptions used for estimating future cash flows are reviewed regularly to reduce any differences between loss estimates and actual loss experience.

Write-off of loans

Loans and the related impairment allowance accounts are written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, they are generally written off after receipt of any proceeds from the realization of the collateral. In circumstances where the net realizable value of any collateral has been determined and there is no reasonable expectation of further recovery, write off may be earlier. For credit cards, the balances and related allowances are written off when payment is 180 days in arrears. Personal loans are generally written off at 150 days past due.

Total allowance for credit losses

Based on the procedures discussed above, management believes that the total allowance for credit losses of $2,088 million is adequate to absorb estimated credit losses incurred in the lending portfolio as at October 31, 2012 (2011 – $2,058 million). This amount includes $91 million (2011 – $91 million) classified in Provisions under Other liabilities on our Consolidated Balance Sheets, which relates to letters of credit and guarantees and unfunded commitments.

Goodwill and other intangible assets

We allocate goodwill to groups of cash-generating units (CGU). Goodwill is not amortized and is tested for impairment on an annual basis, or more frequently if there are indications that impairment may have occurred. We test for impairment by comparing the recoverable amount of a CGU with its carrying amount. A CGU's recoverable amount is the higher of its fair value less cost to sell and its value in use. The carrying amount of a CGU comprises the carrying amount of its net assets, including goodwill. When the carrying value of a CGU exceeds its recoverable amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the CGU and then to the other assets of the CGU proportionally based on the carrying amount of each asset. Any impairment charge is recognized in income in the period it is identified. Subsequent reversals of goodwill impairment are prohibited.

We estimate the value in use and fair value less costs to sell of our CGUs primarily using a discounted cash flow approach which incorporates each CGU's internal forecasts of revenues and expenses. Significant management judgment is applied in the determination of expected future cash flows (uncertainty in timing and amount), discount rates (based on CGU-specific risks) and terminal growth rates. CGU-specific risks include country risk, business/operational risk, geographic risk (including political risk, devaluation risk and government regulation), currency risk and price risk (including product pricing risk and inflation). If the forecast earnings and other assumptions in future periods deviate significantly from the current amounts used in our impairment testing, the value of our goodwill could become impaired.

Other intangible assets with a finite life are amortized on a straight-line basis over their estimated useful lives, generally not exceeding 10 to 20 years, and are tested for impairment when there is an indication that an asset may be impaired. An impairment test is performed by comparing the carrying amount of the intangible asset to its recoverable amount. Where it is not possible to estimate the recoverable amount of an individual asset, we estimate the recoverable amount of the CGU to which the asset belongs. If the recoverable amount of the asset (or CGU) is less than its carrying amount, the carrying amount of the intangible asset is written down to its recoverable amount as an impairment loss. An impairment loss recognized previously is reversed if there is a change in the estimates used to determine the recoverable amount of the asset (or CGU) since the last impairment loss recognized. Significant judgment is applied in estimating the useful lives and recoverable amounts of our intangible assets and assessing whether certain events or circumstances constitute objective evidence of impairment. We do not have any intangible assets with indefinite lives.

As at October 31, 2012, we had $7.5 billion of goodwill (2011 – $7.6 billion) and $2.7 billion of other intangible assets (2011 – $2.1 billion). For further details, refer to Notes 2 and 11 to our 2012 Annual Consolidated Financial Statements.

Employee benefits

We sponsor a number of benefit programs to eligible employees, including registered pension plans, supplemental pension plans, health, dental, disability and life insurance plans.

The calculation of defined benefit expenses and obligations depends on various assumptions such as discount rates, expected rates of return on assets, healthcare cost trend rates, projected salary increases, retirement age, and mortality and termination rates. The discount rate assumption is determined using spot rates from a derived Aa corporate bond yield curve for our Canadian pension and other post-employment plans, and spot rates from an Aa corporate bond yield curve for our U.S. pension and other post-employment plans. All other assumptions are determined by management, applying significant judgment, and are reviewed by the actuaries. Actual experience that differs from the actuarial assumptions will affect the amounts of benefit obligations and expenses that we recognize. As at October 31, 2012, the unrecognized net actuarial losses of our pension and other post-employment plans were $1,345 million and $134 million (2011 – $365 million and $12 million), respectively. The weighted average assumptions used and the sensitivity of key assumptions are presented in Note 18 to our 2012 Annual Consolidated Financial Statements.

Special Purpose Entities

A special purpose entity is an entity created to accomplish a narrow and well-defined objective with limited decision-making powers and pre-established or limited activities. We are required to consolidate an SPE if an assessment of the relevant factors indicates that we control the SPE. Relevant factors include: (i) whether the activities of the SPE are conducted on our behalf according to our specific business needs so that we obtain benefits from the SPE's operation; (ii) whether we have the decision-making powers to obtain a majority of the benefits; (iii) whether we will obtain the majority of the benefits of the activities of the SPE; and (iv) whether we retain the majority of the residual ownership risks related to the assets or SPE in order to obtain the benefits from its activities.

We consider a number of factors in determining whether an entity is an SPE and, if required, analyzing whether we control the SPE. Our approach is generally focused on identifying the significant activities that impact the financial results of the SPE, and determining which party has substantive rights to control the decision making over those activities, and is also exposed to a majority of the SPE's risks and rewards. In certain instances, conditions considered in isolation may indicate control or lack of control over an SPE, but when considered together require a significant degree of judgment to reach a conclusion. For further information on our involvement with SPEs, refer to the Off-balance sheet arrangements section and Note 8 to our 2012 Annual Consolidated Financial Statements.

Derecognition of financial assets

We periodically enter into transactions in which we transfer financial assets such as loans or packaged mortgage-backed securities (MBS) to special purpose entities (SPEs) or trusts that issue securities to investors. We derecognized the assets when our contractual rights to the cash flows from the assets have expired, when we retain the rights to receive the cash flows but assume an obligation to pay those cash flows to a third party subject to certain pass-through requirements, or when we transfer our contractual rights to receive the cash flows and substantially all of the risks and rewards of the assets have been transferred. When we retain substantially all of the risks and rewards of the transferred assets, the transferred assets are not derecognized from our Consolidated Balance Sheets and are accounted for as secured financing transactions. When we neither retain nor transfer substantially all risks and rewards of ownership of the assets, we derecognize the assets if control over the assets is relinquished. If we retain control over the transferred assets, we continue to recognize the transferred assets to the extent of our continuing involvement. Management's judgment is applied in determining whether we have transferred or retained substantially all risk and rewards of ownership of the transferred financial asset.

The majority of assets transferred under repurchase agreements, securities lending agreements, and in our Canadian residential mortgage securitization transactions do not qualify for derecognition; as a result, we continue to record the associated transferred assets on our Consolidated Balance Sheets and no gains or losses are recognized for these securitization activities. Otherwise, a gain or loss is recognized on securitization by comparing the carrying amount of the transferred asset with its fair value at the date of the transfer. As at October 31, 2012, the carrying and fair values of the transferred assets that fail derecognition were $110 billion and $110 billion, respectively (2011 – $88 billion and $89 billion), and the carrying and fair values of the associated liabilities totalled $110 billion and $111 billion, respectively (2011 – $88 billion and $90 billion). For further information on derecognition of financial assets, refer to Note 7 to our 2012 Annual Consolidated Financial Statements.

Income taxes
We are subject to income tax laws in various jurisdictions where we operate, and the complex tax laws are potentially subject to different interpretations by us and the relevant taxation authority. Management's judgment is applied in the interpretation of the relevant tax laws and in the estimation of the provision for current and deferred income taxes, including the expected timing and amount of the realization. A deferred tax asset or liability is determined for each temporary difference based on the tax rates that are expected to be in effect in the period that the asset is realized or the liability is settled. Where the temporary differences will not reverse in the foreseeable future, no deferred tax amount is recognized.

On a quarterly basis, we review whether it is probable that the benefits associated with our deferred tax assets will be realized, using both positive and negative evidence. Refer to Note 25 to our 2012 Annual Consolidated Financial Statements for further information.

Change in accounting estimate – Mortgage prepayment interest
During the third quarter of 2012, we conducted a review of the cash flows that we include in the effective interest rate for mortgages. We determined that the prepayment interest expected to be collected over the term of the mortgages cannot be reliably estimated at the origination date. Therefore, we have revised our methodology to determine the effective interest rates as impacted by prepayment interest. Instead of estimating prepayment interest upon origination of a mortgage, we will defer and amortize the actual receipt of prepayment interest over the expected term of the mortgage if the mortgage is renewed. Otherwise, the prepayment interest will be recognized immediately in income at the prepayment date. This change has been applied as a change in accounting estimate and the cumulative impact increased Net interest income by $125 million this year.

Future changes in accounting policies and disclosure

Amendments to IAS 12 Income Taxes (IAS 12)
In December 2010, the IASB issued *Deferred Taxes, Recovery of Underlying Assets (amendments to IAS 12),* which will be effective for us on November 1, 2012. The amendments provide an exception to the general principle in IAS 12 that the measurement of deferred tax assets and deferred tax liabilities should reflect the tax consequences that would follow from the manner in which the carrying amount of an asset is expected to be recovered. The amendments include a rebuttable presumption that the deferred tax on investment property measured using the fair value model in *IAS 40 Investment Property* should be determined on the basis that its carrying amount will be recovered through sale. The amendments also include a requirement that deferred tax on non-depreciable assets, measured using the revaluation model in *IAS 16 Property, Plant and Equipment* should always be measured on a sale basis.

Amendments to IAS 1 Presentation of Financial Statements (IAS 1)
In June 2011, the IASB issued amendments to *IAS 1 Presentation of Financial Statements (amendments to IAS 1)*, which will be effective for us on November 1, 2012. The amendments change the requirement to group the items presented in other comprehensive income (OCI). Items that could be reclassified to profit or loss at a future point in time would be presented separately from items which will never be reclassified.

Controls and procedures

Disclosure controls and procedures
Our disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed by us in reports filed or submitted under Canadian and U.S. securities laws is recorded, processed, summarized and reported within the time periods specified under those laws and include controls and procedures that are designed to ensure that information is accumulated and communicated to management, including the President and Chief Executive Officer, and the Chief Administrative Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

As of October 31, 2012, management evaluated, under the supervision of and with the participation of the President and Chief Executive Officer and the Chief Administrative Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures as defined under rules adopted by the United States Securities and Exchange Commission. Based on that evaluation, the President and Chief Executive Officer and the Chief Administrative Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of October 31, 2012.

Internal control over financial reporting
Management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. However, because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements on a timely basis. See Management's Report on Internal Control over Financial Reporting and the Report of Independent Registered Chartered Accountants.

No changes were made in our internal control over financial reporting during the year ended October 31, 2012, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Related party transactions

In the ordinary course of business, we provide normal banking services, operational services, and enter into other transactions with associated and other related corporations, including our joint venture entities, on terms similar to those offered to non-related parties. We grant loans to directors, officers and other employees at rates normally accorded to preferred clients. In addition, we offer deferred share and other plans to non-employee directors, executives and certain other key employees. For further information, refer to Notes 13 and 29 of our 2012 Annual Consolidated Financial Statements.