

# Manulife Financial Corporation

## *Management's Discussion and Analysis*

For the year ended December 31, 2011



# 2011 Manulife Financial Corporation

## MANAGEMENT'S DISCUSSION AND ANALYSIS

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### Caution regarding forward-looking statements

This document contains forward-looking statements within the meaning of the "safe harbour" provisions of Canadian provincial securities laws and the U.S. Private Securities Litigation Reform Act of 1995. The forward-looking statements in this document include, but are not limited to, statements with respect to our 2015 management objectives for earnings and return on equity, management objectives with respect to hedging equity markets and interest rate risks and potential future changes related to fixed income URR assumptions if current low interest rates persist. The forward-looking statements in this document also relate to, among other things, our objectives, goals, strategies, intentions, plans, beliefs, expectations and estimates, and can generally be identified by the use of words such as "may", "will", "could", "should", "would", "likely", "suspect", "outlook", "expect", "intend", "estimate", "anticipate", "believe", "plan", "forecast", "objective", "seek", "aim", "continue", "goal", "restore", "embark" and "endeavour" (or the negative thereof) and words and expressions of similar import, and include statements concerning possible or assumed future results. Although we believe that the expectations reflected in such forward-looking statements are reasonable, such statements involve risks and uncertainties, and undue reliance should not be placed on such statements and they should not be interpreted as confirming market or analysts expectations in any way. Certain material factors or assumptions are applied in making forward-looking statements, including in the case of our 2015 management objectives for earnings and return on equity, the assumptions described under "Key Planning Assumptions and Uncertainties" and actual results may differ materially from those expressed or implied in such statements. Important factors that could cause actual results to differ materially from expectations include but are not limited to: the factors identified in "Key Planning Assumptions and Uncertainties"; general business and economic conditions (including but not limited to the performance, volatility and correlation of equity markets, interest rates, credit and swap spreads, currency rates, investment losses and defaults, market liquidity and creditworthiness of guarantors, reinsurers and counterparties); changes in laws and regulations; changes in accounting standards; our ability to execute strategic plans and changes to strategic plans; downgrades in our financial strength or credit ratings; our ability to maintain our reputation; impairments of goodwill or intangible assets or the establishment of valuation allowances against future tax assets; the accuracy of estimates relating to morbidity, mortality and policyholder behavior; the accuracy of other estimates used in applying accounting policies and actuarial methods; our ability to implement effective hedging strategies and unforeseen consequences arising from such strategies; our ability to source appropriate assets to back our long dated liabilities; level of competition and consolidation; our ability to market and distribute products through current and future distribution channels; unforeseen liabilities or asset impairments arising from acquisitions and dispositions of businesses; the realization of losses arising from the sale of investments classified as available for sale; our liquidity, including the availability of financing to satisfy existing financial liabilities on their expected maturity dates when required; obligations to pledge additional collateral; the availability of letters of credit to provide capital management flexibility; accuracy of information received from counterparties and the ability of counterparties to meet their obligations; the availability, affordability and adequacy of reinsurance; legal and regulatory proceedings, including tax audits, tax litigation or similar proceedings; our ability to adapt products and services to the changing market; our ability to attract and retain key executives, employees and agents; the appropriate use and interpretation of complex models or deficiencies in models used; political, legal, operational and other risks associated with our non-North American operations; acquisitions and our ability to complete acquisitions including the availability of equity and debt financing for this purpose; the disruption of or changes to key elements of the Company's or public infrastructure systems; environmental concerns; and our ability to protect our intellectual property and exposure to claims of infringement. Additional information about material factors that could cause actual results to differ materially from expectations and about material factors or assumptions applied in making forward-looking statements may be found in the body of this document under "Risk Management and Risk Factors" and "Critical Accounting and Actuarial Policies" in the Management's Discussion and Analysis and in the "Risk Management" note to the consolidated financial statements as well as under "Risk Factors" in our most recent Annual Information Form and elsewhere in our filings with Canadian and U.S. securities regulators. We do not undertake to update any forward-looking statements except as required by law.

# MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis ("MD&A") is current as of March 16, 2012.

## Overview

***Manulife Financial is a leading Canada-based financial services group with principal operations in Asia, Canada and the United States. In 2012, we celebrate 125 years of providing clients strong, reliable, trustworthy and forward-thinking solutions for their most significant financial decisions. Our international network of employees, agents and distribution partners offers financial protection and wealth management products and services to millions of clients. We also provide asset management services to institutional customers. Funds under management<sup>1</sup> by Manulife Financial and its subsidiaries were \$500 billion (US\$491 billion) as at December 31, 2011. The Company operates as Manulife Financial in Canada and Asia and primarily as John Hancock in the United States.***

***Manulife Financial Corporation trades as 'MFC' on the TSX, NYSE and PSE, and under '945' on the SEHK. Manulife Financial can be found on the internet at [manulife.com](http://manulife.com).***

In this document, the terms "Company", "Manulife Financial" and "we" mean Manulife Financial Corporation ("MFC") and its subsidiaries.

In 2011 we completed our three year product mix repositioning in all three of our geographies and strengthened the Manulife Financial and John Hancock brands. We led the market in executing price increases on new products, and in the U.S. we were pleased with our progress on price increases for our in-force Long-Term Care retail business.

We also significantly expanded our equity market and interest rate hedging programs in the first half of the year, which has reduced our earnings sensitivity and our capital sensitivity. Our hedging held us in good stead as these programs mitigated most, but not all, of the risk in the second half of 2011 as financial markets became increasingly volatile. We remained ahead of our timetable on hedging. We have already achieved our year end 2012 equity markets hedging goal and 93 per cent of our 2014 goal. We have also achieved our 2014 interest rate hedging goal.

We closed 2011 in a strong financial position with reduced equity market and interest rate sensitivity, with a Minimum Continuing Capital and Surplus Requirements ("MCCSR") capital ratio for The Manufacturers Life Insurance Company ("MLI") at 216 per cent. While lower than the 249 per cent at the end of 2010, 30 points of the decline was the result of changes in accounting policies, clarifications of regulatory capital policies and the impact of lower interest rates on the amount of regulatory required capital. In addition, during 2011 the sale of our Life Retrocession business and additional third party reinsurance added ten points to our ratio and offset the impact of declines in the ratio from growth in the business and dividends paid to MFC in excess of MLI's net income. The year end ratio should also be considered in context of the significantly reduced earnings sensitivity to changes in interest rates and equity markets.

Against this positive backdrop, financial markets were very unfavourable with lower equity markets, interest rates, and volatility hurting our financial results despite our significant hedging actions. The charges for goodwill impairment and actuarial basis changes further reduced earnings. Manulife Financial Corporation reported net income attributed to shareholders of \$129 million and net income of \$245 million for 2011. In contrast, net income in accordance with U.S. GAAP for 2011 was \$3.8 billion, \$3.5 billion higher than the Canadian version of IFRS.

Company-wide sales<sup>2</sup> of insurance products targeted for growth increased 11 per cent versus 2010 and were up 35 per cent from 2009. Company-wide sales of targeted wealth products increased 11 per cent compared to 2010 and were up 40 per cent from 2009. With the completion of our product repositioning, the categorization of products as "targeted for growth" and "not targeted for growth" will be discontinued in 2012.

In Asia, we remain focused on accelerating growth in some of the world's fastest growing markets where low financial services market penetration combined with high GDP growth affords the Company excellent opportunities. In 2011, we took important steps toward building a diversified multi-channel distribution platform. Highlights include securing strategically important distribution agreements with key bank partners in Hong Kong, Indonesia and China; continued robust growth of our professional agency force throughout the division and innovative brand building campaigns to enhance our strong global brand.

In Canada, we continued to produce solid sales results, despite significant interest rate declines and increased equity market volatility. Several business lines reported record sales for the year including Manulife Mutual Funds, Manulife Bank, Group Benefits small business segment and Affinity travel insurance, while Group Retirement Solutions continued to lead the Defined Contribution pension plan market in sales<sup>3</sup>. With the continued declines in interest rates, Individual Insurance demonstrated its market leadership by introducing further Universal Life price increases in October 2011, with most competitors subsequently following our lead. Across the division, we have reduced the equity and interest rate risk of our new business, and invested in development and growth of businesses with lower required capital and higher return potential.

<sup>1</sup> Funds under management is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

<sup>2</sup> Sales is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

<sup>3</sup> Based on the year ended December 31, 2011 sales survey by LIMRA, an insurance industry organization.

In the U.S., we have successfully executed a focused transformation of our insurance businesses. Driven by the need to address historically low interest rates, global solvency and accounting convergence as well as the impact of the U.S. economy which is slowly emerging from challenging times, over the last few years we have increased product prices, changed product features and introduced new products in order to reduce earnings sensitivity and lower risk profiles. U.S. Wealth Management successfully transitioned its new business mix to higher return fee based businesses with strong growth in both Mutual Funds and 401(k) Retirement Plan Services by capitalizing on our strong and trusted brand name, industry leading distribution excellence and access, broadened product offerings, innovative financial solutions and superior customer service. John Hancock Mutual Funds delivered record sales of \$12.5 billion in 2011, 29 per cent above 2010. We continued to be the third largest manager of assets for Lifestyle and Target Date portfolios<sup>4</sup>.

Manulife Asset Management made major progress in growing and strengthening its third party asset management capabilities and as at December 31, 2011 had 58 Five- and Four-star Morningstar<sup>5</sup> rated funds. Our fixed income franchise is gaining significant recognition globally for its depth and breadth and we added four new high performance equity teams. Our Hancock Natural Resource Group adds to our overall breadth and continues to be the largest provider of timber investments to institutional investors in the world and one of the largest institutional managers of farmlands in the U.S.

Our Investment Division's general fund asset management continues to be a strength of our Company, reflecting our investment philosophy rooted in a disciplined bottom-up approach, not limited to fixed income investments, but rather on developing a diversified blend of assets that are expected to drive superior risk adjusted returns for our stakeholders. This philosophy has resulted in a well-diversified, high quality investment portfolio that in 2011 generated gains of \$965 million.

With this progress we are well positioned to pursue sustainable growth with our focus on selling products that we expect to generate higher returns with lower earnings volatility.

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<sup>4</sup> Source: Strategic Insight. Includes Lifestyle and Lifecycle (Target Date) mutual fund assets and fund-of-funds variable insurance product assets (variable annuity and variable life).

<sup>5</sup> For each fund with at least a three year history, Morningstar calculates a Morningstar Rating based on a Morningstar Risk-Adjusted Return that accounts for variation in a fund's monthly performance (including effects of sales charges, loads and redemption fees), placing more emphasis on downward variations and rewarding consistent performance. The top 10% of funds in each category, the next 22.5%, 35%, 22.5% and bottom 1% receive 5, 4, 3, 2 or 1 star, respectively. The Overall Morningstar Rating for a fund is derived from a weighted average of the performance associated with its three, five and 10 year (if applicable) Morningstar Rating metrics. Past performance is no guarantee of future results. The overall rating includes the effects of sales charges, loads and redemption fees, while the load-waived does not. Load-waived rating for Class A shares should only be considered by investors who are not subject to a front-end sales charge.

# Financial Performance

As at and for the years ended December 31,	2011	2010	2009 <sup>(1)</sup>
Net income (loss) (C\$ millions)			
attributed to shareholders	\$ 129	\$ (1,663)	\$ 1,402
available to common shareholders	\$ 44	\$ (1,742)	\$ 1,338
excluding the direct impact of equity markets and interest rates <sup>(2)</sup>	\$ 1,193	\$ (660)	\$ 549
Earnings (loss) per common share (C\$)			
Basic	\$ 0.02	\$ (0.99)	\$ 0.82
Diluted	\$ 0.02	\$ (0.99)	\$ 0.82
Return on common shareholders' equity <sup>(2)</sup> (% annualized)	0.2%	(7.3)%	5.2%
U.S. GAAP net income <sup>(2)</sup> (C\$ millions)	\$ 3,765	\$ 1,712	\$ 3,143
Sales <sup>(2)</sup> (C\$ millions)			
Insurance products targeted for growth <sup>(3)</sup>	\$ 2,289	\$ 2,048	\$ 1,766
Wealth products targeted for growth <sup>(4)</sup>	\$ 30,517	\$ 28,028	\$ 24,079
Insurance products <i>not</i> targeted for growth <sup>(3)</sup>	\$ 218	\$ 482	\$ 591
Wealth products <i>not</i> targeted for growth <sup>(4)</sup>	\$ 4,132	\$ 6,083	\$ 12,927
Premiums and deposits <sup>(2)</sup> (C\$ millions)			
Insurance products targeted for growth <sup>(3)</sup>	\$ 18,955	\$ 17,856	\$ 17,747
Wealth products targeted for growth <sup>(4)</sup>	\$ 39,658	\$ 37,328	\$ 35,437
Insurance products <i>not</i> targeted for growth <sup>(3)</sup>	\$ 3,323	\$ 3,880	\$ 5,205
Wealth products <i>not</i> targeted for growth <sup>(4)</sup>	\$ 4,125	\$ 6,042	\$ 12,881
Funds under management <sup>(2)</sup> (C\$ billions)	\$ 500	\$ 477	\$ 439.6
Capital <sup>(2)</sup> (C\$ billions)	\$ 29.0	\$ 28.7	\$ 33.2
MLI's MCCR ratio <sup>(5)</sup>	216%	249%	240%
Sensitivities to equity markets and interest rates			
% of underlying earnings sensitivity to equity market movements offset by hedges <sup>(6)</sup>	60 to 70%	50 to 55%	9 to 12%
Earnings impact of a 1% parallel decline in interest rates <sup>(7)</sup>	\$ (1,000)	\$ (1,800)	\$ (2,200)

<sup>(1)</sup> We adopted IFRS as a replacement of prior Canadian generally accepted accounting principles ("CGAAP") effective January 1, 2010. Where applicable, amounts reflected for 2009 are based on CGAAP prior to the adoption of IFRS.

<sup>(2)</sup> This item is a non-GAAP measure. For a discussion of our use of non-GAAP measures, see "Performance and Non-GAAP Measures" below.

<sup>(3)</sup> Insurance products targeted for growth exclude universal life with lifetime no-lapse guarantees, guaranteed non-par whole life and long-term care insurance in the U.S., which are not targeted for growth.

<sup>(4)</sup> Wealth products targeted for growth exclude variable annuities across all geographies (other than InvestmentPlus and Manulife PensionBuilder in Canada) and book value fixed deferred annuities in the U.S. which are not targeted for growth. InvestmentPlus is a Canadian Division product with a 75% minimum death benefit guarantee and a 75% maturity benefit guarantee at age 100 that is used as an alternative to mutual funds for some customers. PensionBuilder provides an alternative to GICs for some customers. Due to the low risk nature of the guarantees these products are in the products targeted for growth category.

<sup>(5)</sup> The ratios for 2010 and 2009 have been calculated in accordance with CGAAP prior to the adoption of IFRS.

<sup>(6)</sup> Defined as earnings sensitivity to a 10 per cent decline in public equity markets including settlements on reinsurance contracts existing at September 30, 2010, but excluding the dynamic hedging strategy and other hedging activities. The high end of the range assumes that the dynamic hedges completely offset related liability changes and the low end assumes that dynamic hedges offset 80% of the dynamically hedged variable annuity policy liabilities. See "Risk Management and Risk Factors" section.

<sup>(7)</sup> The impact above excludes the impact of market value changes in available-for-sale ("AFS") bonds. The AFS bonds provide a natural economic offset to the interest rate risk arising from our product liabilities, and if included would reduce the impact to \$(200), \$(600) and \$(1,600) for the years ended December 31, 2011, 2010 and 2009.

Net income attributed to shareholders was \$129 million in 2011 and net income excluding the direct impact of equity markets and interest rates was \$1,193 million. As noted above, financial markets were very unfavourable with equity markets, interest rates, and volatility hurting our financial results despite our significant hedging actions. The charges for the goodwill impairment and actuarial basis changes further reduced earnings.

The table below outlines the notable items impacting net income including the components of the direct impact of equity markets and interest rates. Net income excluding the direct impact of equity markets and interest rates is a non-GAAP profitability measure introduced in 2010 and related to our activities to reduce earnings sensitivity to changes in interest rates and equity markets.

### Analysis of Net Income (Loss)

For the years ended December 31,  
(C\$ millions)

	2011	2010	2009 <sup>(1)</sup>
<b>Net income (loss) attributed to shareholders</b>	<b>\$ 129</b>	<b>\$ (1,663)</b>	<b>\$ 1,402</b>
<b>Less direct impact of equity markets and interest rates<sup>(2)</sup>:</b>			
Gains (charges) on variable annuity guarantee liabilities not dynamically hedged <sup>(3)</sup>	(1,092)	(30)	2,871
Gains (charges) on general fund equity investments supporting policy liabilities and on fee income	(214)	133	361
Gains (losses) on macro equity hedges <sup>(4)</sup>	636	(48)	N/A
Charges on lower fixed income reinvestment rates assumed in the valuation of policy liabilities, excluding ultimate reinvestment rate assumptions	(281)	(1,293)	(2,247)
Gains on sale of AFS bonds and interest rate swaps in the surplus segment	324	544	–
Charges due to lower fixed income ultimate reinvestment rate (“URR”) assumptions used in the valuation of policy liabilities	(437)	(309)	(132)
<b>Direct impact of equity markets and interest rates</b>	<b>\$ (1,064)</b>	<b>\$ (1,003)</b>	<b>\$ 853</b>
<b>Net income (loss) excluding the direct impact of equity markets and interest rates<sup>(5)</sup></b>	<b>\$ 1,193</b>	<b>\$ (660)</b>	<b>\$ 549</b>
<b>Other notable items:</b>			
Earnings impact of the difference between the net increase in variable annuity liabilities that are dynamically hedged and the performance of the related hedge assets <sup>(3),(6)</sup>	\$ (1,153)	\$ (180)	\$ –
Changes in actuarial methods and assumptions (excluding URR changes)	(751)	(1,766)	(1,154)
Goodwill impairment charge	(665)	(2,330)	–
Expected cost of macro equity hedges <sup>(4)</sup>	(408)	(34)	N/A
Net impact of P&C reinsurance claims related to the earthquake in Japan	(151)	–	–
Investment gains (losses) related to fixed income trading, non-fixed income returns, credit experience and asset mix changes	965	271	(1,267)
Favourable impact on policy liabilities related to activities to reduce interest rate exposures	471	416	–
Gain on sale of Life Retrocession business	303	–	–
Tax related items	–	237	125

<sup>(1)</sup> Where applicable, amounts reflected for 2009 are based on CGAAP prior to the adoption of IFRS.

<sup>(2)</sup> The direct impact of equity markets and interest rates is relative to our policy liability valuation assumptions and includes changes to the interest rate assumptions. We also include gains and losses on the sale of AFS bonds as management may have the ability to partially offset the direct impacts of changes in interest rates reported in the liability segments.

<sup>(3)</sup> The breakdown between hedged and unhedged is not available in 2009. All variable annuity guarantee experience in 2009 is presented in “Gains (charges) on variable annuity guarantee liabilities not dynamically hedged”.

<sup>(4)</sup> The 2011 net gain from macro equity hedges was \$228 million and consisted of a \$408 million (2010 – \$34 million) charge related to the estimated expected cost of the macro equity hedges relative to our long-term valuation assumptions and a gain of \$636 million (2010 – loss of \$48 million) because actual markets underperformed our valuation assumptions.

<sup>(5)</sup> Net income (loss) excluding the direct impact of equity markets and interest rates is a non-GAAP measure. See “Performance and Non-GAAP Measures” below.

<sup>(6)</sup> Our variable annuity guarantee dynamic hedging strategy is not designed to completely offset the sensitivity of policy liabilities to all risks associated with the guarantees embedded in these products for a number of reasons including provisions for adverse deviation, fund performance, the portion of interest rate risk that is not hedged, realized equity market and interest rate volatilities and changes to policyholder behaviour. See “Risk Management and Risk Factors” section below for further details.

**In 2011, the direct impact of equity markets and interest rates was a charge of \$1,064 million.** Triple digit declines in risk free rates in North America resulted in a charge from interest movements of \$394 million. This included a charge of \$437 million from lower ultimate reinvestment rates used in actuarial reserves and a \$281 million charge from lower fixed income reinvestment rates, partially offset by \$324 million of gains from the sale of available-for-sale (“AFS”) bonds and from derivative positions. The direct impact of equity markets was a loss of \$670 million, with broad declines in Canadian and Japanese markets, while the U.S. S&P 500 was flat.

**Net income excluding the direct impact of equity markets and interest rates** was balanced across our three major operating divisions in 2011.

Net income (loss) excluding the direct impact of equity markets and interest rates:

For the years ended December 31,  
(C\$ millions)

	2011	2010	2009 <sup>(1)</sup>
Asia Division	\$ 1,111	\$ 954	\$ 1,111
Canadian Division	898	1,244	1,067
U.S. Division	1,035	1,378	63
Corporate and Other segment <sup>(2)</sup>	(1,851)	(4,236)	(1,692)
<b>Total</b>	<b>\$ 1,193</b>	<b>\$ (660)</b>	<b>\$ 549</b>

<sup>(1)</sup> Where applicable, amounts reflected for 2009 are based on CGAAP prior to the adoption of IFRS.

<sup>(2)</sup> Corporate and Other includes the following notable items other than the direct impact of equity markets and interest rates: charges related to changes in actuarial methods and assumptions excluding ultimate reinvestment rates (2011 – \$751 million, 2010 – \$1,766 million); goodwill impairment (2011 – \$665 million, 2010 – \$2,330 million); expected cost of macro hedges (2011 – \$408 million, 2010 – \$34 million); net impact of P&C reinsurance claims related to the 2011 earthquake in Japan of \$151 million; partially offset by the gain on sale of the Life Retrocession business in 2011 of \$303 million. These items net to \$1,672 million for 2011 and \$4,130 million for 2010.

**Other notable items in 2011 included:**

As a result of the adverse market conditions we reported a net charge of \$1.2 billion on variable annuity liabilities that are dynamically hedged which included a \$0.5 billion charge for strengthening provisions for adverse deviation. The remaining \$0.7 billion related to the difference between the \$2.3 billion of gains on the dynamic hedge assets and the \$3.0 billion post tax increase in the best estimate policy liabilities. This difference was driven by unfavourable realized equity and interest rate volatilities and their correlations, the difference in performance of the underlying funds hedged and the hedge instruments, and charges related to the portion of the interest rate risk that was not hedged. Excluding the strengthening of liabilities related to provisions for adverse deviation, an item intentionally not hedged, the dynamic hedging program mitigated almost 75 per cent of the increase in the best estimate liability. In addition, as noted in the table above, the gain on equity macro hedges also mitigated equity related risks, and overall our hedging program operated as expected.

Changes in actuarial methods and assumptions resulted in a net charge of \$1,188 million to shareholder earnings of which \$437 million relates to updates to the URR noted above and the remaining \$751 million includes:

- \$475 million charge as a result of the update to U.S. Life mortality which increased expected mortality for older issue and older attained ages,
- \$733 million benefit from updates to other mortality assumptions as well as the implementation of mortality and morbidity improvements across North American business units,
- \$309 million charge related to updates to lapses and other policyholder behaviour assumptions for segregated fund business,
- \$327 million investment-related charge for updates to guaranteed minimum withdrawal benefit commutation rates and other non-fixed income updates (including future acquisitions), and
- \$373 million charge for updates to lapse assumptions for certain insurance businesses, updates to expense factors including letter of credit costs, and a number of offsetting model refinements related to projections of both asset and liability cash flows.

The charge of \$1,188 million is discussed in detail below under “Critical Accounting and Actuarial Policies – Review of Actuarial Methods and Assumptions”.

In 2011 we reported a \$665 million (US\$650 million) goodwill impairment charge. This was the remaining amount of the goodwill allocated to our U.S. Life Insurance business. In the fourth quarter of 2011 we updated our 2012 business plan including in-force and new business embedded values. We use these measures in determining the recoverable amount of our businesses in our annual goodwill impairment testing typically completed during the fourth quarter. The current economic environment, including the persistent low interest rates, impacted the recoverable amounts of our life insurance businesses, principally in the U.S., for IFRS goodwill impairment testing purposes.

The 2011 net gain from macro equity hedges was \$228 million and consisted of a \$408 million charge related to the estimated expected cost of the macro equity hedges relative to our long-term valuation assumptions and a gain of \$636 million because actual markets underperformed our valuation assumptions. The macro hedge program is outlined in the “Risk Management and Risk Factors” section below.

In the first quarter of 2011 our property and casualty reinsurance business reported a net charge of \$151 million from claims related to the earthquake in Japan.

Investment related gains in 2011 were \$965 million and related to asset mix changes, fixed income trading, non-fixed income returns and credit experience. We reported a gain of \$369 million related to the impact on policy liabilities from the increase in expected yield driven by investing in more non-fixed income investments than had been assumed in the policy liability assumptions and \$211 million of gains related to current year returns on non-fixed income investments in excess of those assumed in the valuations. We also reported a net gain of \$122 million from normal course fixed income trading activities over the year. Net credit experience for the year was positive, with impairments almost the same as recoveries and the impact of downgrades at less than the allowance for credit assumed in the policy liabilities.

The \$471 million gain for de-risking activities reflects the impact of lower risk margins required in the valuation of policy liabilities as a result of the improved match between the asset and liability cash flows.

We completed the reinsurance transaction to sell our Life Retrocession business to Pacific Life Insurance Company, based in the United States, in the third quarter. The transaction was effective July 1, 2011 and under IFRS we reported a gain of \$303 million. As previously announced, the reduction in on-going annual earnings from the sale will not be material to our consolidated financial results.

**For the year ended December 31, 2010,** we reported a net loss attributed to shareholders of \$1,663 million on an IFRS basis and a loss of \$660 million excluding the direct impact of equity markets and interest rates. The loss included a charge for goodwill impairment of \$2.3 billion and charges of \$1.8 billion for changes in actuarial methods and assumptions, excluding the impact of updating the ultimate reinvestment rate assumption. Notable tax related items of \$237 million included the release of provisions on tax years that were closed.

**For the year ended December 31, 2009**, we reported net income attributed to shareholders of \$1,402 million and earnings excluding the direct impact of equity markets and interest rates was \$549 million, both on a Canadian GAAP basis. The significant increase in equity markets in 2009 resulted in non-cash gains of \$2,871 million related to the segregated fund and variable annuity guarantees and \$361 million on general fund equity investments supporting policy liabilities and on fee income. These gains were significantly offset by the \$2,379 impact from the decline in interest rates. Other notable items included charges for changes in actuarial methods and assumptions of \$1,154 million (excluding the URR impact), credit related impairments of \$256 million and downgrade charges captured in the valuation of policy liabilities of \$216 million, other than temporary impairments and realized losses on AFS equities of \$257 million, and \$625 million of charges related to the decline in value, relative to the growth assumptions in our policy liabilities, of real estate, timber and agriculture holdings. The tax related items in 2009 related to the Japan variable annuity business and closure of uncertain tax positions, partially offset by an increase in tax related provisions on leveraged lease investments.

#### **Earnings (Loss) per Common Share and Return on Common Shareholders' Equity<sup>6</sup>**

Net income per common share for 2011 was \$0.02, compared to a net loss of \$0.99 in 2010. Return on common shareholders' equity for 2011 was 0.2 per cent, compared to minus 7.3 per cent for 2010. Return on common shareholders' equity is calculated excluding Accumulated Other Comprehensive Income (Loss) ("AOCI") on AFS securities and cash flow hedges.

**Sales as well as premiums and deposits<sup>7</sup>** ("P&D") were in line with our strategy of accelerating the growth of products that have favourable return on capital and with lower risk profiles while at the same time pulling back or eliminating products that give rise to earnings sensitivity or produce low returns on capital employed. To measure progress on these goals, we separately report on the sales and P&D of product lines we are targeting to grow from those that are not targeted for growth. With the completion of the product repositioning, sales and P&D of products not targeted for growth now represent a relatively small portion of overall sales and P&D, and the categorization of products "targeted for growth" and "not targeted for growth" will be discontinued in 2012.

#### **Sales<sup>8</sup>**

Total Company insurance sales for products we are targeting to grow (all insurance products in Asia and Canada, and insurance products in the U.S. other than universal life products with lifetime no-lapse guarantees, guaranteed non-par whole life and long-term care products) were almost \$2.3 billion in 2011, an 11 per cent increase over 2010.

- In Asia, sales were US\$1.2 billion, an increase of 13 per cent over 2010, with 6 of our 10 businesses achieving record full year sales driven by distribution expansion and product development.
- Canadian Insurance exceeded \$650 million in 2011 sales, consistent with 2010 levels as record sales were achieved in the Affinity travel business and Group Benefits' small case market while repositioning activities resulted in a moderate decline in Individual Insurance sales relative to record 2010 sales.
- In the U.S. Insurance segment, we are continuing to reposition the business to adapt to the low interest rate environment and focus on a business mix favouring higher return and more capital efficient products. Insurance sales of products we are targeting to grow exceeded US\$400 million, an increase of 28 per cent over 2010.

Total Company insurance sales of products not targeted for growth (the U.S. products outlined above) totaled \$218 million for the year, a year over year decline of 52 per cent.

Total insurance sales for the full year 2011 were \$2.5 billion, a decrease of one per cent compared to full year 2010.

Total Company wealth sales for products we are targeting to grow (all wealth products except variable annuity ("VA") and book value fixed deferred annuity products. Manulife PensionBuilder and InvestmentPlus VA products are included in products we are targeting to grow due to their low risk profile) exceeded \$30 billion in 2011, an 11 per cent increase over 2010.

- In the U.S., wealth sales were over US\$18 billion and represented an increase of 12 per cent over 2010 driven by mutual fund sales of over \$12 billion, a new record.
- In Canada, wealth sales of \$8.9 billion represented an increase of seven per cent over 2010 as record mutual fund sales and increased bank volumes were partially offset by lower sales of fixed products.
- In Asia, wealth sales for products we are targeting to grow were \$3.8 billion, an increase of 17 per cent over 2010 despite the adverse impact of market volatility.

Total Company wealth sales of products not targeted for growth totaled \$4.1 billion in 2011, a decline of 32 per cent from 2010 on a constant currency basis.

<sup>6</sup> Return on common shareholders' equity is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

<sup>7</sup> Premiums and deposits is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

<sup>8</sup> Growth in sales is stated on a constant currency basis. Constant currency basis is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

Total wealth sales for the full year 2011 were \$34.6 billion, an increase of four per cent compared to full year 2010.

## Sales

For the years ended December 31,  
(C\$ millions)

	2011	2010	2009
Insurance products targeted for growth	\$ 2,289	\$ 2,048	\$ 1,766
Insurance products not targeted for growth <sup>(1)</sup>	218	482	591
Wealth products targeted for growth	30,517	28,028	24,079
Wealth products not targeted for growth <sup>(2)</sup>	4,132	6,083	12,927

<sup>(1)</sup> JH Life universal life with lifetime no-lapse guarantees and guaranteed non-par whole life products as well as products in JH Long-Term Care.

<sup>(2)</sup> Wealth products targeted for growth exclude variable annuities across all geographies (other than InvestmentPlus and Manulife PensionBuilder in Canada) and book value fixed deferred annuities in the U.S. which are not targeted for growth. InvestmentPlus is a Canadian Division product with a 75% minimum death benefit guarantee and a 75% maturity benefit guarantee at age 100 that is used as an alternative to mutual funds for some customers. PensionBuilder provides an alternative to GICs for some customers. Due to the low risk nature of the guarantees these products are in the products targeted for growth category.

## Premiums and Deposits<sup>9</sup>:

Total Company P&D for insurance products we are targeting to grow increased to \$19.0 billion in 2011, an increase of seven per cent over 2010. The increase was 16 per cent in Asia, 12 per cent in the U.S. and two per cent in Canada.

Total Company P&D for insurance products we are not targeting to grow declined 11 per cent to \$3.3 billion.

Total Company P&D for wealth products we are targeting to grow increased to \$40 billion in 2011, an increase of ten per cent over 2010. For reasons similar to sales, the increase was 15 per cent in Asia, nine per cent in the U.S. and ten per cent in Canada.

Total Company P&D for wealth products we are not targeting to grow (VA and book value deferred fixed annuities) declined 31 per cent from 2010 to \$4.1 billion in 2011.

## Premiums and Deposits

For the years ended December 31,  
(C\$ millions)

	2011	2010	2009 <sup>(1)</sup>
Insurance products targeted for growth	\$ 18,955	\$ 17,856	\$ 17,747
Insurance products not targeted for growth <sup>(2)</sup>	3,323	3,880	5,205
Wealth products targeted for growth	39,658	37,328	35,437
Wealth products not targeted for growth <sup>(3)</sup>	4,125	6,042	12,881
<b>Total premiums and deposits</b>	<b>\$ 66,061</b>	<b>\$ 65,106</b>	<b>\$ 71,270</b>

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

<sup>(2)</sup> JH Life universal life with lifetime no-lapse guarantees and guaranteed non-par whole life products as well as products in JH Long-Term Care.

<sup>(3)</sup> Wealth products targeted for growth exclude variable annuities across all geographies (other than InvestmentPlus and Manulife PensionBuilder in Canada) and book value fixed deferred annuities in the U.S. which are not targeted for growth. InvestmentPlus is a Canadian Division product with a 75% minimum death benefit guarantee and a 75% maturity benefit guarantee at age 100 that is used as an alternative to mutual funds for some customers. PensionBuilder provides an alternative to GICs for some customers. Due to the low risk nature of the guarantees these products are in the products targeted for growth category.

**Total funds under management** as at December 31, 2011 were \$500 billion, an increase of \$23 billion over December 31, 2010. The increase was driven by \$10 billion of investment returns, \$7 billion of net positive policyholder cash flows and \$10 billion due to the weaker Canadian dollar. These items were partially offset by \$4 billion of expenses, commissions, taxes and other movements.

## Funds under Management

As at December 31,  
(C\$ millions)

	2011	2010	2009 <sup>(4)</sup>
General Fund	\$ 226,520	\$ 201,222	\$ 187,470
Segregated Funds excluding Institutional Advisory Accounts <sup>(1),(2)</sup>	193,807	196,868	188,229
Mutual Funds, Institutional Advisory Accounts and Other <sup>(1),(2),(3)</sup>	79,325	78,867	63,918
<b>Total funds under management</b>	<b>\$ 499,652</b>	<b>\$ 476,957</b>	<b>\$ 439,617</b>

<sup>(1)</sup> Segregated fund assets, mutual fund assets and other funds are not available to satisfy the liabilities of the Company's general fund.

<sup>(2)</sup> As at December 31, 2010, we transferred \$6,614 million from segregated funds to mutual funds resulting from a restructuring of our Hong Kong pension business.

<sup>(3)</sup> Other funds represent pension funds, pooled funds, endowment funds and other institutional funds managed by the Company on behalf of others.

<sup>(4)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

## Capital<sup>10</sup>

Total capital was \$29.0 billion as at December 31, 2011 compared to \$28.7 billion as at December 31, 2010, an increase of \$0.3 billion. Contributing factors included: \$0.5 billion increase from impact of the weaker Canadian dollar, \$0.4 billion of preferred shares issued and \$0.2 billion of earnings, partially offset by cash dividends of \$0.7 billion and a \$0.2 billion decrease in unrealized gains on AFS securities. The \$0.55 billion of MLI subordinated debt capital issued in the fourth quarter offset \$0.55 billion of MLI subordinated debt capital redeemed in the first quarter.

<sup>9</sup> Growth in P&D is stated on a constant currency basis. Constant currency basis is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

<sup>10</sup> Capital is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

## Public equity risk and Interest rate risk reduction plans

We have established risk reduction plans designed to reduce our exposure to public equity risk and interest rate risk through a combination of time-scheduled and market-trigger based actions. The plans established a goal of executing additional hedges so that approximately 60 per cent of our underlying earnings sensitivity to public equity market movements is offset by hedges by the end of 2012 and approximately 75 per cent of our underlying earnings sensitivity to public equity market movements is offset by hedges by the end of 2014. In addition, we established goals to reduce our interest rate exposures, as measured by the sensitivity of shareholders' net income to a 100 basis point decline in interest rates, to \$1.65 billion as at year end 2012 and to \$1.1 billion as at year end 2014. As of December 31, 2011 we are ahead of our timetable on hedging having already achieved our year end 2012 equity markets hedging goal and 93 per cent of our 2014 goal. We have also achieved our 2014 interest rate hedging goal.

For further details please see "Risk Management and Risk Factors – Market Risk" section below.

## Fourth Quarter Financial Highlights

For the quarters ended December 31,

(C\$ millions, except per share amounts)

	2011	2010	2009 <sup>(1)</sup>
Net income (loss) attributed to shareholders	\$ (69)	\$ 1,796	\$ 868
Diluted earnings (loss) per share	\$ (0.05)	\$ 0.96	\$ 0.51
Return on common shareholders' equity (annualized)	(1.6)%	32.3%	13.1%

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

## Net Income (Loss) Attributed to Shareholders

In the fourth quarter of 2011, we reported a net loss attributed to shareholders of \$69 million, which included a goodwill impairment charge on our JH Life insurance business of \$665 million. This non-cash charge was driven by the outlook for continued low interest rates over the medium term and our actions to reduce interest rate risk.

Excluding the notable items identified in the table below, fourth quarter 2011 earnings declined by \$262 million compared to fourth quarter 2010. This decline can be categorized into three approximately equal groups:

- Gains in fourth quarter 2010 that did not recur,
- One-time charges in fourth quarter 2011, and
- Operating items including costs associated with the hedging of additional in-force variable annuity guaranteed value, lower fee income due to market declines and higher new business strain.

The 2010 one-time gains included income from our Life Retrocession business sold in 2011 and tax related items. The one-time charges in fourth quarter 2011 included U.S. based severance costs and industry assessments, a historical correction to our deferred tax balance and a reversal of a gain incorrectly reported in third quarter.

In the fourth quarter of 2010, we reported net income attributed to shareholders of \$1,796 million which included \$824 million of gains related to the direct impact of equity markets and interest rates. Net income also included gains on the dynamically hedged variable annuity business, favourable investment experience and tax gains related to releasing provisions for closed tax years.

The table below outlines the notable items impacting net income in the fourth quarters of 2010 and 2011, including the components of the direct impact of equity markets and interest rates.

## Analysis of Net Income (Loss)

For the quarters ended December 31,

(C\$ millions)

	2011	2010
<b>Net income (loss) attributed to shareholders</b>	<b>\$ (69)</b>	<b>\$ 1,796</b>
<b>Less direct impact of equity markets and interest rates<sup>(1)</sup>:</b>		
Gains on variable annuity guarantee liabilities not dynamically hedged	234	274
Gains on general fund equity investments supporting policy liabilities and on fee income	56	117
Losses on macro equity hedges <sup>(2)</sup>	(250)	(48)
Gains on fixed income reinvestment rates assumed in the valuation of policy liabilities	122	516
Losses on sale of AFS bonds and interest rate swaps in the surplus segment	(9)	(35)
<b>Direct impact of equity markets and interest rates</b>	<b>\$ 153</b>	<b>\$ 824</b>
<b>Net income (loss) excluding the direct impact of equity markets and interest rates<sup>(3)</sup></b>	<b>\$ (222)</b>	<b>\$ 972</b>
<b>Other notable items:</b>		
Goodwill impairment charge	\$ (665)	\$ –
Earnings impact of the difference between the net increase in variable annuity liabilities that are dynamically hedged and the performance of the related hedge assets <sup>(4)</sup>	(193)	184
Expected cost of macro equity hedges <sup>(2)</sup>	(97)	(34)
Changes in actuarial methods and assumptions	2	(54)
Investment gains (losses) primarily related to fixed income trading, favourable credit experience and asset mix changes	279	(115)
Favourable impact on policy liabilities related to activities to reduce interest rate exposure	–	174
Tax related items	–	103

<sup>(1)</sup> The direct impact of equity markets and interest rates is relative to our policy liability valuation assumptions and includes changes to the interest rate assumptions. We also include gains and losses on the sale of AFS bonds as management may have the ability to partially offset the direct impacts of changes in interest rates reported in the liability segments.

(footnotes continue on following page)

<sup>(2)</sup> The fourth quarter 2011 net loss from macro equity hedges was \$347 million and consisted of a \$97 million charge related to the estimated expected cost of the macro equity hedges relative to our long-term valuation assumptions and a loss of \$250 million because actual markets overperformed our valuation assumptions.

<sup>(3)</sup> Net income (loss) excluding the direct impact of equity markets and interest rates is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

<sup>(4)</sup> Our variable annuity guarantee dynamic hedging strategy is not designed to completely offset the sensitivity of policy liabilities to all risks associated with the guarantees embedded in these products for a number of reasons including provisions for adverse deviation, fund performance, the portion of interest rate risk that is not hedged, realized equity market and interest rate volatilities and changes to policyholder behavior. See "Risk Management and Risk Factors" section below for further details.

### Earnings (Loss) per Share and Return on Common Shareholders' Equity

The loss per common share for the fourth quarter of 2011 was \$0.05 compared to earnings of \$1.00 per share for the fourth quarter of 2010. Return on common shareholders' equity was (1.6) per cent for the fourth quarter of 2011 (fourth quarter of 2010 – 32.3 per cent).

### Premiums and Deposits

Fourth quarter 2011 premiums and deposits for insurance products targeted for growth were \$4.9 billion, in line with the fourth quarter of 2010, on a constant currency basis. Strong growth across Asia and in Canadian Affinity markets was offset by lower premiums in the Reinsurance segment following the sale of the Life Retrocession business.

Fourth quarter 2011 premiums and deposits for wealth products targeted for growth were \$9.1 billion, seven per cent lower on a constant currency basis than the fourth quarter of 2010. The Institutional Advisory business, Group Retirement Solutions in Canada and foreign annuities in Japan all reported strong growth but this was offset as North American mutual fund sales slowed due to market volatility while the low interest rate environment resulted in lower fixed product sales. Also, fourth quarter 2010 premiums and deposits were boosted by fund launches in Asia.

For insurance products not targeted for growth the decline in premiums and deposits for the full year was 11 per cent.

For the wealth products not targeted for growth (variable annuities across all geographies – other than InvestmentPlus and PensionBuilder in Canada – and book value fixed deferred annuities in the U.S.), full year premiums and deposits declined by 31 per cent.

### Premiums and Deposits

For the quarters ended December 31,  
(C\$ millions)

	2011	2010	2009 <sup>(1)</sup>
Insurance products targeted for growth	\$ 4,892	\$ 4,757	\$ 4,437
Insurance products not targeted for growth <sup>(2)</sup>	857	972	2,124
Wealth products targeted for growth	9,138	9,706	8,101
Wealth products not targeted for growth <sup>(3)</sup>	1,030	1,284	1,873
<b>Total premiums and deposits</b>	<b>\$ 15,917</b>	<b>\$ 16,719</b>	<b>\$ 16,535</b>

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

<sup>(2)</sup> JH Life universal life with lifetime no-lapse guarantees and guaranteed non-par whole life products as well as products in JH Long-Term Care.

<sup>(3)</sup> Wealth products targeted for growth exclude variable annuities across all geographies (other than InvestmentPlus and Manulife PensionBuilder in Canada) and book value fixed deferred annuities in the U.S. which are not targeted for growth. InvestmentPlus is a Canadian Division product with a 75% minimum death benefit guarantee and a 75% maturity benefit guarantee at age 100 that is used as an alternative to mutual funds for some customers. PensionBuilder provides an alternative to GICs for some customers. Due to the low risk nature of the guarantees these products are in the products targeted for growth category.

# Performance by Division

## Asia Division

*Manulife Financial has operated in Asia since 1897, beginning in Hong Kong. Today, as a pan-Asian insurer, we have insurance and asset management operations in ten markets. In addition to Hong Kong we operate in the Philippines, Singapore, Indonesia, Taiwan, China, Japan, Vietnam, Malaysia, and Thailand.*

*We offer a diverse portfolio of protection, savings and wealth management products and services to meet the needs of individuals and corporate customers. To reach our customers we distribute our products through a multi-channel network, including more than fifty thousand tied agents, bank partners, independent agents, and financial advisors.*

In 2011, Asia Division contributed 16 per cent of the Company's total premiums and deposits and, as at December 31, 2011, accounted for 14 per cent of the Company's funds under management.

### Financial Performance

Asia Division's net loss attributed to shareholders for 2011 was US\$62 million compared to net income of US\$689 million in 2010. Net income attributed to shareholders excluding the direct impact of equity markets and interest rates was US\$1,124 million in 2011, an increase of US\$193 million compared to US\$931 million in 2010. The table that follows outlines other notable items impacting both years. Excluding these items, net income attributed to shareholders increased by US\$57 million over 2010 driven by growth in in-force business, higher new business margins, the strengthening of the Yen and other local currencies compared to the U.S. dollar, partially offset by higher expenses related to growth initiatives and IT systems enhancements.

On a Canadian dollar basis, the net loss attributed to shareholders for 2011 was \$48 million compared to net income of \$712 million reported a year earlier.

The table below outlines the net income (loss) attributable to shareholders for Asia Division for 2011, 2010 and 2009 as well as the direct impact of equity markets and interest rates and the impact of other notable items.

### Analysis of Net Income (Loss)

For the years ended December 31,

(\$ millions)	Canadian \$			US \$		
	2011	2010	2009 <sup>(1)</sup>	2011	2010	2009 <sup>(1)</sup>
<b>Net income (loss) attributed to shareholders</b>	<b>\$ (48)</b>	<b>\$ 712</b>	<b>\$ 2,169</b>	<b>\$ (62)</b>	<b>\$ 689</b>	<b>\$ 1,912</b>
<b>Less direct impact of equity markets and interest rates<sup>(2)</sup>:</b>						
Gains (charges) on variable annuity guarantee liabilities not dynamically hedged <sup>(3),(4)</sup>	(877)	(208)	934	(901)	(208)	837
Gains (charges) on general fund equity investments supporting policy liabilities and on fee income	(120)	30	133	(123)	28	120
Charges on lower fixed income reinvestment rates assumed in the valuation of policy liabilities	(162)	(64)	(9)	(162)	(62)	(11)
<b>Direct impact of equity markets and interest rates</b>	<b>\$ (1,159)</b>	<b>\$ (242)</b>	<b>\$ 1,058</b>	<b>\$ (1,186)</b>	<b>\$ (242)</b>	<b>\$ 946</b>
<b>Net income excluding the direct impact of equity markets and interest rates<sup>(5)</sup></b>	<b>\$ 1,111</b>	<b>\$ 954</b>	<b>\$ 1,111</b>	<b>\$ 1,124</b>	<b>\$ 931</b>	<b>\$ 966</b>
<b>Other notable items:</b>						
Earnings impact of the difference between the net increase in variable annuity liabilities that are dynamically hedged and the performance of the related hedge assets <sup>(3),(4),(6)</sup>	\$ (31)	\$ (18)	\$ –	\$ (31)	\$ (18)	\$ –
Favourable impact on policy liabilities related to activities to reduce interest rate exposures	63	58	–	64	57	–
Investment gains (losses) related to fixed income trading, favourable credit experience and asset mix changes	141	(1)	(12)	141	(1)	(7)
Tax related item	–	–	208	–	–	167

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

<sup>(2)</sup> The direct impact of equity markets and interest rates is relative to our policy liability valuation assumptions and includes changes to the interest rate assumptions.

<sup>(3)</sup> The breakdown between hedged and unhedged is not available in 2009. All variable annuity guarantee experience in 2009 is presented in "Gains (charges) on variable annuity guarantee liabilities not dynamically hedged".

<sup>(4)</sup> The amount of variable annuity guaranteed value that was dynamically hedged at the end of 2011 was 12 per cent.

<sup>(5)</sup> Net income (loss) excluding the direct impact of equity markets and interest rates is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

<sup>(6)</sup> Our variable annuity guarantee dynamic hedging strategy is not designed to completely offset the sensitivity of policy liabilities to all risks associated with the guarantees embedded in these products for a number of reasons including provisions for adverse deviation, fund performance, the portion of interest rate risk that is not hedged, realized equity market and interest rate volatilities and changes to policyholder behavior. See "Risk Management and Risk Factors" section below for further details.

## Sales

**Asia Division's insurance sales** of US\$1.2 billion were 13 per cent higher than 2010, on a constant currency basis. New product launches and expanded agency and bank distribution capacity helped deliver record full year sales in six of our 10 operations. In Japan, full year sales of US\$690 million were up 13 per cent over 2010 due to the continued expansion of the Managing General Agent ("MGA") channel and growth in Increasing Term and Cancer product sales. Sales in Hong Kong were US\$209 million, an increase of eight per cent over 2010, as a result of growth in our agency distribution as well as growth in bank channel sales. Sales in our other countries totaled US\$345 million, up 19 per cent compared to 2010. Strong sales results were reported in Vietnam, the Philippines, Singapore and Indonesia while results in Malaysia and China fell short of prior year.

**Asia Division's wealth sales targeted for growth (excluding variable annuities)** of US\$3.8 billion were 17 per cent higher than prior year on a constant currency basis driven by new fund launches in Manulife TEDA and in Taiwan, as well as a new Australian dollar denominated fixed annuity product launched in Japan late in the year. Offsetting these successes were declines in our Hong Kong and Indonesia businesses, largely the result of market volatility and consumer sentiment which adversely impacted investment linked and mutual fund sales.

## Sales

For the years ended December 31, (\$ millions)	Canadian \$			US \$		
	2011	2010	2009	2011	2010	2009
Insurance products targeted for growth	\$ 1,230	\$ 1,066	\$ 778	\$ 1,244	\$ 1,036	\$ 685
Wealth products targeted for growth	3,716	3,177	2,505	3,767	3,100	2,168

## Premiums and Deposits

Premiums and deposits for products targeted for growth in 2011 were US\$10 billion, up 15 per cent over 2010 on a constant currency basis. Premiums and deposits for insurance products of US\$5 billion were 16 per cent higher than prior year driven by higher new business sales and in-force business growth across all regions. Despite volatile markets, premiums and deposits of wealth management products targeted for growth (excluding variable annuities) of US\$4.6 billion were 14 per cent higher than prior year largely driven by successful fund launches in Manulife TEDA and Taiwan, as well as successful launch of the Australian dollar denominated fixed annuity product in Japan.

## Premiums and Deposits

For the years ended December 31, (\$ millions)	Canadian \$			US \$		
	2011	2010	2009 <sup>(1)</sup>	2011	2010	2009 <sup>(1)</sup>
Insurance products targeted for growth	\$ 5,311	\$ 4,512	\$ 4,139	\$ 5,365	\$ 4,384	\$ 3,640
Wealth products targeted for growth	4,584	4,057	3,425	4,644	3,953	2,973
Wealth products not targeted for growth (VA)	408	1,310	1,744	413	1,265	1,496
<b>Total premiums and deposits</b>	<b>\$ 10,303</b>	<b>\$ 9,879</b>	<b>\$ 9,308</b>	<b>\$ 10,422</b>	<b>\$ 9,602</b>	<b>\$ 8,109</b>

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

## Funds under Management

Funds under management as at December 31, 2011 were US\$70 billion consistent with December 31, 2010 on a constant currency basis. Net policyholder cash inflows of US\$4.3 billion across the territories were mostly offset by the impact of the declines in equity markets.

## Funds under Management

As at December 31, (\$ millions)	Canadian \$			US \$		
	2011	2010	2009 <sup>(1)</sup>	2011	2010	2009 <sup>(1)</sup>
General funds	\$ 34,757	\$ 29,077	\$ 24,469	\$ 34,172	\$ 29,240	\$ 23,377
Segregated funds	23,524	24,026	27,218	23,130	24,159	26,007
Mutual and other funds	13,109	14,557	5,547	12,889	14,638	5,299
<b>Total funds under management</b>	<b>\$ 71,390</b>	<b>\$ 67,660</b>	<b>\$ 57,234</b>	<b>\$ 70,191</b>	<b>\$ 68,037</b>	<b>\$ 54,683</b>

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

## Strategic Direction

Asia Division remains focused on accelerating growth in some of the world's fastest growing markets where low market penetration combined with high GDP growth affords the Company excellent opportunities. Our growth strategy is based on expanding our professional agency force, focusing on alternative channel distribution, growing our wealth and asset management businesses and building on the strength of our brand across Asia. It also includes expanding product offerings to capitalize on existing markets and reach new market segments, particularly in the wealth management space, where we can leverage our asset management capabilities.

In 2011, we took important steps toward building a diversified multi-channel distribution platform. Highlights include securing strategically important distribution agreements with key bank partners in Hong Kong, Indonesia and China; continued robust growth of our professional agency force with accelerated growth in our Asia Other businesses; and innovative brand building campaigns to enhance our strong global brand. The investments we have made in 2011, combined with continued focus on implementing our pan-Asian strategy, provide a solid foundation for future growth.

In Hong Kong, our brand recognition is supported by our 1.6 million customers, and a professionally trained agency force of more than 5,000. During 2011, we extended and expanded our bancassurance strategic partnership with CITIC Bank International. Our growth plans include increasing our agency force through both new and experienced agent recruits, further expanding our bancassurance distribution network through new partnerships, and broadening our relationships in the independent financial advisory and broker market by enhancing our wholesale capability. In 2011, we launched a mobile device financial planning application and sophisticated new point of sale software, evidence of our commitment to meet the changing needs and expectations of our customers. In the pension space, we continue to leverage our extensive distribution network, comprehensive fund choices and customer service focus to further grow our strong market position. In addition, we are well positioned to capitalize on the expected regulatory changes to the Mandatory Provident Fund which will allow individuals to choose their pension asset manager.

In Japan, we continue to execute a growth strategy based on diversified product offerings and broad distribution capabilities. In 2011, we achieved our fourth consecutive year of record insurance sales despite the tremendous challenges posed by the Great Eastern Japan Earthquake in March 2011. The MGA channel continued to achieve strong sales in the corporate market and successfully expanded into the retail market. We launched a new medical product in the captive agency channel, complementing our existing Universal Life medical rider. In addition, a new Australian dollar denominated fixed annuity product has enjoyed significant initial success. Our plans include expanding our Mutual Fund business by building enhanced management capabilities, greater fund breadth and increased brand recognition.

Other Asia Territories' operations achieved strong sales growth in 2011 and are an increasingly important contributor to our overall results. In Indonesia, the signing of a distribution partnership in October 2011 with PT Bank Danamon Indonesia was a major strategic achievement and a significant step towards delivering our growth objectives. We intend to build on our success in 2011 by continuing strategic initiatives to accelerate agency recruitment and development, increase the scale of our partnership distribution, explore new alternative distribution opportunities and strengthen our brand. We also received notice that we will be awarded an insurance license in Cambodia and we will commence operations in 2012.

In China, Manulife Sinochem is now licensed in 12 provinces and 49 cities (2010 – 45 cities) and has the broadest geographic footprint of any foreign joint venture insurance company in China. We will strive to continue to grow our business through expanding our professional agency force, leveraging recently signed bancassurance relationships, and capitalizing on new pension and mutual fund opportunities.

# Canadian Division

*Serving one in five Canadians, our Canadian Division is one of the leading financial services organizations in Canada. Our portfolio includes a full range of protection and savings products and services available through a diversified distribution base, meeting the needs of a broad marketplace. Our individual life and living benefits insurance products are aimed at middle and upper-income individuals and business owners. Our Affinity Markets business offers life, health and specialty products, such as travel insurance, through alternative distribution channels, as well as direct to customer marketing. Group life, health, disability and retirement products and services are marketed to Canadian employers. Our individual wealth management product offerings include mutual funds, fixed and variable annuities, guaranteed investment certificates and high interest savings accounts. In addition, through Manulife Bank of Canada and Manulife Trust Company, we offer a variety of lending products including fixed and variable rate mortgages, most notably our innovative Manulife One product, and investment loans.*

In 2011, Canadian Division contributed 26 per cent of the Company's total premiums and deposits and, as at December 31, 2011, accounted for 25 per cent of the Company's funds under management.

## Financial Performance

Canadian Division's net income attributed to shareholders for 2011 was \$910 million compared to \$1,085 million in 2010. Net income excluding the direct impact of equity markets and interest rates was \$898 million in 2011, a decline of \$346 million compared to \$1,244 million in 2010. The \$346 million decline in net income excluding the direct impact of equity markets and interest rates was significantly impacted by a \$291 million charge related to the impact of the volatile markets on our dynamically hedged variable annuity block of business and a significantly lower release of tax provisions upon closing prior years' tax filings. Other earnings pressures in 2011 included the cost of hedging a greater proportion of our variable annuity guarantees and an increase in new business strain resulting from the lower interest rate environment. Partially offsetting these items were gains of \$150 million in 2011 related to our interest rate hedging activities and higher fee income from the growth in our wealth management businesses.

The table below outlines the net income attributed to shareholders for Canadian Division for full year 2011, 2010 and 2009 as well as the direct impact of equity markets and interest rates and the impact of other notable items.

## Analysis of Net Income (Loss)

For the years ended December 31,  
(C\$ millions)

	2011	2010	2009 <sup>(1)</sup>
<b>Net income attributed to shareholders</b>	<b>\$ 910</b>	<b>\$ 1,085</b>	<b>\$ 1,703</b>
<b>Less direct impact of equity markets and interest rates<sup>(2)</sup>:</b>			
Gains (charges) on variable annuity guarantee liabilities not dynamically hedged <sup>(3),(4)</sup>	(39)	(16)	285
Gains (charges) on general fund equity investments supporting policy liabilities and on fee income	(80)	20	94
Gains (charges) on changes in fixed income reinvestment rates assumed in the valuation of policy liabilities	131	(163)	257
<b>Direct impact of equity markets and interest rates</b>	<b>\$ 12</b>	<b>\$ (159)</b>	<b>\$ 636</b>
<b>Net income excluding the direct impact of equity markets and interest rates<sup>(5)</sup></b>	<b>\$ 898</b>	<b>\$ 1,244</b>	<b>\$ 1,067</b>
<b>Other notable items:</b>			
Earnings impact of the difference between the net increase in variable annuity liabilities that are dynamically hedged and the performance of the related hedge assets <sup>(3),(4),(6)</sup>	\$ (278)	\$ 13	\$ –
Favourable impact on policy liabilities related to activities to reduce interest rate exposures	150	64	–
Investment gains (losses) primarily related to fixed income trading, favourable credit experience and asset mix changes	192	125	(6)
Tax related gains <sup>(7)</sup>	65	186	64

<sup>(1)</sup> 2009 amounts shown are based on Canadian GAAP prior to the adoption of IFRS.

<sup>(2)</sup> The direct impact of equity markets and interest rates is relative to our policy liability valuation assumptions and includes changes to the interest rate assumptions.

<sup>(3)</sup> The breakdown between hedged and unhedged is not available in 2009. All variable annuity guarantee experience in 2009 is presented in "Gains (charges) on variable annuity guarantee liabilities not dynamically hedged".

<sup>(4)</sup> The amount of variable annuity guaranteed value that was dynamically hedged increased from 43 per cent at the end of 2009 to 78 per cent at the end of 2010 and to 80 per cent at the end of 2011.

<sup>(5)</sup> Net income excluding the direct impact of equity markets and interest rates is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

<sup>(6)</sup> Our variable annuity guarantee dynamic hedging strategy is not designed to completely offset the sensitivity of policy liabilities to all risks associated with the guarantees embedded in these products for a number of reasons including provisions for adverse deviation, fund performance, the portion of interest rate risk that is not hedged, realized equity market and interest rate volatilities and changes to policyholder behaviour. See "Risk Management and Risk Factors" section for further details.

<sup>(7)</sup> Tax related gains are tax provisions that are released when they become statute-barred. 2011 gain is excluded from total company notable items due to materiality.

## Sales

In 2011, we produced solid sales results and demonstrable progress in our product repositioning strategy against a backdrop of significant interest rate declines and increased equity market volatility. Through product re-design and re-pricing, we have been reducing the equity and interest rate risk of our new business, while continuing to invest in the development and growth of businesses with lower required capital and higher return potential. We are seeing the desired impact of these actions with a lower proportion of our overall sales from guaranteed, long duration products in 2011.

Sales of wealth products targeted for growth of \$8.9 billion in 2011 grew seven per cent relative to 2010, driven by a 45 per cent increase in mutual fund retail deposits to a record \$2.0 billion, reflecting consumer demand for funds in fixed income and balanced fund categories where our fund management performance is strong. As a result, Manulife was the second fastest growing mutual fund organization in Canada based on assets under management of companies reporting to The Investment Funds Institute of Canada (IFIC)<sup>11</sup>. Sales of our low risk variable annuity products increased 27 per cent from 2010 to \$831 million, driven by the fourth quarter launch of Manulife PensionBuilder, a variable annuity product with no equity exposure as the underlying investments are in fixed income funds. Manulife Bank posted record lending volumes of \$4.7 billion for the year with assets reaching a record \$20 billion at December 31, 2011. Our Group Retirement Solutions unit continued to hold the #1 market position for defined contribution sales in the Canadian group retirement industry in 2011<sup>12</sup>. However, activity across the industry was down and our group retirement sales volumes of just over \$900 million for the year were consistent with 2010 levels. The growth across our wealth businesses was tempered by reduced sales of fixed rate products in the low interest rate environment.

Sales of insurance products targeted for growth of \$658 million in 2011 were consistent with 2010 levels. The Direct Response TV advertising campaign for our Affinity Markets CoverMe program drove higher direct health and dental sales. Affinity Markets also had record travel insurance sales in 2011. Our repositioning activities resulted in a moderate decline in Individual Insurance sales relative to 2010, reflecting the effect of price increases on Universal Life and Term to 100 products. Group Benefits sales were marginally above 2010, with record sales in the small case market segment.

## Sales

For the years ended December 31,  
(C\$ millions)

	2011	2010	2009
Insurance products targeted for growth	\$ 658	\$ 657	\$ 634
Wealth products targeted for growth	8,877	8,258	7,607
Wealth products not targeted for growth	1,907	1,887	3,013

## Premiums and Deposits

Premiums and deposits for the Division of \$17.3 billion in 2011 grew five per cent from \$16.6 billion in 2010, mainly due to strong sales of wealth products targeted for growth. The primary contributors of the year-over-year increase were a 45 per cent rise in mutual fund deposits, increases in group retirement deposits from sales and a growing in-force block of plan participants, and growth in low risk variable annuity products. These increases were dampened by a decline in sales of fixed rate products. Growth in the insurance businesses contributed modestly to the year-over-year increase.

## Premiums and Deposits

For the years ended December 31,  
(C\$ millions)

	2011	2010	2009 <sup>(1)</sup>
Insurance products targeted for growth	\$ 9,125	\$ 8,944	\$ 8,779
Wealth products targeted for growth	6,306	5,755	5,125
Wealth products not targeted for growth	1,907	1,887	3,013
<b>Total premiums and deposits</b>	<b>\$ 17,338</b>	<b>\$ 16,586</b>	<b>\$ 16,917</b>

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

## Funds under Management

Funds under management for the Division grew to a record \$122.1 billion as at December 31, 2011, a seven per cent increase from \$114.4 billion as at December 31, 2010. The increase reflects business growth across the division, driven by Manulife Bank and the wealth management businesses. The market value of funds under management was also increased by the impact of lower interest rates which outweighed the negative impact from equity market declines.

## Funds under Management

As at December 31,  
(C\$ millions)

	2011	2010	2009 <sup>(1)</sup>
General fund	\$ 73,857	\$ 66,407	\$ 59,898
Segregated funds	40,826	40,773	36,258
Mutual and other funds	17,708	16,760	14,563
Less mutual funds held by segregated funds	(10,333)	(9,546)	(8,055)
<b>Total funds under management</b>	<b>\$ 122,058</b>	<b>\$ 114,394</b>	<b>\$ 102,664</b>

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

<sup>11</sup> Based on IFIC report of Mutual fund assets for top 30 Fund Companies in Canada as at December 31, 2011.

<sup>12</sup> Based on quarterly sales survey by LIMRA, an insurance industry organization, for the year ended 2011.

## Strategic Direction

Our vision is to be the premier broad-based financial services organization in Canada with a reputation for providing strong, reliable, trustworthy and forward-thinking solutions to support our customers' most significant financial decisions. Continued focus on our core competencies of product leadership, distribution excellence and service value has made us a market leader in many of our businesses.

The aging of Canada's baby boomer generation<sup>13</sup> and the increasing focus of employers and governments on reducing the cost of benefits creates opportunities for products and services focused on income growth and safety of investments, inter-generational wealth transfer and managing health care costs. These are all areas in which we excel. We will continue to focus on this target market, enhancing our life, living benefits, banking and savings products to meet the evolving needs of the Canadian population.

The business environment continues to be very competitive and challenged by global economic uncertainty and evolving regulatory oversight. We are targeting accelerated growth in business lines consistent with the Company's goals of efficient use of capital and optimizing risk-adjusted returns, which align with consumer demographics. This includes our wealth management businesses, particularly Manulife Mutual Funds and Group Retirement Solutions, Manulife Bank; small employer Group Benefits and our specialty marketing insurance unit, Affinity Markets. Growth opportunities for permanent life insurance products are expected to continue as they provide a tax efficient means of wealth transfer and business succession over the long term.

We are focused on maintaining a strong, disciplined risk management culture. Over the past three years, we have made substantial progress in moderating our exposure to market risk through a combination of hedging of equity and interest rate exposures, as well as product re-pricing and re-design. As a result of these actions, we expect to see a declining proportion of insurance and VA sales from guaranteed, long duration products. We have also used reinsurance opportunistically to manage our insurance lapse and mortality/morbidity exposures, resulting in lower capital requirements.

We will continue to build on our reputation for product leadership. In 2011, Individual Insurance launched our new Synergy product, the first of its kind in Canada, combining life, disability and critical illness coverage into a single policy. In 2010 and again in 2011, we led the market in increasing Universal Life prices in response to the continuing low interest rate environment. Group Benefits continues to develop alternative benefit offerings to support employers in providing cost effective options to their employees.

We continue to expand our individual wealth management portfolio to offer a diverse choice of high-performing options for our customers. We are keenly focused on enhancing our mutual fund performance and diversifying our fund offerings, and in 2011 launched 26 new mutual funds, many in categories where we were under-represented. In the group retirement market, we are working closely with governments and industry representatives to participate in the development of the new Pooled Registered Pension Plan (PRPP) which is aimed at Canadians who do not have access to a workplace pension plan.

We remain focused on expanding our strong distribution capabilities. With over 70,000 licensed advisors and 600 Manulife sales professionals supporting them, we serve one in five Canadians. We will continue to nurture our relationships with our advisors and to expand relationships across product lines. Key to success is our commitment to providing competitive products and services to meet customers' diverse needs, as well as efficient support to advisors to help their businesses thrive. We will continue to invest in the industry-leading professional value-added services provided by our tax and estate planning teams, as well as the channel and product wholesaler teams who market our product and sales solutions to advisors.

Service quality is important in all our businesses, supporting both sales growth and customer retention. We closely monitor customer and advisor feedback to proactively improve their service experience. We continue to invest in modernizing our infrastructure, launching innovative e-services and expanding capacity in our high growth businesses. We also continue to make efficiency improvements across the Division through increased automation of customer touch-points, system enhancements, elimination of legacy systems and pursuit of outsourcing and off-shoring opportunities.

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<sup>13</sup> Based on Investor Economics 2011 Household Balance Sheet Report.

# U.S. Insurance

*Our U.S. Insurance operation provides life and long-term care insurance products and services to select markets. John Hancock Life offers a broad portfolio of innovative insurance products, including universal, variable, whole and term life insurance designed to provide estate, business and retirement solutions designed for high net worth and emerging affluent markets. John Hancock Long-Term Care provides products offering support and financial resources that help cover the cost of long-term care in the event of an illness, accident, or through the normal effects of aging, giving you choice and control over where you receive care and providing care advisory services and provider discounts. These products are designed for the middle income to affluent markets.*

*We distribute our life and long-term care insurance products through a multi-channel network, including brokerage general agents, producer groups, banks, wirehouses and broker-dealers as well as John Hancock Financial Network ("JHFN"), a national network of independent career agencies comprised of nearly 1,700 financial representatives across the U.S., offering insurance and wealth management solutions to individuals, families and businesses. Additionally, the International Group Program ("IGP") offers international employee benefits management to multinational corporations and their affiliates through a global network of life insurance companies, called "Network Partners".*

In 2011, U.S. Insurance contributed 11 per cent of the Company's total premiums and deposits and, as at December 31, 2011, accounted for 18 per cent of the Company's funds under management.

## Financial Performance

U.S. Insurance reported net income attributed to shareholders of US\$1,090 million for 2011 compared to a net loss of US\$271 million for 2010. Net income excluding the direct impact of equity markets and interest rates was US\$1,216 million in 2011, an increase of US\$605 million compared to US\$611 million in 2010. The table below outlines the notable items impacting both years. Excluding these items, net income attributable to shareholders increased US\$111 million compared to 2010 primarily due to lower new business strain as a result of actions taken to reposition our product portfolio.

On a Canadian dollar basis, the net income attributed to shareholders for 2011 was \$1,085 million compared to a net loss of \$281 million in 2010.

The table below outlines the net income (loss) attributable to shareholders for U.S. Insurance for full year 2011, 2010 and 2009 as well as the direct impact of equity markets and interest rates and the impact of other notable items. See "Goodwill and Intangible Assets" for discussion of goodwill impairment charge recorded in our Corporate and Other segment.

## Analysis of Net Income (Loss)

For the years ended December 31, (\$ millions)	Canadian \$			US \$		
	2011	2010	2009 <sup>(1)</sup>	2011	2010	2009 <sup>(1)</sup>
<b>Net income (loss) attributed to shareholders</b>	<b>\$ 1,085</b>	<b>\$ (281)</b>	<b>\$ (2,576)</b>	<b>\$ 1,090</b>	<b>\$ (271)</b>	<b>\$ (2,288)</b>
<b>Less direct impact of equity markets and interest rates<sup>(2)</sup>:</b>						
Gains (charges) on general fund equity investments supporting policy liabilities and on fee income	<b>(24)</b>	44	89	<b>(27)</b>	43	83
Charges on lower fixed income reinvestment rates assumed in the valuation of policy liabilities	<b>(95)</b>	(957)	(2,112)	<b>(99)</b>	(925)	(1,870)
<b>Direct impact of equity markets and interest rates</b>	<b>\$ (119)</b>	<b>\$ (913)</b>	<b>\$ (2,023)</b>	<b>\$ (126)</b>	<b>\$ (882)</b>	<b>\$ (1,787)</b>
<b>Net income (loss) excluding the direct impact of equity markets and interest rates<sup>(3)</sup></b>	<b>\$ 1,204</b>	<b>\$ 632</b>	<b>\$ (553)</b>	<b>\$ 1,216</b>	<b>\$ 611</b>	<b>\$ (501)</b>
<b>Other notable items:</b>						
Favourable impact on policy liabilities related to activities to reduce interest rate exposures	<b>\$ 217</b>	\$ 322	\$ –	<b>\$ 223</b>	\$ 313	\$ –
Investment gains (losses) primarily related to fixed income trading, favourable credit experience and asset mix changes	<b>490</b>	(95)	(818)	<b>488</b>	(96)	(727)

<sup>(1)</sup> 2009 amounts shown are based on Canadian GAAP prior to the adoption of IFRS.

<sup>(2)</sup> The direct impact of equity markets and interest rates is relative to our policy liability valuation assumptions and includes changes to the interest rate assumptions.

<sup>(3)</sup> Net income (loss) excluding the direct impact of equity markets and interest rates is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

## Sales

Over the last few years in response to historically low interest rates we have focused on repositioning our insurance product portfolio to reduce interest rate risk and earnings sensitivity through product re-design and re-pricing. To measure progress on these goals, we separately report on the sales and premiums and deposits of product lines we are targeting to grow from those that are not targeted for growth. As evidenced by our 2011 sales results, we have successfully executed a focused transformation of our insurance businesses.

Sales for 2011 for insurance products targeted for growth were US\$404 million, US\$88 million or 28 per cent higher than 2010. Sales for 2011 for products not targeted for growth were US\$221 million, 53 per cent lower than 2010. U.S. insurance products not targeted for growth include JH Life universal life with lifetime no-lapse guarantees and guaranteed non-par whole life products as well as products in JH Long-Term Care.

## Sales

For the years ended December 31, (\$ millions)	Canadian \$			US \$		
	2011	2010	2009	2011	2010	2009
Insurance products targeted for growth	<b>\$ 401</b>	\$ 325	\$ 354	<b>\$ 404</b>	\$ 316	\$ 313
Insurance products not targeted for growth <sup>(1)</sup>	<b>218</b>	482	591	<b>221</b>	468	523

<sup>(1)</sup> JH Life universal life with lifetime no-lapse guarantees and guaranteed non-par whole life products as well as products in JH Long-Term Care.

## Premiums and Deposits

The insurance business has both first year and renewal premiums and while the repositioning of sales mix to targeted for growth products impacts premiums and deposits, it will be over a longer time frame. Premiums and deposits for 2011 for insurance products targeted for growth were US\$4.2 billion, US\$0.5 billion or 12 per cent higher than 2010. Premiums and deposits for 2011 for insurance products not targeted for growth were US\$3.4 billion, 11 per cent lower than 2010.

## Premiums and Deposits

For the years ended December 31, (\$ millions)	Canadian \$			US \$		
	2011	2010	2009 <sup>(1)</sup>	2011	2010	2009 <sup>(1)</sup>
Insurance products targeted for growth	<b>\$ 4,153</b>	\$ 3,837	\$ 4,169	<b>\$ 4,195</b>	\$ 3,729	\$ 3,664
Insurance products not targeted for growth <sup>(2)</sup>	<b>3,324</b>	3,880	5,206	<b>3,358</b>	3,769	4,659
<b>Total premiums and deposits</b>	<b>\$ 7,477</b>	\$ 7,717	\$ 9,375	<b>\$ 7,553</b>	\$ 7,498	\$ 8,323

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

<sup>(2)</sup> JH Life universal life with lifetime no-lapse guarantees and guaranteed non-par whole life products as well as products in JH Long-Term Care.

## Funds under Management

Funds under management as at December 31, 2011 were US\$90.1 billion, up 21 per cent from December 31, 2010. The increase is due to the impact of lower interest rates on the market value of funds under management.

## Funds under Management

As at December 31, (\$ millions)	Canadian \$			US \$		
	2011	2010	2009 <sup>(1)</sup>	2011	2010	2009 <sup>(1)</sup>
General fund	<b>\$ 79,133</b>	\$ 61,706	\$ 55,227	<b>\$ 77,811</b>	\$ 62,041	\$ 52,768
Segregated funds	<b>12,471</b>	12,197	11,431	<b>12,262</b>	12,263	10,922
<b>Total funds under management</b>	<b>\$ 91,604</b>	\$ 73,903	\$ 66,658	<b>\$ 90,073</b>	\$ 74,304	\$ 63,690

<sup>(1)</sup> 2009 amounts shown are based on Canadian GAAP prior to the adoption of IFRS.

## Strategic Direction

We have successfully completed the three year repositioning of our insurance product portfolio. Driven by the need to address historically low interest rates, global solvency and accounting convergence as well as the impact of the U.S. economy which is slowly emerging from challenging times, over the last few years we have increased product prices, changed product features and introduced new products in order to reduce earnings sensitivity and lower risk profiles.

The Life business has successfully completed its strategy to reposition its new business product portfolio while maintaining its industry leading distribution franchise. Following on product changes in 2010, the continued success was driven by the launch in 2011 of new innovative universal life insurance products. As a result sales of insurance products targeted for growth in 2011 increased 28 per cent compared to 2010, and represented 84 per cent of our overall Life sales.

Life intends to build on this success going forward with new products that expand our portfolio, meet our risk tolerances and leverage our strong distribution relationships. This includes our entry into the rapidly growing indexed universal life insurance market which provides clients the potential to participate in equity market returns.

Life expects to continue to support efforts of its key distribution partners to grow and expand their markets. A significant focus is to drive growth and penetration in large financial institutions where our distribution partners operate as life insurance sales specialists. We will implement product enhancements, simplify new business processing and provide sales support and advanced case design expertise to support our distributors' growth in sales in this channel.

Long-Term Care's focus continues to be on the execution of an in-force premium rate increase and the transitioning of the current product portfolio. We are seeking an average premium increase of 40 per cent on 75 per cent of our in-force business or approximately 800,000 policyholders subject to state acceptance. Securing state approvals for in-force premium rate increases is a top priority of the business, with approvals granted by more than half of the states at year end.

Long-term care products are designed to meet the needs of consumers arising from major gaps in U.S. social programs. At the same time, the long-term care industry has been challenged by low interest rates, in-force rate increases and limited market penetration. While our focus has been on limiting the sales of our current product portfolio, we are working on new long-term care products with improved risk profiles and adjustability in light of the low interest rate environment, while also addressing affordability of coverage and filling a hole in consumers' retirement planning. In line with this direction, we will continue to focus on managing and retaining distribution relationships that are critical to the success of our future product direction.

JHFN remains a valuable asset and this was never more evident than during the recent market and economic challenges. JHFN has maintained a number two ranking and greater than 15 per cent share of sales in each of our insurance businesses, demonstrating strong support of our repositioning efforts. We continue to invest in this enterprise that provides meaningful and diversified distribution opportunities.

# U.S. Wealth Management

*U.S. Wealth Management offers a broad range of personal and family oriented wealth management products and services focused on individuals and business markets, as well as institutional oriented products for employee benefit plan funding solutions. U.S. Wealth Management has asset management based business lines as well as fixed and variable annuity businesses.*

- *John Hancock Wealth Asset Management ("Wealth Asset Management") which consists of John Hancock Retirement Plan Services ("Retirement Plan Services") and John Hancock Mutual Funds ("Mutual Funds") operations are business lines focused on growth. Retirement Plan Services provides 401(k) plans to small and medium-sized businesses. Mutual Funds offers a variety of mutual funds, privately managed accounts and 529 College Savings plans.*
- *Our two annuity businesses are John Hancock Variable Annuities ("Variable Annuities"), which offers variable annuity products sold mainly to middle and upper-income individuals, and John Hancock Fixed Products ("Fixed Products"). Fixed Products provides fixed deferred annuities and fixed guaranteed income payout annuities to individuals, as well as a variety of spread based products and fee based products to institutional clients.*

In 2011, U.S. Wealth Management contributed 42 per cent of the Company's total premiums and deposits and, as at December 31, 2011, accounted for 38 per cent of the Company's funds under management.

## Financial Performance

U.S. Wealth Management reported a net loss attributed to shareholders of US\$459 million for 2011 compared to net income of US\$859 million for 2010. Net loss excluding the direct impact of equity markets and interest rate was US\$167 million in 2011, a decrease of US\$893 million compared to net income of US\$726 million in 2010. The table below outlines the notable items impacting both years. Excluding these items, net income attributable to shareholders declined by US\$114 million compared to 2010. The decline was driven by the costs associated with the hedging of additional in-force variable annuity guaranteed value, the impact of lower sales of fixed annuities and higher acquisition costs related to higher sales of mutual funds. Partially offsetting these was higher fee income in Wealth Asset Management from higher average assets under management.

On a Canadian dollar basis, the net loss attributed to shareholders for 2011 was \$447 million compared to net income of \$882 million reported a year earlier.

The table below outlines the net income (loss) attributable to shareholders for U.S. Wealth Management for full year 2011, 2010 and 2009 as well as the direct impact of equity markets and interest rates and the impact of other notable items.

## Analysis of Net Income (Loss)

For the years ended December 31, (\$ millions)	Canadian \$			US \$		
	2011	2010	2009 <sup>(1)</sup>	2011	2010	2009 <sup>(1)</sup>
<b>Net income (loss) attributed to shareholders</b>	<b>\$ (447)</b>	<b>\$ 882</b>	<b>\$ 1,901</b>	<b>\$ (459)</b>	<b>\$ 859</b>	<b>\$ 1,765</b>
<b>Less direct impact of equity markets and interest rates<sup>(2)</sup>:</b>						
Gains (charges) on variable annuity guarantee liabilities not dynamically hedged <sup>(3),(4)</sup>	(136)	210	1,639	(144)	201	1,509
Gains on general fund equity investments supporting policy liabilities and on fee income	10	40	45	10	39	42
Charges on lower fixed income reinvestment rates assumed in the valuation of policy liabilities	(152)	(114)	(399)	(158)	(107)	(351)
<b>Direct impact of equity markets and interest rates</b>	<b>\$ (278)</b>	<b>\$ 136</b>	<b>\$ 1,285</b>	<b>\$ (292)</b>	<b>\$ 133</b>	<b>\$ 1,200</b>
<b>Net income (loss) attributed to shareholders, excluding the direct impact of equity markets and interest rates<sup>(5)</sup></b>	<b>\$ (169)</b>	<b>\$ 746</b>	<b>\$ 616</b>	<b>\$ (167)</b>	<b>\$ 726</b>	<b>\$ 565</b>
<b>Other notable items:</b>						
Earnings impact of the difference between the net increase in variable annuity liabilities that are dynamically hedged and the performance of the related hedge assets <sup>(3),(4),(6)</sup>	\$ (844)	\$ (175)	\$ –	\$ (857)	\$ (167)	\$ –
Impact on policy liabilities related to activities to reduce interest rate exposures	41	(28)	–	42	(28)	–
Investment gains (losses) primarily related to fixed income trading, favourable credit experience and asset mix changes	111	286	(145)	119	278	(96)

(footnotes for table on following page)

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

<sup>(2)</sup> The direct impact of equity markets and interest rates is relative to our policy liability valuation assumptions and includes changes to the interest rate assumptions.

<sup>(3)</sup> The breakdown between hedged and unhedged is not available in 2009. All variable annuity guarantee experience in 2009 is presented in "Gains (charges) on variable annuity guarantee liabilities not dynamically hedged".

<sup>(4)</sup> The amount of variable annuity guaranteed value that was dynamically hedged or reinsured increased from 42 per cent at the end of 2009 to 62 per cent at the end of 2010 and to 76 per cent at the end of 2011.

<sup>(5)</sup> Net income (loss) excluding the direct impact of equity markets and interest rates is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

<sup>(6)</sup> Our variable annuity guarantee dynamic hedging strategy is not designed to completely offset the sensitivity of policy liabilities to all risks associated with the guarantees embedded in these products for a number of reasons including provisions for adverse deviation, fund performance, the portion of interest rate risk that is not hedged, realized equity market and interest rate volatilities and changes to policyholder behavior. See "Risk Management and Risk Factors" section below for further details.

## Sales

Over the last few years in response to increased equity market volatility and declines in interest rates we have reduced the equity and interest rate risk of our wealth management new business through product re-design and re-pricing, while continuing to invest in the growth of fee based products with lower capital requirements and higher return potential.

Sales for 2011 of wealth products targeted for growth were US\$18.1 billion, US\$2.0 billion or 12 per cent higher than 2010 due to a 29 per cent increase in mutual fund sales. Sales of wealth products not targeted for growth were US\$1.8 billion for 2011, 33 per cent lower than 2010 as a result of actions taken to de-risk products.

## Sales

For the years ended December 31, (\$ millions)	Canadian \$			US \$		
	2011	2010	2009	2011	2010	2009
Wealth products targeted for growth	<b>\$ 17,924</b>	\$ 16,593	\$13,967	<b>\$ 18,131</b>	\$ 16,118	\$ 12,372
Wealth products not targeted for growth (VA and book value deferred fixed annuities)	<b>1,810</b>	2,843	8,130	<b>1,836</b>	2,759	6,961

## Premiums and Deposits

Premiums and deposits include new business as well as recurring deposits from the 401(k) business. Premiums and deposits for 2011 of wealth products targeted for growth were US\$26.3 billion, US\$2.2 billion or nine per cent higher than 2010 due to US\$2.0 billion in sales and US\$0.2 billion of higher renewal deposits. Premiums and deposits for 2011 of wealth products not targeted for growth were US\$1.8 billion, the same as sales noted above.

## Premiums and Deposits

For the years ended December 31, (\$ millions)	Canadian \$			US \$		
	2011	2010	2009 <sup>(1)</sup>	2011	2010	2009 <sup>(1)</sup>
Wealth products targeted for growth	<b>\$ 25,953</b>	\$ 24,815	\$ 22,383	<b>\$ 26,259</b>	\$ 24,098	\$ 19,709
Wealth products not targeted for growth (VA and book value deferred fixed annuities)	<b>1,810</b>	2,843	8,129	<b>1,836</b>	2,760	6,961
<b>Total premiums and deposits</b>	<b>\$ 27,763</b>	\$ 27,658	\$ 30,512	<b>\$ 28,095</b>	\$ 26,858	\$ 26,670

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

## Funds under Management

Funds under management were US\$186.1 billion as at December 31, 2011, down one per cent from December 31, 2010. Over the last twelve months net sales of US\$4.4 billion in Wealth Asset Management and positive investment returns were more than offset by surrender and benefit payments in JH Variable Annuities and JH Fixed Products.

## Funds under Management

As at December 31, (\$ millions)	Canadian \$			US \$		
	2011	2010	2009 <sup>(1)</sup>	2011	2010	2009 <sup>(1)</sup>
General fund	<b>\$ 35,875</b>	\$ 33,107	\$ 35,482	<b>\$ 35,275</b>	\$ 33,287	\$ 33,903
Segregated funds	<b>117,110</b>	120,021	113,440	<b>115,153</b>	120,673	108,389
Mutual funds	<b>32,268</b>	30,184	25,044	<b>31,728</b>	30,347	23,929
Other funds	<b>4,028</b>	3,742	3,477	<b>3,960</b>	3,762	3,322
<b>Total funds under management</b>	<b>\$ 189,281</b>	\$ 187,054	\$ 177,443	<b>\$ 186,116</b>	\$ 188,069	\$ 169,543

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

## Strategic Direction

U.S. Wealth Management successfully transitioned its new business mix to higher return fee based businesses with strong growth in both Mutual Funds and 401(k) Retirement Plan Services by capitalizing on our strong and trusted brand name, industry leading distribution excellence and access, broadened product offerings, innovative financial solutions and superior customer service.

Mutual Funds' success in growing sales and market share is attributable to our maturing distribution organization, a diverse product line-up offering strong investment performance and our strong brand. Building on this success, we plan to enhance investment options through new product offerings managed by both John Hancock Asset Management and non-affiliated investment managers; and to further broaden and diversify our investment management platform. In addition, we plan to expand our support to both retail and institutional distributors. Our retail distribution support includes national wirehouse firms, financial planners and regional/financial institutions. Our institutional distribution capacity includes Defined Contribution Investment Only, Registered Investment Advisors and managed money platforms.

Retirement Plan Services' focus has been on its core 401(k) small plan market segment, where it has very strong market share. Our plans include maintaining our strong position in this market segment and growing in the mid-market segment with the launch of a new mutual fund based product. Growth plans also include further penetration of existing distribution relationships; continuously enhancing the available investment management offerings, particularly our industry leading Lifestyle risk tolerance and target date portfolios; and providing superior customer service capabilities. In 2007, we introduced a 401(k) roll-over service center, educating our customers on their options during employment transitions with the goal of increasing customer retention. We plan on increasing the service scope of this successful business line.

Our annuity businesses will continue to provide secured retirement income solutions across a broad array of variable and fixed product offerings. However, given the current difficult macro-economic conditions and our desired risk profile, we will manage this line of business conservatively. Providing excellent service, particularly as more of our annuity clients are entering the income phase of their life, will be a primary focus. We will continue to seek opportunistic growth in our structured settlement business when strong risk adjusted returns are available.

# Corporate and Other

*Corporate and Other is comprised of the earnings on assets backing capital, net of amounts allocated to operating divisions, Investment Division's external asset management business (Manulife Asset Management), our Property and Casualty Reinsurance business, our run-off reinsurance business lines, settlement costs for macro equity hedges, changes in actuarial assumptions and other non-operating items. Also included are the results of the Life Retrocession business prior to its sale in 2011.*

On July 18, 2011, the Company entered into an agreement with Pacific Life Insurance Company ("Pacific Life") to sell its Life Retrocession business. The reinsurance transaction closed on August 31, 2011 and resulted in an after-tax gain of \$303 million. As a result of this transaction, the Company's remaining reinsurance operations no longer constitute a separate reportable segment. Therefore, the results of our Property and Casualty and run-off operations are included in the Corporate and Other segment and our International Group Program business is included in the U.S. Insurance segment. Previously reported segmented information has been restated to reflect these changes.

As at December 31, 2011 Corporate and Other accounted for five per cent of the Company's premiums and deposits and five per cent of the Company's funds under management.

## Financial Performance

Corporate and Other reported a net loss attributed to shareholders of \$1,371 million in 2011 compared to a net loss of \$4,061 million in 2010.

The net loss in 2011 included gains of \$480 million related to the direct impact of equity markets and interest rates. These gains included experience gains from the macro equity hedges and realized gains on AFS bonds and interest rate swaps. Other notable items netted to a loss of \$1,641 million and included charges related to changes in actuarial methods and assumptions, impairment of JH Life's goodwill and the expected cost of the macro equity hedges, partially offset by the gain on the sale of the Life Retrocession business.

The net loss of \$4,061 million in 2010 included gains of \$175 million related to the direct impact of equity markets and interest rates, a charge of \$1,766 million for changes in actuarial methods and assumptions, a goodwill impairment charge of \$2,330 million and \$35 million of other notable items.

The charges related to changes in actuarial methods and assumptions are outlined in the Critical Accounting and Actuarial Policies section below.

Excluding the notable items above, year over year earnings declined by \$105 million, primarily due to lower earnings following the sale of our Life Retrocession business and a decline in realized gains on our AFS equity portfolio.

The table below outlines the net loss attributable to shareholders for Corporate and Other for full year 2011, 2010 and 2009 including the direct impact of equity markets and interest rates as well as other notable items.

## Analysis of Net Income (Loss)

For the years ended December 31,

(C\$ millions)

	2011	2010	2009 <sup>(1)</sup>
<b>Net loss attributed to shareholders</b>	<b>\$ (1,371)</b>	<b>\$ (4,061)</b>	<b>\$ (1,795)</b>
<b>Less direct impact of equity markets and interest rates<sup>(2)</sup>:</b>			
Gains (charges) on variable annuity guarantee liabilities not dynamically hedged	(40)	(16)	13
Gains (losses) on macro equity hedges <sup>(5)</sup>	636	(48)	N/A
Charges on fixed income reinvestment rates assumed in the valuation of policy liabilities excluding URR assumptions	–	(1)	–
Gains (losses) on lower fixed income reinvestment rates assumed in the valuation of policy liabilities, excluding ultimate reinvestment rates	(3)	5	16
Gains on sale of AFS bonds and interest rate swaps in the surplus segment	324	544	–
Charges on lower fixed income URR assumptions assumed in the valuation of policy liabilities	(437)	(309)	(132)
<b>Direct impact of equity markets and interest rates</b>	<b>\$ 480</b>	<b>\$ 175</b>	<b>\$ (103)</b>
<b>Net loss excluding the direct impact of equity markets and interest rates<sup>(3)</sup></b>	<b>\$ (1,851)</b>	<b>\$ (4,236)</b>	<b>\$ (1,692)</b>
<b>Other notable items:</b>			
Changes in actuarial methods and assumptions (excluding URR changes)	\$ (751)	\$ (1,766)	\$ (1,154)
Goodwill impairment charge <sup>(4)</sup>	(665)	(2,330)	–
Expected cost of macro equity hedges <sup>(5)</sup>	(408)	(34)	–
Investment gains (losses) primarily related to fixed income trading, favourable credit experience and asset mix changes	31	(44)	(286)
Gain on sale of Life Retrocession business	303	–	–
Net impact of P&C reinsurance claims related to the earthquake in Japan	(151)	–	–
Tax related items	–	43	(187)

(footnotes for table on following page)

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

<sup>(2)</sup> The direct impact of equity markets and interest rates is relative to our policy liability valuation assumptions and includes changes to the interest rate assumptions. We also include gains and losses on the sale of AFS bonds as management may have the ability to partially offset the direct impacts of changes in interest rates reported in the liability segments.

<sup>(3)</sup> Net income (loss) excluding the direct impact of equity markets and interest rates is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

<sup>(4)</sup> See Goodwill and Intangible Assets section outlined in the Critical Accounting Policies below for details related to goodwill.

<sup>(5)</sup> The net gain from macro equity hedges in 2011 was \$228 million and consisted of a \$408 million charge related to the estimated expected cost of the macro equity hedges relative to our long-term valuation assumptions and a gain of \$636 million because actual markets underperformed our valuation assumptions.

## Premiums

Premiums were \$366 million for 2011, down 35 per cent from \$566 million reported in 2010, due to the sale of our Life Retrocession business. Property and Casualty Reinsurance premiums were higher in 2011 than in the prior year due to the reinstatement premiums resulting from the Japan earthquake and tsunami losses.

### Premiums

For the years ended December 31, (\$ millions)	Canadian \$			US \$		
	2011	2010	2009 <sup>(1)</sup>	2011	2010	2009 <sup>(1)</sup>
Life Retrocession	\$ 253	\$ 491	\$ 574	\$ 259	\$ 477	\$ 504
Property and Casualty Reinsurance	113	75	84	114	72	74
<b>Total premiums</b>	<b>\$ 366</b>	<b>\$ 566</b>	<b>\$ 658</b>	<b>\$ 373</b>	<b>\$ 549</b>	<b>\$ 578</b>

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

## Funds under Management

Funds under management of \$25.3 billion as at December 31, 2011 included assets managed by Manulife Asset Management on behalf of institutional clients of \$22.5 billion (2010 – \$23.2 billion) and \$2.8 billion (2010 – \$10.7 billion) of the Company's own funds. The decline in the latter of \$7.9 billion largely relates to a derivatives reporting adjustment booked in the Corporate and Other segment. The operating divisions report derivative positions on a net basis; the Corporate and Other segment includes the adjustment to gross up the balance sheet derivative assets and liabilities. Excluding this derivative adjustment, the \$1.1 billion increase in funds under management reflects the impact of declining interest rates in the year, resulting in higher bond values, partially offset by an increase in assets allocated to the operating divisions.

### Funds under Management

As at December 31, (C\$ millions)	2011	2010	2009 <sup>(1)</sup>
General fund	\$ 2,898	\$ 10,924	\$ 12,394
Segregated funds – elimination of amounts held by the Company	(124)	(148)	(118)
Institutional advisory accounts	22,545	23,170	23,342
<b>Total funds under management</b>	<b>\$ 25,319</b>	<b>\$ 33,946</b>	<b>\$ 35,618</b>

<sup>(1)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

## Strategic Direction

Our Property and Casualty Reinsurance business provides substantial retrocessional capacity for a very select clientele in the property and aviation reinsurance markets. The property catastrophe market experienced a series of major natural catastrophes in 2011 and the year ended as the worst year in history for insured and economic losses, which also triggered losses for our Property and Casualty Reinsurance business. As a result, the Company anticipated a hardening of the retrocession market, which materialized late in 2011 for January 1, 2012 renewals and new business. The Company was able to take advantage of this opportunity to selectively increase business by meeting the existing and increasing needs of its core clients. The Company continues to monitor its exposure to natural catastrophes and manages such exposures in relation to the overall balance sheet risk and volatility.

The strategic direction for our Manulife Asset Management business is included in the Investment Division section that follows.

# Investment Division

*The Investment Division has two major mandates – managing the invested assets of the Company's general fund and Manulife Asset Management, a leading global asset management business.*

*For the general fund we manage a broad range of investments including public and private bonds, public and private equities, mortgages, real estate, oil and gas, infrastructure, timberland and farmland properties. Our investment philosophy for the general fund is rooted in a bottom-up approach to developing an asset mix that matches the needs of our policyholder liabilities.*

*As the asset management arm of the Company, Manulife Asset Management's mission is to manage comprehensive investment strategies and deliver strong investment performance to retail and institutional investors. We partner with Manulife's and John Hancock's Wealth Management groups to provide their retail clients with superior investment products. We also offer investment solutions directly to institutional clients, such as pension plans, foundations, endowments and financial institutions. Operating a global network in 17 countries and territories, with more than 300 investment professionals, our business model combines the asset manager empowerment of a boutique environment with the resources and risk management rigour of a global asset manager backed by a financial services leader.*

## General Fund

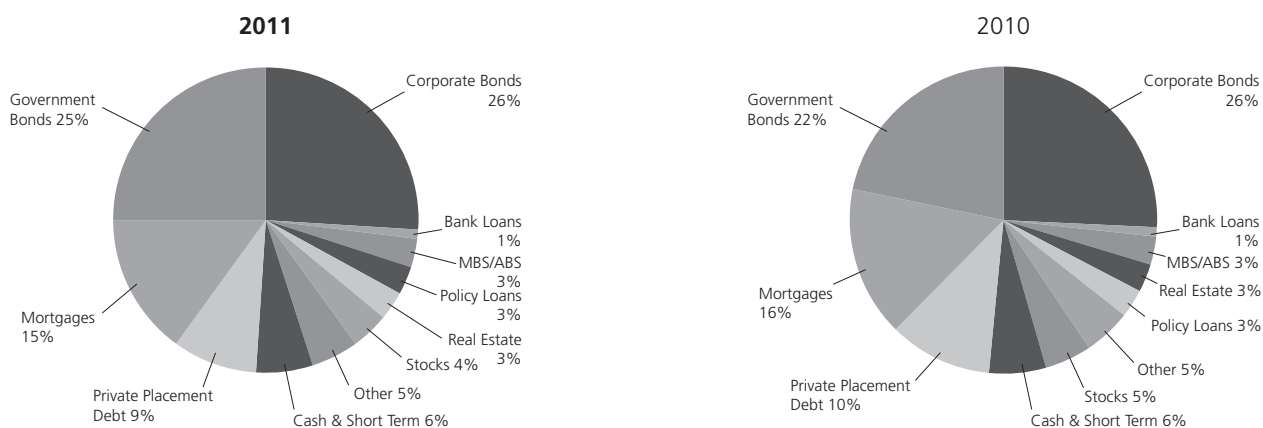
### General Fund Investment Philosophy

As noted above, our investment philosophy is rooted in a bottom-up approach which is not limited to fixed income investments, but rather on developing a diversified blend of assets that are expected to drive superior risk adjusted returns for our stakeholders. Our risk management strategy with respect to investments is outlined in the Risk Management section below. This diversification strategy has historically produced superior returns while reducing overall risk. We use a disciplined approach across all of our segments, and we do not chase yield in the riskier end of the fixed income market. This philosophy has resulted in a well-diversified, high quality investment portfolio.

### General Fund Assets

As at December 31, 2011 our general fund invested assets totaled \$226.5 billion compared to \$201.2 billion at the end of 2010. The asset strategies are diversified by class, geography and sector. In 2011, as part of the interest rate sensitivity reduction activities, we extended the duration of our fixed income portfolio. As outlined in the charts below, our government bond weighting has increased, and for the most part, this increase has been focused on the longer end of the maturity spectrum.

The following charts show the asset class composition as at December 31, 2011 and December 31, 2010.

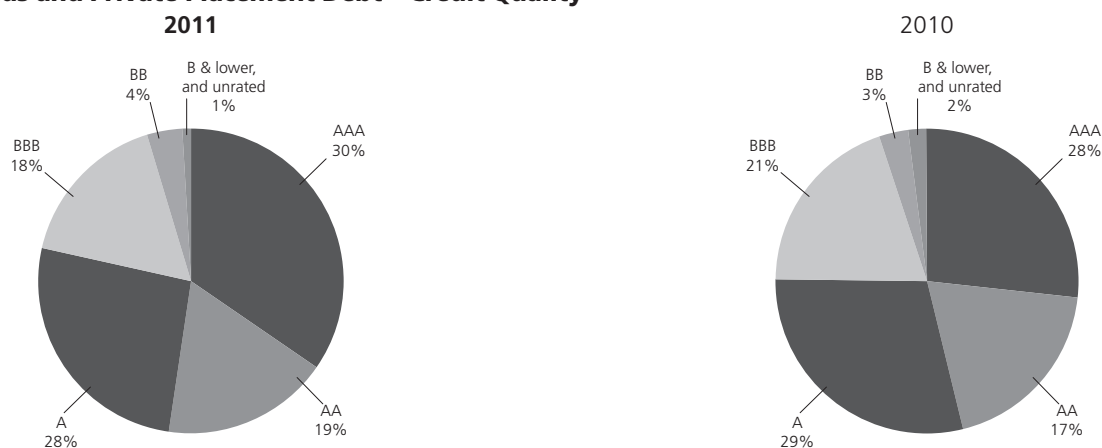


### Public Bonds and Private Placement Debt

The Company's public bond and private placement debt portfolio of \$140.8 billion at December 31, 2011 (2010 – \$121.1 billion) was 95 per cent investment grade and 77 per cent was A or higher rated (2010 – 95 and 74 per cent, respectively). The percentage of AAA-rated public bonds and private placement debt increased to 30 per cent (2010 – 28 per cent), largely attributable to the interest rate de-risking actions. In addition, the private placement debt holdings provide diversification benefits (issuer, industry and geography), and because they often provide stronger covenants and collateral than public bonds, they also provide better credit protection and potentially higher recoveries in the event of default.

The following charts provide information on the credit quality of these assets as at December 31, 2011 and December 31, 2010.

### Public Bonds and Private Placement Debt – Credit Quality



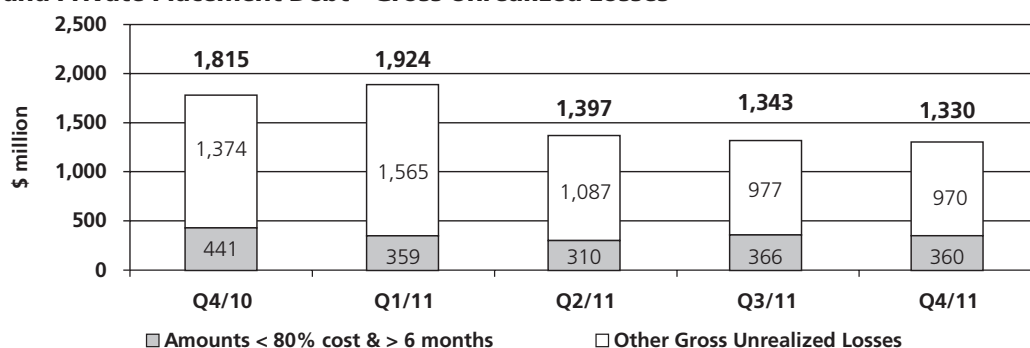
This high quality portfolio is also diversified by sector, industry, duration, issuer and geography.

### Public Bonds and Private Placement Debt – Diversification

As at December 31, Per cent of carrying value	2011			2010		
	Public	Private placement debt	Total	Public	Private placement debt	Total
Government and agency	47	11	42	42	10	37
Financial	16	10	15	18	10	17
Telecommunications	2	–	2	2	–	2
Utilities	11	33	14	11	30	14
Energy	6	9	6	7	9	7
Industrial	4	10	5	4	10	5
Securitized (MBS/ABS)	5	–	4	7	1	6
Consumer (non-cyclical)	4	12	5	3	12	5
Consumer (cyclical)	1	6	2	2	7	2
Basic materials	2	8	3	2	9	3
Technology	1	–	1	1	1	1
Media and internet	1	1	1	1	1	1
<b>Total per cent</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Total carrying value (C\$ billions)</b>	<b>\$ 120.5</b>	<b>\$ 20.3</b>	<b>\$ 140.8</b>	<b>\$ 101.5</b>	<b>\$ 19.6</b>	<b>\$ 121.1</b>

As at December 31, 2011, gross unrealized losses on our public bond and private placement debt holdings were \$1.3 billion or one per cent of the amortized cost of these holdings (2010 – \$1.8 billion or two per cent). Of this amount, \$360 million (2010 – \$441 million) relates to bonds trading below 80 per cent of cost for more than six months. Securitized assets represented \$355 million of the gross unrealized losses and \$253 million of the amounts trading below 80 per cent of cost for more than six months (2010 – \$403 million and \$345 million, respectively). The following chart shows the decline in gross unrealized losses from December 31, 2010 to December 31, 2011.

### Public Bonds and Private Placement Debt – Gross Unrealized Losses



After adjusting for bonds held in the participating policyholder and other pass-through segments, as well as the provisions for credit included in the policy liabilities, the potential impact to shareholders' pre-tax earnings for bonds trading at less than 80 per cent for greater than six months was approximately \$218 million as at December 31, 2011.

## Securitized Assets

As at December 31, 2011, the Company had \$5.7 billion of both public and private securitized assets representing three per cent of total invested assets (2010 – \$6.8 billion and three per cent).

Residential Mortgage Backed Securities (“RMBS”) as at December 31, 2011 were \$407 million (2010 – \$482 million) of which \$192 million were sub-prime and \$77 million were Alt-A holdings and originations were concentrated in the years 2005 and prior.

Commercial Mortgage Backed Securities (“CMBS”) holdings at December 31, 2011 were \$3.4 billion (2010 – \$4.6 billion), with approximately 89 per cent of holdings rated AAA, of which approximately 98 per cent are in the most senior class. By vintage or year of origination, 89 per cent of the CMBS holdings were from years 2005 and prior.

Asset Backed Securities (“ABS”) holdings as at December 31, 2011 were \$1.9 billion (2010 – \$1.7 billion) and were both highly rated and well diversified by sector.

The following table outlines the securitized holdings by type and asset quality.

As at December 31, (C\$ millions), Carrying value	2011				2010
	RMBS	CMBS	ABS	Total	Total
AAA	\$ 83	\$ 3,022	\$ 1,357	\$ 4,462	\$ 5,285
AA	64	19	56	139	286
A	16	110	174	300	272
BBB	36	64	211	311	361
BB & below	208	195	119	522	583
<b>Total public and private securitized assets</b>	<b>\$ 407</b>	<b>\$ 3,410</b>	<b>\$ 1,917</b>	<b>\$ 5,734</b>	<b>\$ 6,787</b>

## Mortgages

As at December 31, 2011, mortgages represented 15 per cent (2010 – 16 per cent) of invested assets with 60 per cent of the mortgage portfolio invested in Canada (2010 – 59 per cent) and 40 per cent in the United States (2010 – 41 per cent). The overall portfolio is also diversified by geographic region, property type and borrower. 32 per cent (2010 – 34 per cent) of the total mortgage portfolio is insured by CMHC, Canada’s AAA rated government backed national housing agency, with 71 per cent (2010 – 84 per cent) of residential mortgages insured and nine per cent (2010 – 15 per cent) of commercial mortgages insured.

The following table shows the distribution of the carrying value of the mortgage portfolio by property type.

## Mortgages

As at December 31, (C\$ millions)	2011		2010	
	Carrying value	% of total	Carrying value	% of total
Commercial				
Multi family residential	\$ 3,459	10	\$ 3,393	10
Retail	5,816	17	5,903	18
Office	5,688	16	5,483	17
Industrial	2,888	8	3,184	10
Other commercial	2,197	6	1,758	5
	<b>\$ 20,048</b>	<b>57</b>	<b>\$ 19,721</b>	<b>60</b>
Manulife Bank single residential	13,434	38	11,482	35
Agriculture	1,541	5	1,634	5
<b>Total mortgages</b>	<b>\$ 35,023</b>	<b>100</b>	<b>\$ 32,837</b>	<b>100</b>

Commercial mortgages have been conservatively underwritten and accounted for 57 per cent (2010 – 60 per cent) of total mortgages. Geographically, 37 per cent are in Canada and 63 per cent in the United States. We are well diversified by property type and largely avoid risky segments of the market such as hotels, construction loans and second liens. As noted in the table below, the mortgages have low loan-to-value ratios, high debt-service coverage ratios and only a few loans in arrears.

## Non-CMHC Insured Commercial Mortgages<sup>(1),(2)</sup>

As at December 31,	2011		2010	
	Canada	U.S.	Canada	U.S.
Loan-to-Value ratio <sup>(3)</sup>	61%	65%	64%	64%
Debt-Service Coverage ratio <sup>(3)</sup>	1.48x	1.58x	1.47x	1.57x
Average duration	2.9 years	5.1 years	3.2 years	4.9 years
Average loan size (C\$ millions)	\$ 4.8	\$ 10.3	\$ 4.5	\$ 9.4
Loans in arrears <sup>(4)</sup>	0.08%	0.70%	0.00%	0.11%

<sup>(1)</sup> CMHC is Canada Mortgage and Housing Corporation, Canada’s national housing agency.

<sup>(2)</sup> Excludes Manulife Bank commercial mortgage loans.

<sup>(3)</sup> LTV and DSC are based on re-underwritten cash flows.

<sup>(4)</sup> Arrears defined as over 90 days past due in Canada and over 60 days past due in the U.S.

## Real Estate

As at December 31, 2011, three per cent of the Company's invested assets were held in real estate, with a carrying value of \$7.5 billion (2010 – three per cent and \$6.4 billion). The portfolio is diversified by geographic region, with 56 per cent located in the U.S., 38 per cent in Canada and six per cent in Asia (2010 – 56 per cent, 37 per cent and seven per cent, respectively). The fair value of the portfolio was \$7.9 billion as at December 31, 2011 (2010 – \$6.7 billion). The high quality portfolio has virtually no leverage and is mostly premium urban office towers, concentrated in cities with stable growth and highly diverse economies in North America and Asia. The portfolio is well positioned with an average occupancy rate of 94.2 per cent (2010 – 93.3 per cent) and an average lease term of 5.7 years (2010 – 5.7 years). The following table shows the distribution of the carrying value and fair value of the real estate portfolio by property type.

### Real Estate

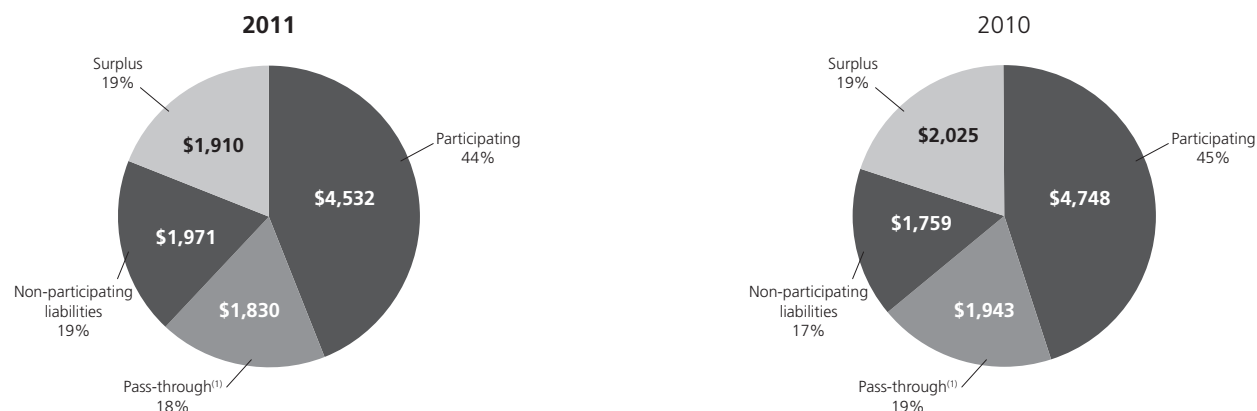
As at December 31, (C\$ millions)	2011			2010		
	Fair value	Carrying value	% of total carrying value	Fair value	Carrying value	% of total carrying value
Office	\$ 5,296	\$ 5,296	71	\$ 4,320	\$ 4,320	68
Industrial	585	585	8	572	572	9
Company use	1,260	831	11	1,207	822	13
Other	754	754	10	639	639	10
<b>Total real estate</b>	<b>\$ 7,895</b>	<b>\$ 7,466</b>	<b>100</b>	<b>\$ 6,738</b>	<b>\$ 6,353</b>	<b>100</b>

## Public Stocks

As at December 31, 2011, public stock holdings of \$10.2 billion represented four per cent (2010 – \$10.5 billion and five per cent) of invested assets. The composition of holdings by segment is outlined below. The portfolio is diversified by industry sector and issuer. Geographically, 34 per cent (2010 – 35 per cent) is held in Canada, 29 per cent (2010 – 28 per cent) is held in the U.S. and the remaining 37 per cent (2010 – 37 per cent) is held in Asia, Europe and Other. Of the total portfolio, 65 per cent is actively managed with the remaining 35 per cent indexed (2010 – 64 and 36 per cent, respectively).

### Public Stocks – by segment

(C\$ millions, unless otherwise stated)



<sup>(1)</sup> Equities denoted as pass-through are held by the Company to support the yield credited on equity-linked investment funds for Canadian universal life products.

## Other Investments

As at December 31, 2011, other investments represented five per cent (2010 – five per cent) of invested assets. The investments include private equity and mezzanine, power and infrastructure, leases, oil and gas, timberland, farmland, affordable housing and other. Our alternative assets provide enhanced yields and provide a good match against our long duration liabilities, offering diversification to traditional equity and bond markets. The following table shows the distribution of the carrying value of the other investments portfolio by sector and/or asset type.

## Other Investments

As at December 31, (C\$ millions)	2011		2010	
	Carrying value	% of total	Carrying value	% of total
Private equity and mezzanine debt	\$ 1,474	13	\$ 1,343	14
Power and infrastructure	2,507	23	2,157	22
Leases	2,560	23	2,424	25
Oil and gas	1,292	12	895	9
Timberland	1,527	14	1,374	14
Farmland	762	7	589	6
Affordable housing	470	4	517	5
Other	487	4	433	5
<b>Total other investments</b>	<b>\$ 11,079</b>	<b>100</b>	<b>\$ 9,732</b>	<b>100</b>

## Other Notable Items

As at December 31, 2011, European public and private bond net exposure represented three per cent of fixed income assets or two per cent of total invested assets. Excluding par and pass-through segments and reflecting the cumulative impact of downgrades reflected in our policy liability valuation, our net sovereign, banks and other financials exposure to Ireland, Italy and Spain was limited to \$47 million. We do not have any investments in Greece or Portugal. As at December 31, 2011, we had \$147 million invested in Ireland (\$33 million in financials and \$114 million in other corporate investments), \$14 million in Italian sovereigns and \$79 million in Spain's corporate bonds. Other European exposures totaled \$14 million of sovereigns, \$1,155 million from the financial sector and \$2,742 million from other sectors. The split by country was France – \$701 million, U.K. – \$896 million, Germany – \$302 million and other parts of Europe – \$2,012 million.

The Company began writing credit default swaps ("CDS") in 2011. As outlined in the Risk Management and Risk Factors section the Company does not employ leverage in its CDS program and therefore, does not write CDS protection in excess of its government bond holdings. As at December 31, 2011, we had \$219 million notional outstanding of CDS protection sold. All CDS decisions follow the same rigorous underwriting standards as our cash bond portfolio and we believe the addition of this asset class allows us to better diversify our overall credit portfolio. Additionally, the Company does not take on any material credit or liquidity risk with its securities lending programs. The Company has avoided highly structured and complex instruments, such as Structured Investment Vehicles, Constant Proportion Debt Obligations, U.S. Home Equity Lines of Credit and Synthetic Securities that have resulted in significant losses to other institutions.

## Manulife Asset Management

### Assets Under Management

Assets managed by Manulife Asset Management grew by \$2.3 billion to \$211.4 billion as at December 31, 2011 compared to December 31, 2010. Assets managed for external clients grew by \$1.7 billion to \$178.1 billion during the same period.

On the retail side, our wealth management partners continued to deliver strong gross sales across the globe, mainly in our industry-leading fixed income and asset allocation products. We also launched several innovative products around the world, including Taiwan's first Chinese Renminbi-backed bond fund and a new diversified alternative asset class product in the U.S.

Institutional sales for our Public Markets investment teams were up significantly this year as we began to reap the benefits of the investments we have made in the business in recent years. Particular success was seen in the U.S., where we won several large and high profile public mandates and made further inroads with consultants and institutional investors. In Asia, we further solidified our presence by becoming an early entrant in the institutional offshore Chinese Renminbi bond market in Hong Kong and by attracting significant sub-advisory mandates from a Japanese fund house. Our alternative managers had modest net redemptions in 2011 as we found only limited attractive value opportunities to put new capital to work in a disciplined manner.

### Assets Under Management

As at December 31, (C\$ millions)	2011	2010 <sup>(2)</sup>	2009 <sup>(3)</sup>
Managed on behalf of Operating Divisions <sup>(1)</sup>	\$ 158,583	\$ 157,314	\$ 82,146
Managed on behalf of Institutional clients	19,540	19,113	18,595
<b>Total Manulife Asset Management assets managed for external clients<sup>(4)</sup></b>	<b>\$ 178,123</b>	<b>\$ 176,427</b>	<b>\$ 100,741</b>
Managed on behalf of General Fund	33,323	32,689	28,450
<b>Total Manulife Asset Management assets under management<sup>(4)</sup></b>	<b>\$ 211,446</b>	<b>\$ 209,116</b>	<b>\$ 129,191</b>

<sup>(1)</sup> Includes 49 per cent share of Manulife TEDA Fund Management Company Ltd., based on the joint venture ownership structure.

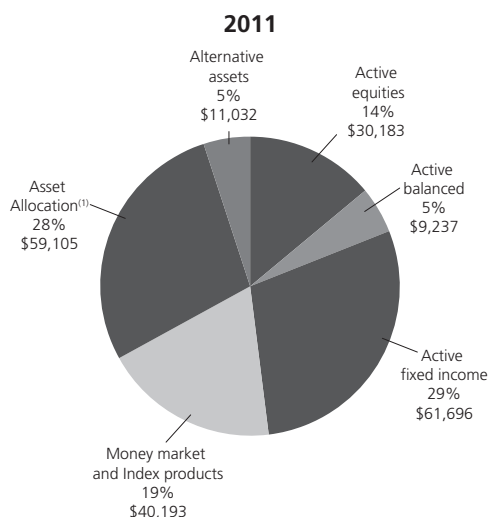
<sup>(2)</sup> Includes the addition of \$60,753 of asset allocation funds from our U.S. Wealth Management business, as we consolidated management of all asset allocation assets under Manulife Asset Management.

<sup>(3)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

<sup>(4)</sup> An additional \$4,356 in assets were managed for external clients by Investment Division affiliates in addition to Manulife Asset Management assets as at December 31, 2011. Similarly, assets for 2009 and 2010 have been adjusted to exclude external assets not managed by Manulife Asset Management.

## Assets Under Management – Manulife Asset Management

(C\$ millions, unless otherwise stated)



<sup>(1)</sup> Asset Allocation excludes \$30,149 internally managed underlying funds already included in the other asset categories to avoid double-counting.

### Strategic Direction

Manulife Asset Management is a key component of the Company's overall growth strategy. We expect to continue to drive growth by partnering with our wealth management affiliates to deliver best in class performance and products to retail investors in all of the markets in which we operate. Our strategy also includes leveraging our long term performance records, extensive footprint and global infrastructure to distribute our investment solutions directly into the institutional market.

Over the past few years we have expanded and strengthened our investment capabilities and service organization, to provide a deeper commercial platform from which to distribute our strategies and services. In 2011 we continued to focus on providing strong and consistent risk-adjusted performance to our clients, achieving 58 Five and Four-star Morningstar<sup>14</sup> rated funds, our highest posting ever. Our global fixed income franchise is gaining significant recognition globally for its depth and breadth. We further reinforced our strong equity capabilities by establishing four new high performance investment teams to collectively manage U.S. large cap growth, U.S. large cap core value, U.S. all cap, international value and Canadian core equity strategies. We also continue to hold a leadership position in alternative investments through our Hancock Natural Resource Group, as the largest provider of timber investment management services to institutional clients in the world and one of the largest institutional managers of farmland in the U.S.<sup>15</sup> In addition, we continue to be a leader in asset allocation products, with a \$90 billion suite of target date, target risk, liability-driven investment and customized solutions for both retail and institutional investors.

Since changing our group name to Manulife Asset Management in December 2010, and a comprehensive brand campaign, we have gained significant traction in reinforcing what makes us different: our boutique investment teams backed by the resources of a global leader. With a more closely tied name, including the John Hancock Asset Management brand used when providing investment management services to John Hancock products, we are able to leverage and support the strong brands of our wealth partners.

Building on our proven ability to establish and integrate new investment management teams, organically and through new team acquisitions, we expect to further expand and strengthen our investment capabilities. By leveraging our brand, global footprint, breadth and depth of our institutional presence, and the strength of our retail wealth management distribution and service platforms, we intend to continue to make the growth of Manulife Asset Management a cornerstone of our wealth and asset management growth strategy.

<sup>14</sup> For each fund with at least a three year history, Morningstar calculates a Morningstar Rating based on a Morningstar Risk-Adjusted Return that accounts for variation in a fund's monthly performance (including effects of sales charges, loads and redemption fees), placing more emphasis on downward variations and rewarding consistent performance. The top 10% of funds in each category, the next 22.5%, 35%, 22.5% and bottom 10% receive 5, 4, 3, 2 or 1 star, respectively. The Overall Morningstar Rating for a fund is derived from a weighted average of the performance associated with its three, five and 10 year (if applicable) Morningstar Rating metrics. Past performance is no guarantee of future results. The overall rating includes the effects of sales charges, loads and redemption fees, while the load-waived does not. Load-waived rating for Class A shares should only be considered by investors who are not subject to a front-end sales charge.

<sup>15</sup> 2011 Pensions & Investments Databook, December 26, 2011.

# Risk Management and Risk Factors

## Overview

Manulife Financial is a financial institution offering insurance, wealth and asset management products and services, which subjects the Company to a broad range of risks. We manage these risks within an enterprise-wide risk management framework. Our goal is to strategically optimize risk taking and risk management to support long-term revenue, earnings and capital growth. We seek to achieve this by capitalizing on business opportunities that are aligned with the Company’s risk taking philosophy, risk appetite and return expectations; by identifying, measuring and monitoring key risks taken; and by executing risk control and mitigation programs.

The enterprise risk management (“ERM”) framework sets out policies and standards of practice related to risk governance, risk identification, risk measurement, risk monitoring, and risk control and mitigation. With an overall goal of effectively executing risk management activities, we continuously invest to attract and retain qualified risk professionals, and to build, acquire and maintain the necessary processes, tools and systems.

Risk taking activities are managed against an overall risk appetite, which defines the amount and type of risks we are willing to assume. Our risk appetite reflects the Company’s financial condition, risk tolerance and business strategies. The quantitative component of our risk appetite establishes total Company targets defined in relation to economic capital, regulatory capital required, and earnings at risk. We have further established targets for each of our principal risks to assist us in managing levels of exposures and risk profiles that are well diversified across risk categories. To facilitate the alignment of business strategies and plans with the Company’s overall risk management objectives, targets for certain principal risks are cascaded down to our operating divisions.

Risk management programs are in place for each of our broad risk categories: strategic, market, liquidity, credit, insurance and operational. These programs incorporate policies and standards of practice that are aligned with those within the enterprise risk management framework, covering:

- Assignment of risk management accountabilities across the organization;
- Philosophy and appetite related to assuming risks;
- Establishment of specific risk targets or limits;
- Delegation of authorities related to risk taking activities;
- Identification, measurement, assessment, monitoring and reporting of risks; and
- Activities related to risk control and mitigation.

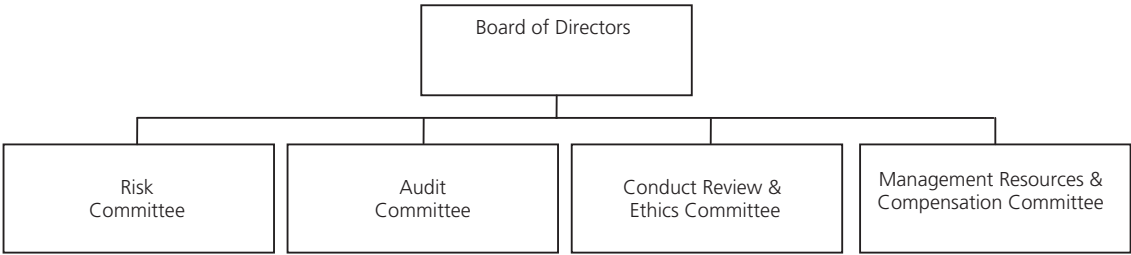
## Risk Governance

The Board of Directors oversees the implementation by management of appropriate systems to identify and manage the principal risks of the Company’s business and periodically reviews and approves our enterprise risk policy, our risk taking philosophy and overall risk appetite.

The Chief Executive Officer (“CEO”) is directly accountable to the Board of Directors for all risk taking activities and risk management practices, and is supported by the Company’s Chief Risk Officer (“CRO”) as well as by the Executive Risk Committee (“ERC”). Together, they shape and promote our risk culture and guide risk taking throughout our global operations and strategically manage our overall risk profile. The ERC, along with other executive-level risk oversight committees, establishes risk policies, guides risk taking activity, monitors significant risk exposures and sponsors strategic risk management priorities throughout the organization. The Board and executive-level risk oversight committees and key elements of their mandates are presented below.

Corporate Risk Management (“CRM”), under the direction of the CRO, establishes and maintains our enterprise risk management framework and oversees the execution of individual risk management programs across the enterprise. CRM seeks to ensure a consistent enterprise-wide assessment of risk, risk-based capital and risk-adjusted returns.

## Board of Directors & Board Committees



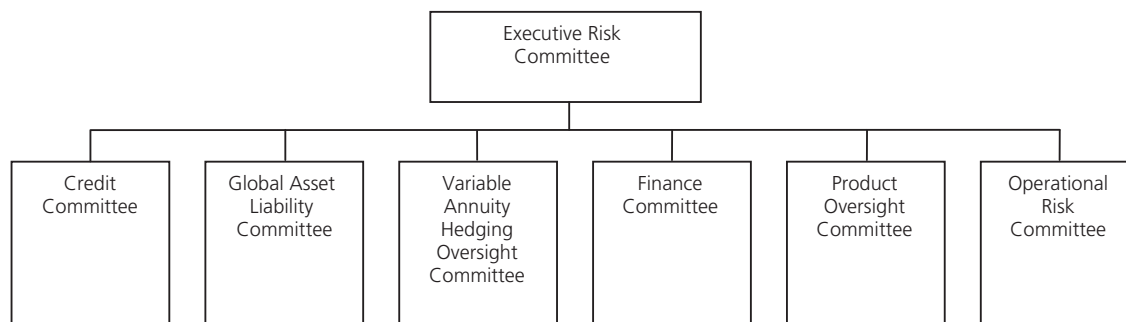
**Risk Committee** – This committee is responsible for assisting the Board in its oversight of the Company’s management of its principal risks. The committee also assesses, reviews and approves policies, procedures and controls in place to manage risks and reviews the Company’s compliance with risk policies.

**Audit Committee** – This committee is responsible for assisting the Board in its oversight role with respect to the quality and integrity of financial information, the effectiveness of the Company’s internal controls over financial reporting and the effectiveness of the Company’s compliance with legal and regulatory requirements.

**Conduct Review and Ethics Committee** – This committee oversees activities and risks related to conflicts of interest, confidentiality of information, customer complaints and related party transactions.

**Management Resources and Compensation Committee** – This committee oversees the Company’s global human resources strategy, policies, programs with a special focus on management succession, development and compensation and risk management relating to these programs.

## Executive Committees



**Executive Risk Committee** – The ERC approves risk policies and oversees the execution of our enterprise risk management program. The committee monitors our overall risk profile, including key and emerging risks and guides risk-taking activities. As part of these activities, the ERC monitors material risk exposures, and sponsors strategic risk management priorities including overseeing risk reduction plans. The ERC also reviews and assesses the impact of business strategies, opportunities and initiatives on our overall risk position.

**Credit Committee** – The Credit Committee establishes credit risk policies and oversees credit risk management. The Credit Committee monitors our overall credit risk profile, key and emerging risk exposures and risk management activities and ensures compliance with credit risk policies. The committee also approves large individual credits and investments.

**Global Asset Liability Committee** (“GALCO”) – The GALCO establishes market and liquidity risk policies and oversees related market and liquidity risk and asset liability management programs and practices. The committee monitors our overall market risk profile, key and emerging risk exposures and risk management activities as well as compliance with related policies. GALCO also approves target investment strategies.

**Variable Annuity Hedging Oversight Committee** (“VAHOC”) – The VAHOC oversees global variable annuity dynamic hedging operations. The committee reviews and approves hedging strategies and operational policies and procedures. VAHOC also oversees hedge program performance and effectiveness and monitors compliance with related policies.

**Finance Committee** – The Finance Committee oversees our capital management policy framework and provides direction on strategic issues affecting our capital, solvency and balance sheet management. The committee monitors the adequacy and efficiency of the Company’s solvency position for consolidated and local entities on an actual and projected basis, recommending appropriate actions. It reviews capital stress testing, sensitivity analyses and approves principles of capital allocation to the businesses.

**Product Oversight Committee** (“POC”) – The POC establishes and oversees the execution of product design and pricing policies and insurance risk policies, as well as risk management standards of practice with regards to risks covered by these policies. As such, the POC oversees insurance risk and retention management and monitors product design, new product pricing, and insurance risk exposures and trends. The POC delegates approval of new product initiatives, new business reinsurance arrangements and material insurance underwriting initiatives to the CRO and officers in Product and Insurance Risk Management.

**Operational Risk Committee** (“ORC”) – The ORC establishes, reviews and approves policies related to operational risk. The committee oversees operational risk management and monitors operational risk exposures and trends.

## Risk Management Culture

A strong risk culture and a common approach to risk management are integral to our risk management practices. Our governance framework is centered on the “three lines of defense” model.

As the first line of defense, businesses are accountable for the risks within their unit including the day to day management of the risks and related controls. They are responsible for ensuring their business strategies align with the Company’s risk taking philosophy, risk appetite and culture, for thoroughly evaluating and managing risk exposures consistent with our enterprise risk policies and standards of practice, and for delivering returns commensurate with the level of risk assumed. They are supported by global risk managers who are responsible for the design and execution of risk mitigation practices that are consistent with the Company’s policies and specific risk management strategies.

The second line of defense includes Corporate Risk Management, Corporate Actuarial, Corporate Finance, Global Compliance, other corporate functional areas and divisional risk officers. Together this group provides independent oversight of risk taking and risk mitigation activities across the enterprise. Executive-level risk oversight committees, including the ERC, also provide oversight of risk taking and risk mitigation activities.

As the third line of defense, Internal Audit provides independent analysis of whether controls are effective and appropriate relative to the risk inherent in the business, and whether risk mitigation programs and risk oversight functions are effective in managing risks.

### **Risk Identification, Measurement and Assessment**

We have a common approach and process to identify, measure and assess the risks we assume. We evaluate all potential new business initiatives, acquisitions, product offerings, reinsurance arrangements, and investment and financing transactions on a comparable risk-adjusted basis. Business units and functional groups are responsible for identifying and assessing risks arising from business activities on an ongoing basis, as an integral component of business management processes. A standard inventory of risks is used in all aspects of risk identification, measurement and assessment, and monitoring and reporting.

Risk exposures are evaluated using a variety of risk measures, with certain measures used across all risk categories, while others apply only to some risks or a single risk type. Risk measurement includes: simple key risk indicators; stress tests, including sensitivity tests and scenario impact analyses; and stochastic scenario modeling. Qualitative risk assessments are performed for those risk types that cannot be reliably quantified.

We perform a variety of sensitivity tests on earnings, regulatory capital ratios, economic capital, earnings at risk and liquidity that consider significant, but plausible events. Through our Dynamic Capital Adequacy Testing ("DCAT"), we stress test our regulatory capital adequacy over a five year projected timeframe, incorporating both existing and projected new business activities, under a number of plausible adverse scenarios. We also perform other integrated, complex scenario tests to assess key risks and the interaction of these risks.

Economic capital measures the amount of capital needed to meet obligations with a high and pre-defined confidence level. Our earnings at risk metric measures the potential variance from quarterly expected earnings at a particular confidence level. Economic capital and earnings at risk are both determined using internal models and measure enterprise-wide risks and are allocated by risk type and business. Economic capital and earnings at risk provide measures of enterprise-wide risk that can be aggregated, and compared, across business activities and risk types.

### **Risk Monitoring and Reporting**

CRM oversees a formal process for monitoring and reporting on enterprise-wide risk exposures, discusses risk exposures with our various risk oversight committees, and submits requests for approval of any policy exceptions or remedial action plans, as required.

On a quarterly basis, the ERC, Board Risk Committee and Board of Directors review risk reports that present an overview of our overall risk profile and exposures across our principal risks. The reports incorporate both quantitative risk exposure measures and sensitivities and qualitative risk assessments. The reports also highlight key risk management activities and facilitate monitoring compliance with key risk policy targets and limits. The reports present information gathered through a formal risk identification and assessment process involving business unit general managers and their executive teams, as well as corporate executives overseeing global risk management of key risks. The ERC reviews key financial risk exposures and sensitivities at least monthly.

Our Chief Actuary presents the results of the DCAT to the Board of Directors annually. Our Internal Auditor reports the results of internal audits of risk controls and risk management programs to the Audit Committee semi-annually. Management reviews the implementation of key risk management strategies, and their effectiveness, with the Risk Committee annually.

### **Risk Control and Mitigation**

Risk control activities are in place throughout the Company to mitigate risks to within approved risk targets or limits. We believe our controls, which include policies, procedures, systems and processes, are appropriate and commensurate with the key risks faced at all levels across the Company and such controls are an integral part of day to day activity, business management and decision making.

CRM establishes and oversees formal review and approval processes, involving independent individuals, groups or risk oversight committees, for product offerings, insurance underwriting, reinsurance, investment activities and other material business activities, based on the nature, size and complexity of the risk taking activity involved. Authorities for assuming risk at the transaction level are delegated to specific individuals based on their skill, knowledge and experience.

Risk mitigation activities, such as product and investment portfolio management, hedging, reinsurance and insurance protection are used to assist in managing our aggregate risk to within our risk appetite, targets and limits. Internal controls within the business units and corporate functions mitigate our exposure to operational risks.

The following sections describe the key risks and associated risk management strategies for each of our broad risk categories (strategic, market, liquidity, credit, insurance and operational).

### **Strategic Risk**

Strategic risk is the risk of loss resulting from the inability to adequately plan or implement an appropriate business strategy, or to adapt to change in the external business, political or regulatory environment.

## Key Risk Factor Overview

We operate in highly competitive markets and compete for customers with both insurance and non-insurance financial services companies. Customer loyalty and retention, and access to distributors, are important to the Company's success and are influenced by many factors, including our product features, service levels, prices, and our financial strength ratings and reputation. Erosion of our corporate image by adverse publicity, as a result of our business practices or those of our employees, representatives and business partners, may cause damage to our franchise value.

External business, economic, political, tax, legal, regulatory environments and changes to actuarial reserving standards can significantly impact the types, pricing and attractiveness of the products and services we offer. The economic environment may remain volatile and our regulatory environment, particularly in Canada, will continue to evolve, potentially with higher capital requirements which would materially impact our competitiveness. Further, the attractiveness of our product offerings relative to our competitors will be influenced by competitor actions as well as our own, and the requirements of the regulatory regimes we and they operate under. For these and other reasons, there is no certainty that we will be successful in implementing our business strategies or that these strategies will achieve the objectives we target.

## Risk Management Strategy

The CEO and Executive Committee establish and oversee execution of business strategies, and have accountability to identify and manage the risks embedded in these strategies. They are supported by a number of processes:

- Strategic business, risk and capital planning that is reviewed with the Board of Directors;
- Detailed business planning that is executed by divisional management and is reviewed by the CEO, the Chief Financial Officer and the CRO;
- Quarterly operational performance and risk reviews of all key businesses with the CEO and annual reviews with the Board of Directors;
- Risk-based capital attribution and allocation designed to encourage a consistent decision-making framework across the organization; and
- Review and approval of acquisitions and divestitures by the CEO and, where appropriate, the Board of Directors.

The CEO and Executive Committee are ultimately responsible for our reputation; however, our employees and representatives are responsible for conducting their business activities in a manner that upholds our reputation. This responsibility is reinforced by:

- An enterprise-wide reputation risk policy that specifies the oversight responsibilities of the Board and the responsibilities of executive management;
- Communication to and education of all directors, officers, employees and representatives, including our Code of Business Conduct and Ethics;
- Application of a set of guiding principles in conducting all our business activities, designed to protect and enhance our reputation; and
- Reputation risk assessments considered as part of business strategy development and execution.

We regularly review and adapt our business strategies and plans in consideration of changes in the external business, economic, political, and regulatory environments in which we operate. Changes in actuarial reserving standards and changes in the cost of hedging may also cause us to review our business strategies and plans. Key elements of our business strategy include diversifying our business mix, accelerating growth of those products that have a favourable return on capital and better potential outcomes under a range of economic and policyholder behaviour scenarios, and reducing or withdrawing from products with unattractive risk profiles. Our strategy also incorporates a plan to systematically hedge or offset a significant portion of our in-force public equity and interest rate risks over the next few years. These actions will, however, result in costs which will depress income. We have designed our business plans and strategies to align with our risk appetite, capital and financial performance objectives.

The following is a further description of key strategic risk factors.

## General Macro-Economic Risk Factors

Over the past few years, financial markets have been dominated by ongoing uncertainty surrounding the macro environment. In 2011 we saw substantial declines in equity markets and interest rate levels, exceptional equity market volatility and monetary policy actions that lowered long-term treasury rates in the U.S. and interest rates elsewhere, including Canada and Asia. Under the Canadian insurance accounting and regulatory capital regimes, current market conditions are largely reflected in our current period results.

Continued poor or worsening economic conditions could result in further material charges to income and reductions in our capital position, notwithstanding our improved risk profile and strong underlying regulatory capital position.

In 2010, management announced a 2015 net income objective of \$4 billion and a 2015 ROE objective of 13 per cent. While management has not changed our objective, as a result of the deterioration in the economic conditions and global instability, our 2015 objectives no longer include a cushion for further unfavourable conditions. Therefore additional risk factors may result in an inability to achieve such objectives.

For example:

- Actions taken by management to bolster capital and further reduce the Company's risk profile could reduce earnings. In 2011, the Company entered into a third party mortality and lapse reinsurance agreement, which contributed six points to MLI's MCCR but which will reduce future earnings. In 2011 the Company also sold its Life Retrocession business, which generated a gain of \$303 million, increased the MLI MCCR ratio by six points, and is expected to reduce earnings by approximately \$50 million per annum. Additional actions that the Company may take to bolster near-term regulatory capital ratios or accelerate its plans to reduce equity market and interest rate exposures or to increase the amounts hedged could reduce earnings.
- A period of flat equity markets would represent underperformance relative to our long-term valuation assumption and would negatively impact earnings. In addition, as outlined below, there can be no assurance that our dynamic hedging strategy will fully offset the risks arising from the variable annuities being hedged. The publicly traded equity performance risk measures outlined below show the potential impact on net income attributed to shareholders resulting from an immediate 10, 20 and 30 per cent change in market values of publicly traded equities followed by a return to the expected level of growth assumed in the valuation of policy liabilities. Expected long-term annual market growth assumptions for public equities pre-dividends for key markets are based on long-term historical observed experience and are 7.6% per annum in Canada, 8.0% per annum in the U.S., 5.2% per annum in Japan and 9.5% per annum in Hong Kong. Explicit margins for adverse deviation are applied to these assumptions, or implicit margins are determined through stochastic valuation processes, each of which results in lower net yields used in the valuation. Non-fixed income asset return assumptions vary based on asset class but are largely consistent with total returns assumed for public equities.
- A prolonged low interest environment would result in charges related to lower fixed income URR and new business strain.
  - The fixed income URR is based on five and ten year rolling averages of government bond rates and, if current rates persist in 2012, we would expect to take a charge potentially greater than the \$437 million reported in 2011. If the rates persist for the next ten years, the fixed income URR would continue to decline and could result in cumulative after-tax charges over the ten year period of \$2 to \$3 billion of which \$1 to \$2 billion would be expected to be accrued over the four year period ending 2015, under current Canadian Actuarial Standards.
  - In addition, the difference between the current investable returns and the returns used in pricing new business are generally capitalized when new business is written. Lower interest rates result in higher new business strain until products are re-priced or rates increase.
  - Fixed income reinvestment rates other than URR are based on current market rates. The net income sensitivity to changes in current rates is outlined in the section "Interest Rate and Spread Risk" below.
- Other potential consequences of poor economic conditions include:
  - Low interest rates could negatively impact sales.
  - Lower sales volumes could put increased pressure on our ability to maintain operating expense levels within the levels provided for in the policy liability valuation and could result in lower future profit.
  - Lower risk free rates tend to increase the equity hedging costs and under certain market conditions the costs of hedging the benefit guarantees provided in variable annuities may increase or become uneconomic.
  - The re-investment of cash flows into low yielding AFS bonds could result in lower future earnings on surplus.
  - A lower interest rate environment could be correlated with other macro-economic factors including unfavourable economic growth and lower returns on other asset classes.
  - Lower interest rates could contribute to potential impairments of goodwill.
  - A weak or declining economic environment could increase the value of guarantees associated with variable annuities or other embedded guarantees and could contribute to adverse policyholder behaviour experience.

### Regulatory and Capital Risk Factors

MFC is a holding company with no significant operations and its principal assets are the shares of its regulated insurance subsidiaries. These subsidiaries are subject to a wide variety of insurance and other laws and regulations that vary by jurisdiction and are intended to protect policyholders and beneficiaries first and foremost, rather than investors. These laws and regulations include regulatory restrictions which may limit the ability of subsidiary companies to pay dividends or make distributions to MFC.

As a result of the global financial crisis, financial authorities and regulators in many countries are reviewing their capital requirements and considering potential changes. Future regulatory capital, actuarial and accounting changes could have a material adverse effect on the Company's consolidated financial statements and regulatory capital both on transition and going forward. While the impact of these changes remains uncertain, we anticipate that regulators, rating agencies and investors will expect higher levels of capital going forward. These changes could further limit the ability of the insurance subsidiaries to pay dividends or make distributions and could have a significantly adverse effect on MFC's capital mobility, including its ability to pay dividends to shareholders, buy back its shares and service its debt. We may be required to raise additional capital, which could be dilutive to existing shareholders, or to limit the new business we write.

The Office of the Superintendent of Financial Institutions ("OSFI") has been considering a number of changes, including establishing methodologies for evaluating standalone capital adequacy for Canadian operating life insurance companies, such as MLI, and updates to its regulatory guidance and disclosures for non-operating insurance companies acting as holding companies, such as MFC. OSFI has indicated that MCCSR and internal target capital ratio guidelines, which have not yet been determined, are expected to become applicable to MFC over a two year transition period, which may start as early as 2013. In addition, OSFI is evaluating possible changes to the capital requirements for segregated fund guarantees and for market, credit, insurance and operational risk. Changes in regulatory capital guidelines for banks under the Basel Accord or for European insurance companies under Solvency II may also have implications for Canadian insurance companies. The timing and outcome of these initiatives as well as various initiatives related to International Financial Reporting Standards ("IFRS") are uncertain, and could have a significantly adverse impact on the Company or on our competitive position relative to that of other Canadian and international financial institutions with which we compete for business and capital.

Some recent examples of regulatory and professional standard developments which could impact our capital position include the following.

- Until the new IFRS standard for insurance contracts is completed and effective, our policyholder liabilities continue to be valued under standards established by the Canadian Institute of Actuaries ("CIA"). The CIA has published a new research paper updating the equity calibration parameters for guaranteed variable annuities and segregated funds. The Canadian Actuarial Standards Board is expected to adopt these revised calibration parameters for valuations on or after October 15, 2012. The CIA is also expecting to publish calibration criteria for fixed income funds in 2012 as well as guidance on the modeling of future realized volatility where a hedging program is in place. Once effective, the new calibration standards will apply both to the determination of actuarial liabilities and required capital and may result in a reduction in MLI's MCCSR ratio and the Company's net income.
- The amendments to IAS 19 "Employee Benefits", effective January 1, 2013 are expected to result in a material reduction in accumulated other comprehensive income ("AOCI"), a component of equity, upon adoption. As at December 31, 2011, the consolidated pre-tax unrecognized net actuarial losses for the Company's pension and post-employment benefits were \$1,011 million and \$58 million, respectively, which if persisted at the date of adoption is expected to result in a material reduction to our capital ratios and could result in significant ongoing volatility in available capital, if regulatory capital includes this component of AOCI in the future. The actual impact to the Company will be based on actuarial estimates, market conditions and capital requirements that exist at the date of transition.
- In a development concerning U.S. statutory accounting practices potentially affecting U.S. life insurers, including John Hancock, the National Association of Insurance Commissioners ("NAIC") created a commissioner level working group in the fall of 2011 for the purpose of reviewing a change to actuarial standards for certain universal life ("UL") products pursuant to Actuarial Guideline 38 ("AG38"). On February 21, 2012 this working group agreed to a bifurcated approach for establishing valuation standards for in-force versus business issued after a yet to be determined date. While this action is viewed as a significant step forward in the effort to resolve the AG38 issue, additional details, questions and approvals remain outstanding. The Company is unable at this time to determine the nature or extent of potential changes or the impact of any such changes to AG38. However, based on our information to-date, it appears that any changes applied retroactively will likely not have a material adverse impact on John Hancock's statutory capital position.

### **The Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank")**

Dodd-Frank Title VII creates a new framework for regulation of over-the-counter ("OTC") derivatives which could affect those activities of the Company which use derivatives for various purposes, including hedging equity market, interest rate and foreign currency exposures. Dodd-Frank will require certain types of OTC derivative transactions to be executed through a centralized exchange or regulated facility and be cleared through a regulated clearinghouse. The legislation could also potentially impose additional costs, including new capital requirements, and additional regulation on the Company.

Derivative transactions executed through exchanges or regulated facilities will attract new incremental margin requirements to fund initial margin, and will require variation margin to be cash settled on a daily basis which increases liquidity risk for the Company. The increase in margin requirements combined with a more restricted list of securities that qualify as eligible collateral could require us to hold larger positions in cash and treasuries, which would reduce income. Conversely, transactions executed through exchanges largely eliminate OTC counterparty credit risk but increase our exposure to the risk of an exchange or clearinghouse defaulting, and increased capital or margin requirements imposed on our OTC derivative counterparties could reduce our exposure to the counterparties' default. In force derivative transactions will be grandfathered and could migrate to exchanges over time, or the Company may elect to accelerate the migration. We cannot predict the effect of the legislation on our hedging costs, our hedging strategy or its implementation, or whether Dodd-Frank will lead to an increase or decrease in or change in composition of the risks we hedge.

In addition, pursuant to Dodd-Frank, in October 2011, the Financial Stability Oversight Council ("FSOC") released its second notice of proposed rulemaking outlining the proposed criteria that will inform the FSOC's designation of non-bank financial institutions as "systemically important" and the procedures the FSOC will use in the designation process. If designated, the largest, most interconnected and highly-leveraged companies would face stricter prudential regulation, including higher capital requirements and more robust consolidated supervision. While the proposed rules specify various quantitative thresholds for use in determining which non-bank financial institutions may be designated, FSOC has left open the possibility that a non-bank financial institution can be below the thresholds and still become subject to a designation as systemically important. The comment period on the FSOC second notice of proposed rulemaking has closed, and FSOC is now reviewing submitted comments. At this stage, OSFI has not announced similar rules. Although there are good arguments why neither MFC nor any of its subsidiaries should be designated as systemically important by the FSOC, OSFI or any other regulator, at this stage we cannot predict the outcome of this regulatory initiative.

## International Financial Reporting Standards ("IFRS")

In 2010 the International Accounting Standards Board ("IASB") issued its Insurance Contracts (Phase II) Exposure Draft and the U.S. Financial Accounting Standards Board ("FASB") issued its Insurance Contract Discussion paper. The insurance contract project is considered a "joint project" whereby the IASB and FASB discuss common research papers. A due process step for joint projects also involves assessing differences reached by the two Boards and determining if they can be resolved. Since 2010, the Boards have redeliberated significant issues based on feedback received on the IASB Exposure Draft and FASB Discussion paper. In 2012 the IASB expects to issue a "Review Draft" or a revised Exposure Draft. The FASB expects to issue an Exposure Draft. The final standards are not expected to be effective until at least 2015.

The insurance contracts accounting policy proposals being considered by the IASB and FASB include the definition of the discount rate used in the measurement of insurance liabilities. The draft proposals contain a discount rate approach that is not consistent with our business model because they do not align the measurement of insurance liabilities with the assets that support the payment of those liabilities. Therefore, the standard as proposed and if implemented may lead to a large initial increase in reported insurance liabilities and potentially our required regulatory capital upon adoption, and may create significant ongoing volatility in our reported results and potentially our regulatory capital, particularly for long duration guaranteed products. This mismatch between the underlying economics of our business and reported results and potentially our capital requirements could have significant unintended negative consequences on our business model which would potentially affect our customers, shareholders and the capital markets.

We, along with other companies in the insurance industry from around the world, provided feedback on the significant non-economic volatility that would result from the proposals. As a result, the IASB and the FASB are considering the use of Other Comprehensive Income to record changes in the discount rate. While this proposal removes volatility from the performance statement (income statement), it does not remove the non-economic volatility from the reported shareholders' equity.

We believe the accounting rules under discussion, if applied to regulatory capital, could put Canadian insurers at a significant disadvantage relative to their U.S. and global peers, and also to the banking sector in Canada. The insurance industry in Canada is working with OSFI and the federal government with respect to the potential impact of these proposals on Canadian insurance companies, and the industry is urging policymakers to ensure that any future accounting and capital proposals appropriately consider the underlying business model of a life insurance company and, in particular, the implications for long duration guaranteed products which are much more prevalent in North America than elsewhere.

## Ratings Risk Factors

The Company has received security ratings from approved rating organizations on certain of its long-term debt, liabilities for preferred shares and capital instruments and preferred shares qualifying as equity. In addition, the Company and its primary insurance operating subsidiaries have received financial strength/claims paying ratings. Our ratings could be adversely affected if, in the view of the rating organizations, there is deterioration in our financial flexibility, operating performance, or risk profile. Adverse ratings changes could have a negative impact on future financial results.

## Reputation Risk Factors

The Company's reputation is one of our most valuable assets. Our corporate image may be eroded by adverse publicity, as a result of our business practices or those of our employees, representatives and business partners, potentially causing damage to our franchise value. A loss of reputation is often a consequence of some other risk control failure whether associated with complex financial transactions or relatively routine operational activities. As such, reputation risk cannot be managed in isolation from other risks.

## Market Risk

***Market risk is the risk of loss resulting from market price volatility, interest rate change, credit and swap changes, and from adverse foreign currency rate movements. Market price volatility primarily relates to changes in prices of publicly traded equities and alternative non-fixed income investments.***

## Market Risk Management Strategy Overview

Our overall strategy to manage our market risks incorporates several component strategies, each targeted to manage one or more of the market risks arising from our businesses. At an enterprise level, these strategies are designed to manage our aggregate exposures to market risks against economic capital, regulatory required capital and earnings at risk targets.

The following table outlines our key market risks and identifies the risk management strategies which contribute to managing these risks.

	Publicly Traded Equity Performance Risk	Interest Rate Risk	Alternative Non-Fixed Income Asset Performance Risk	Foreign Exchange Risk
Product Design and Pricing	X	X	X	X
Variable Annuity Guarantee Dynamic Hedging	X	X		X
Macro Equity Risk Hedging	X			X
Asset Liability Management	X	X	X	X
Foreign Exchange Management				X

We have established risk reduction plans designed to reduce our exposure to public equity risk and interest rate risk through a combination of time-scheduled and market-trigger based actions. The plans established a goal of executing additional hedges so that approximately 60 per cent of our underlying earnings sensitivity to public equity market movements is offset by hedges by the end of 2012 and approximately 75 per cent of our underlying earnings sensitivity to public equity market movements is offset by hedges by the end of 2014. In addition, we established goals to reduce our interest rate exposures, as measured by the sensitivity of shareholders' net income to a 100 basis point decline in interest rates, to \$1.65 billion as at year end 2012 and to \$1.1 billion as at year end 2014. As of December 31, 2011, we are ahead of our timetable on hedging having already achieved our year end 2012 equity markets hedging goal and our 2014 interest rate hedging goal.

To reduce public equity risk, we use a combination of variable annuity guarantee dynamic hedging and general macro equity risk hedging strategies. As at December 31, 2011, we estimated that approximately 60 to 70 per cent of our underlying earnings sensitivity to a 10 per cent decline in equity markets would be offset by hedges. The range at December 31, 2010 was 50 to 55 per cent. The lower end of the range assumes that the dynamic hedge assets would cover 80 per cent of the loss from the dynamically hedged variable annuity guarantee liabilities and the upper end of the range assumes the dynamic hedge assets would completely offset the loss from the dynamically hedged variable annuity guarantee liabilities. Our strategies employed for variable annuity guarantee dynamic hedging and macro equity risk hedging expose the Company to additional risks. These risks are outlined in the Market Risk Management Strategies section below.

To reduce interest rate risk, we lengthened the duration of our fixed income investments in both our liability and surplus segments by investing cash and trading shorter term bonds for longer term bonds, and by executing lengthening interest rate swaps. These actions, partially offset by the changes in interest rates and the impact of updates to policyholder liability assumptions during the year, contributed to a net reduction in the sensitivity of net income attributed to shareholders to declines in interest rates. As at December 31, 2011, a 100 basis point parallel decline in interest rates would reduce earnings by approximately \$1.0 billion, compared to \$1.8 billion as at December 31, 2010.

Changes in the market value of fixed income assets held in our surplus segment may provide a natural economic offset to the interest rate risk arising from our product liabilities. In order for there to also be an accounting offset, the Company would need to realize a portion of the available for sale fixed income unrealized gains or losses. It is not certain we would crystallize any of the unrealized gains or losses available.

Other risk reduction actions taken during 2011 include re-pricing of our guaranteed benefit insurance products in Canada and the U.S., and launching new insurance products with lower or limited guarantees. We also launched a lower risk variable annuity product in Japan, an initiative that followed the redesign and re-pricing of our North American variable annuities in 2009. The changes made to our product portfolio are a deliberate shift in our new business to lower risk product lines with higher profit margins.

## **Key Risk Factors**

### **Publicly Traded Equity Performance Risk**

Publicly traded equity performance risk arises from a variety of sources, including guarantees associated with certain variable annuity and segregated fund products, asset based fees, and investments in publicly traded equities supporting both our general fund products and our surplus segment.

Our most significant source of equity risk arises from variable annuity and segregated funds with guarantees, where the guarantees are linked to the performance of the underlying funds. Guaranteed benefits are contingent and only payable upon death, maturity, permitted withdrawal or annuitization. If equity markets decline or even if they increase by an amount lower than that assumed in our actuarial valuation, additional liabilities may need to be established to cover the contingent liabilities, resulting in a reduction in shareholders' net income and regulatory capital ratios. Further, if equity markets do not recover to the amount of the guarantees, by the dates the liabilities are due, the accrued liabilities will need to be paid out in cash. In addition, a sustained flat or a decline in public equity markets would likely reduce asset based fee revenues related to variable annuities and segregated funds with guarantees and related to other wealth and insurance products.

If equity market volatility remains high, the costs of hedging the guarantees would likely increase. Further, the variable annuity dynamic hedging strategy is designed to hedge public equity and bond fund performance and interest rate movements. However, we have chosen to maintain certain risks unhedged (such as the realized market volatility), and therefore higher levels of equity and interest rate volatility will create losses on our dynamically hedged business. For additional risk factors related to our variable annuity guarantee dynamic hedging and macro equity risk hedging strategies, refer to 'Risks Related to Hedging Strategies' below.

Where publicly traded equity investments are used to support policy liabilities, the policy valuation incorporates projected investment returns on these assets. If actual returns are lower than the expected returns, the Company's policy liabilities will increase, reducing net income attributed to shareholders.

Further, for products where the investment strategy applied to future cash flows in the policy valuation includes investing a specified portion of future cash flows in publicly traded equities, a decline in the value of publicly traded equities relative to other assets could require us to change the investment mix assumed for future cash flows, increasing policy liabilities and reducing net income attributed to shareholders. In addition, a reduction in the outlook for expected future returns for publicly traded equities, which could result from a fundamental change in future expected economic growth, would increase policy liabilities and reduce net income attributed to

shareholders. In addition, to the extent publicly traded equities are held as AFS, other than temporary impairments that arise will reduce income.

Expected long-term annual market growth assumptions for public equities pre-dividends are based on long-term historical observed experience and are 7.6% per annum in Canada, 8.0% per annum in the U.S., 5.2% per annum in Japan and 9.5% per annum in Hong Kong. Explicit margins for adverse deviation are applied to these assumptions, or implicit margins are determined through stochastic valuation processes, each of which results in lower net yields used in the valuation.

### **Interest Rate and Spread Risk**

Interest rate and spread risk arises from general fund guaranteed benefit products, general fund adjustable benefit products with minimum rate guarantees, general fund products with guaranteed surrender values, segregated fund products with minimum benefit guarantees and from surplus fixed income investments.

Interest rate and spread risk arises within the general fund primarily due to the uncertainty of future returns on investments to be made as assets mature and as recurring premiums are received and must be reinvested to support longer dated liabilities. Interest rate risk also arises due to minimum rate guarantees and guaranteed surrender values on products where investment returns are generally passed through to policyholders.

A general decline in interest rates, without a change in corporate bond spreads and swap spreads, will reduce the assumed yield on future investments used in the valuation of policy liabilities, resulting in an increase in policy liabilities and a reduction in net income. A general increase in interest rates, without a change in corporate bond spreads and swap spreads, will result in a decrease in policy liabilities and an increase in net income. In addition, decreases in corporate bond spreads and increases in swap spreads will result in an increase in policy liabilities and a reduction in net income. An increase in corporate bond spreads and a decrease in swap spreads will have the opposite impact. The impact of changes in interest rates and in spreads may be partially offset by changes to credited rates on adjustable products that pass through investment returns to policyholders.

For segregated fund and variable annuity products, a sustained increase in interest rate volatility or a decline in interest rates would also likely increase the costs of hedging the benefit guarantees provided.

### **Alternative Non-Fixed Income Asset Performance Risk**

Alternative non-fixed income asset performance risk arises from general fund investments in commercial real estate, timber properties, agricultural properties, oil and gas properties, and private equities.

Where these assets are used to support policy liabilities, the policy valuation incorporates projected investment returns on these assets. Non-fixed income assumptions vary by asset class and generally have a similar impact on policy liabilities as public equities would. If actual returns are lower than the expected returns, the Company's policy liabilities will increase, reducing net income attributed to shareholders. Further, for products where the investment strategy applied to future cash flows in the policy valuation includes investing a specified portion of future policy cash flows in alternative non-fixed income assets, a decline in the value of these assets relative to other assets could require us to change the investment mix assumed for future cash flows, increasing policy liabilities and reducing net income. In addition, a reduction in the outlook for expected future returns for alternative non-fixed income assets, which could result from a fundamental change in future expected economic growth, would increase policy liabilities and reduce net income attributed to shareholders.

### **Foreign Exchange Risk**

Our financial results are reported in Canadian dollars. A substantial portion of our business is transacted in currencies other than Canadian dollars, mainly U.S. dollars, Hong Kong dollars and Japanese yen. If the Canadian dollar strengthens, reported earnings would decline and our reported shareholders' equity would decline. Further, to the extent that the resultant change in available capital is not offset by a change in required capital, our regulatory capital ratios would be reduced. A weakening of the Canadian dollar against the foreign currencies in which we do business would have the opposite effect, and would increase reported Canadian dollar earnings and shareholders' equity, and would potentially increase our regulatory capital ratios.

## **Market Risk Management Strategies**

### **Product Design and Pricing**

Our product design and pricing standards and guidelines are designed with the objective of aligning our product offerings with our risk taking philosophy and tolerances, and in particular, that incremental risk generated from new sales aligns with our strategic risk objectives and risk targets. The specific design features of our product offerings, including level of benefit guarantees, policyholder options, fund offerings and availability restrictions as well as our associated investment strategies help to mitigate the level of underlying risk. We regularly review and modify all key features within our product offerings, including premiums and fee charges with a goal of meeting both profit and risk targets. New product initiatives, new business reinsurance arrangements and material insurance underwriting initiatives must be reviewed and approved by the CRO or key individuals within CRM.

### **Variable Annuity Guarantee Dynamic Hedging Strategy**

The variable annuity dynamic hedging strategy is designed to hedge the sensitivity of variable annuity guarantee policy liabilities and available capital, to both public equity and bond fund performance and interest rate movements. The objective of the dynamic

hedging strategy is to offset as closely as possible, the change in our internally defined economic value of guarantees, with the profit and loss from our hedge asset portfolio. The internal economic value of guarantees moves in close tandem with, but not exactly as, our variable annuity guarantee policy liabilities, as it reflects best estimate liabilities and does not include any liability provisions for adverse deviations.

Our current hedging approach is to short exchange-traded equity index and government bond futures and execute currency futures and lengthening interest rate swaps to hedge sensitivity of policy liabilities to fund performance and interest rate movements arising from variable annuity guarantees. We dynamically rebalance these hedge instruments as market conditions change, in order to maintain the hedged position within established limits. We may consider the use of additional hedge instruments opportunistically in the future.

We employ dynamic hedging for virtually all new variable annuity guarantee business when written, or as soon as practical thereafter, and just over half of our in-force variable annuity guarantee values were dynamically hedged as at December 31, 2011. We intend to initiate dynamic hedging for incremental amounts of in-force business not dynamically hedged as market conditions meet our criteria. Public equity risk arising from business not dynamically hedged is managed through our macro equity risk hedging strategy and interest rate risk arising from variable annuity business not dynamically hedged is managed within our asset liability management strategy. During 2011, we initiated dynamic hedging on an additional \$8.5 billion of in-force variable annuity guarantee value.

Our variable annuity guarantee dynamic hedging strategy is not designed to completely offset the sensitivity of policy liabilities to all risks associated with the guarantees embedded in these products. The profit (loss) on the hedge instruments will not completely offset the underlying losses (gains) related to the guarantee liabilities hedged because:

- Policyholder behaviour and mortality experience are not hedged;
- Provisions for adverse deviation in the policy liabilities are not hedged;
- A portion of interest rate risk is not hedged;
- Fund performance on a small portion of the underlying funds is not hedged due to lack of availability of effective exchange-traded hedge instruments;
- Performance of the underlying funds hedged may differ from the performance of the corresponding hedge instruments;
- Correlations between interest rates and equity markets could lead to unfavourable material second order impacts;
- Unfavourable hedge rebalancing costs can be incurred during periods of high volatility from equity markets, bond markets and/or interest rates. The impact is magnified when these impacts occur concurrently; and
- Not all other risks are hedged.

The risks related to the variable annuity dynamic hedging strategy are described below within 'Risks Related to Hedging Strategies'.

### **Macro Equity Risk Hedging Strategy**

The macro equity risk hedging strategy is designed to hedge a portion of our earnings sensitivity to public equity markets movements arising from the following sources in order to maintain our overall earnings sensitivity to public equity market movements below targeted levels:

- General fund equity holdings backing non-participating liabilities;
- Variable life insurance;
- Variable annuity guarantees not dynamically hedged;
- Unhedged provisions for adverse deviation related to variable annuity guarantees dynamically hedged;
- Variable annuity fees not associated with guarantees; and
- Fees on segregated funds without guarantees, mutual funds and institutional assets managed.

We currently execute our macro equity risk hedging strategy by shorting equity futures and executing currency futures, and rolling them over at maturity. We may consider the use of alternative long maturity instruments opportunistically in the future. The notional value of equity futures contracts that were shorted as part of our macro equity risk hedging strategy as at December 31, 2011 was approximately \$5.6 billion. Management intends to increase the amount of macro equity hedges on a time-scheduled and market-trigger basis. Management also intends to increase the amount of hedges in order to maintain our overall earnings sensitivity to equity market movements below targeted levels should markets decline.

### **Risks Related to Hedging Strategies**

Our variable annuity guarantee dynamic hedging strategy relies on the execution of derivative transactions in a timely manner. Therefore, hedging costs and the effectiveness of the strategy may be negatively impacted if markets for these instruments become illiquid. The Company is also subject to counterparty risks arising from the derivative instruments and to the risk of increased funding and collateral demands which may become significant as equity markets and interest rates increase. The dynamic hedging strategy is highly dependent on complex systems and mathematical models that are subject to error, which rely on forward-looking long-term assumptions that may prove inaccurate, and which rely on sophisticated infrastructure and personnel which may fail or be unavailable at critical times. Due to the complexity of the dynamic hedging strategy there may be additional, unidentified risks that may negatively impact our business and future financial results.

The macro equity risk hedging strategy exposes the Company to risks. The strategy relies on the execution of derivative transactions and the ability to execute may be negatively impacted if markets for these instruments become illiquid. The Company is also subject to the risk of increased funding and collateral demands which may become significant as equity markets increase.

There can be no assurance that the Company's exposure to public equity markets will be reduced to within the year-end 2014 target, or that our exposure to movements in interest rates will remain below the year-end 2014 target.

We may be unable to hedge our existing unhedged business as outlined in our risk reduction plans, or if we do so, we may be required to record a charge to income when we initiate hedging. Under certain market conditions, which include a sustained increase in realized equity and interest rate volatilities, a decline in interest rates, or an increase in the correlation between equity returns and interest rate declines, the costs of hedging the benefit guarantees provided in variable annuities may increase or become uneconomic, in which case we may reduce or discontinue sales of certain of these products. In addition, there can be no assurance that our dynamic hedging strategy will fully offset the risks arising from the variable annuities being hedged.

Policy liabilities and MCCR required capital for variable annuity guarantees are determined using long-term forward-looking estimates of volatilities. These long-term forward-looking volatilities assumed for policy liabilities and required capital meet the Canadian Institute of Actuaries and OSFI calibration standards. To the extent that realized equity or interest rate volatilities in any quarter exceed the assumed long-term volatilities, or correlations between interest rate changes and equity returns are higher, there is a risk that rebalancing will be greater and more frequent, resulting in higher hedging costs.

The level of guarantee claims ultimately paid will be impacted by policyholder longevity and policyholder activity including the timing and amount of withdrawals, lapses and fund transfers. The sensitivity of liability values to equity market and interest rate movements that we hedge are based on long-term expectations for longevity and policyholder activity, since the impact of actual longevity and policyholder experience variances cannot be hedged using capital markets instruments.

### **Asset Liability Management Strategy**

Our asset liability management strategy is designed to help ensure that the market risks embedded in our assets and liabilities held in the Company's general fund are effectively managed and that risk exposures arising from these assets and liabilities are maintained below targeted levels. The embedded market risks include risks related to the level and movement of interest rates and credit spreads, public equity market performance, alternative non-fixed income asset performance and foreign exchange rate movements.

General fund product liabilities are segmented into groups with similar characteristics that are supported by specific asset segments. Each segment is managed to a target investment strategy appropriate for the premium and benefit pattern, policyholder options and guarantees, and crediting rate strategies of the products they support. Similar strategies are established for assets in the Company's surplus account. The strategies are set using portfolio analysis techniques intended to optimize returns, subject to considerations related to regulatory and economic capital requirements, and risk tolerances. They are designed to achieve broad diversification across asset classes and individual investment risks while being suitably aligned with the liabilities they support. The strategies encompass asset mix, quality rating, term profile, liquidity, currency and industry concentration targets.

We employ matching mandates, target return mandates or a combination of both in managing the assets in each segment. Matching mandates invest in fixed income assets such as publicly traded bonds, private debt and mortgages and seek to match the term profile of the liabilities, subject to the assets available in investment markets. Target return mandates invest a portion in a diversified basket of alternative non-fixed income assets with the remainder invested in fixed income assets and seek to generate returns sufficient to support either guaranteed obligations or to maximize policyholder dividends or credited rates subject to risk and capital constraints for products that generally pass-through investment returns to policyholders. We manage overall allocations to alternative non-fixed income assets to reflect our risk tolerances.

We group our liabilities into four broad categories:

- Guaranteed products with premiums and benefits that are not adjusted with changes in investment returns and interest rates. We use a combination of matching and target return mandates with the matching mandates supporting obligations within the term period for which fixed income assets are generally available in investment markets.
- Adjustable products which have benefits that are generally adjusted as interest rates and investment returns change, but which have minimum credited rate guarantees. These tend to be supported by target return mandates although segments supporting shorter term liabilities may use matching mandates.
- Variable annuity guarantee liabilities with benefits and liability amounts that fluctuate significantly with performance of the underlying segregated funds. These tend to be supported by matching mandates.
- Non-insurance liabilities which are commingled with the assets held in our surplus account. These tend to be supported by a combination of mandates.

In our general fund, we limit concentration risk associated with non-fixed income asset performance by investing in a diversified basket of assets including public and private equities, commercial real estate, timber and agricultural properties, and oil and gas assets. We further diversify risk by managing publicly traded equities and alternative non-fixed income asset investments against established targets and limits, including for industry type and corporate connection, commercial real estate type and geography, and timber and agricultural property geography and crop type.

Authorities to manage our investment portfolios are delegated to investment professionals who manage to benchmarks derived from the target investment strategies established for each segment, including interest rate risk tolerances. Interest rate risk exposure measures are monitored and communicated to portfolio managers with frequencies ranging from daily to annually, depending on the type of liability. Asset portfolio rebalancing, accomplished using cash investments or derivatives, may occur at frequencies ranging from daily to monthly, depending on our established risk tolerances and the potential for changes in the profile of the assets and liabilities.

Our asset liability management strategy incorporates a wide variety of risk measurement, risk mitigation and risk management and hedging processes. The liabilities and risks to which the Company is exposed, however, cannot be completely matched or hedged due to both limitations on instruments available in investment markets and uncertainty of policyholder experience and consequent liability cash flows.

### **Foreign Exchange Risk Management Strategy**

Our foreign exchange risk management strategy is designed to hedge the sensitivity of our regulatory capital ratios to movements in foreign exchange rates. In particular, the objective of the strategy is to offset within acceptable tolerance levels, changes in required capital with changes in available capital that result from movements in foreign exchange rates. These changes occur when assets and liabilities related to business conducted in currencies other than Canadian dollars are translated to Canadian dollars at period ending exchange rates.

Our policy is to generally match the currency of our assets with the currency of the liabilities they support, and similarly, we have a policy of generally matching the currency of the assets in our shareholders' equity account to the currency of our required capital. Where assets and liabilities are not matched, forward contracts and currency swaps are used to stabilize our capital ratios and our capital adequacy relative to economic capital, when foreign exchange rates change.

We have established target levels of risk exposure, measured in terms of potential changes in capital ratios due to foreign exchange rate movements, determined to represent a specified likelihood of occurrence based on internal models. We utilize a Value-at-Risk ("VaR") methodology quarterly to estimate the potential impact of currency mismatches on our capital ratios.

While our risk management strategy is designed to stabilize capital adequacy ratios, the sensitivity of reported shareholders' equity and income to foreign exchange rate changes is not hedged.

### **Sensitivities and Risk Exposure Measures**

#### **Caution Related to Sensitivities**

In the sections that follow, we have provided sensitivities and risk exposure measures for certain risks. These include the sensitivity due to specific changes in market prices and interest rate levels projected using internal models as at a specific date, and are measured relative to a starting level reflecting the Company's assets and liabilities at that date and the actuarial factors, investment returns and investment activity we assume in the future. The risk exposures measure the impact of changing one factor at a time and assume that all other factors remain unchanged. Actual results can differ significantly from these estimates for a variety of reasons including the interaction among these factors when more than one changes, changes in actuarial and investment return and future investment activity assumptions, actual experience differing from the assumptions, changes in business mix, effective tax rates and other market factors, and the general limitations of our internal models. For these reasons, these sensitivities should only be viewed as directional estimates of the underlying sensitivities for the respective factors based on the assumptions outlined below. Given the nature of these calculations, we cannot provide assurance that the actual impact on net income attributed to shareholders or on MLI's MCCR ratio will be as indicated.

#### **Variable Annuity and Segregated Fund Guarantees**

Guarantees on variable products and segregated funds may include one or more of death, maturity, income and withdrawal guarantees. Variable annuity and segregated fund guarantees are contingent and only payable upon the occurrence of the relevant event, if fund values at that time are below guaranteed values. Depending on future equity market levels, liabilities on current in-force business would be due primarily in the period from 2015 to 2038.

The table below shows selected information regarding the Company's variable annuity and segregated fund investment related guarantees gross and net of reinsurance, and net of the business dynamically hedged.

### Variable Annuity and Segregated Fund Guarantees

As at December 31, (C\$ millions)	2011			2010		
	Guarantee value	Fund value	Amount at risk <sup>(4)</sup>	Guarantee value	Fund value	Amount at risk <sup>(4)</sup>
Guaranteed minimum income benefit <sup>(1)</sup>	\$ 7,518	\$ 5,358	\$ 2,163	\$ 8,202	\$ 6,359	\$ 1,856
Guaranteed minimum withdrawal benefit	66,655	56,954	9,907	62,382	57,331	6,391
Guaranteed minimum accumulation benefit	23,509	23,030	2,813	23,902	25,152	1,980
Gross living benefits <sup>(2)</sup>	\$ 97,682	\$ 85,342	\$ 14,883	\$ 94,486	\$ 88,842	\$ 10,227
Gross death benefits <sup>(3)</sup>	15,202	11,614	3,232	16,279	12,736	2,813
Total gross of reinsurance and hedging	\$ 112,884	\$ 96,956	\$ 18,115	\$ 110,765	\$ 101,578	\$ 13,040
Living benefits reinsured	\$ 6,491	\$ 4,622	\$ 1,871	\$ 7,108	\$ 5,506	\$ 1,611
Death benefits reinsured	4,360	3,430	1,104	4,924	4,070	1,052
Total reinsured	\$ 10,851	\$ 8,052	\$ 2,975	\$ 12,032	\$ 9,576	\$ 2,663
Total, net of reinsurance	\$ 102,033	\$ 88,904	\$ 15,140	\$ 98,733	\$ 92,002	\$ 10,377
Living benefits dynamically hedged	\$ 55,522	\$ 50,550	\$ 6,346	\$ 44,606	\$ 44,827	\$ 2,685
Death benefits dynamically hedged	5,133	3,461	739	4,685	3,032	424
Total dynamically hedged	\$ 60,655	\$ 54,011	\$ 7,085	\$ 49,291	\$ 47,859	\$ 3,109
Living benefits retained	\$ 35,669	\$ 30,170	\$ 6,666	\$ 42,772	\$ 38,509	\$ 5,931
Death benefits retained	5,709	4,723	1,389	6,670	5,634	1,337
<b>Total, net of reinsurance and dynamic hedging</b>	<b>\$ 41,378</b>	<b>\$ 34,893</b>	<b>\$ 8,055</b>	<b>\$ 49,442</b>	<b>\$ 44,143</b>	<b>\$ 7,268</b>

<sup>(1)</sup> Contracts with guaranteed long-term care benefits are included in this category.

<sup>(2)</sup> Where a policy includes both living and death benefits, the guarantee in excess of the living benefit is included in the death benefit category as outlined in footnote (3).

<sup>(3)</sup> Death benefits include standalone guarantees and guarantees in excess of living benefit guarantees where both death and living benefits are provided on a policy.

<sup>(4)</sup> Amount at risk (in-the-money amount) is the excess of guarantee values over fund values on all policies where the guarantee value exceeds the fund value. This amount is not currently payable. For guaranteed minimum death benefit, the net amount at risk is defined as the current guaranteed minimum death benefit in excess of the current account balance. For guaranteed minimum income benefit, the net amount at risk is defined as the excess of the current annuitization income base over the current account value. For all guarantees, the net amount at risk is floored at zero at the single contract level.

As at December 31, 2011, approximately 63 per cent of the guarantee value was either dynamically hedged or reinsured, compared to 55 per cent at December 31, 2010. The business dynamically hedged at December 31, 2011 comprises 59 per cent of the variable annuity guarantee values, net of amounts reinsured.

The policy liabilities established for these benefits were \$10,021 million at December 31, 2011 (2010 – \$3,101 million). These policy liabilities include the policy liabilities for both the hedged and the unhedged business. For unhedged business, policy liabilities were \$3,586 million at December 31, 2011 (2010 – \$2,083 million). The policy liabilities for the hedged block were \$6,435 million at December 31, 2011 (2010 – \$1,018 million). The increase in the policy liabilities for the hedged block was primarily due to the adverse impact of interest rate movements on the cost of hedging associated with the dynamic hedging program that is reflected in IFRS hedged reserves and the adverse impact from basis changes. The year over year increase in policy liabilities related to the unhedged business was due primarily to the adverse impacts from basis changes and interest rate movements, offset by the favourable impact of improved public equity markets.

### Variable Contracts with Guarantees

Variable contracts with guarantees are invested, at the policyholder's discretion subject to contract limitations, in various fund types within the segregated fund accounts and other investments. The account balances by investment category are set out below:

#### Investment categories for variable contracts with guarantees

As at December 31, (C\$ millions)	2011	2010
Equity funds	\$ 34,123	\$ 37,400
Balanced funds	55,921	57,411
Bond funds	10,296	10,430
Money market funds	3,027	2,805
Other fixed interest rate investments	1,519	1,452
<b>Total</b>	<b>\$ 104,886</b>	<b>\$ 109,498</b>

The following table shows the notional value of shorted equity futures contracts utilized for our variable annuity guarantee dynamic hedging and our macro equity risk hedging.

#### Notional value of shorted equity futures contracts

As at December 31, (C\$ millions)	2011	2010
For variable annuity guarantee dynamic hedging strategy <sup>(1)</sup>	\$ 10,600	\$ 4,200
For macro equity risk hedging strategy	5,600	5,100
<b>Total</b>	<b>\$ 16,200</b>	<b>\$ 9,300</b>

<sup>(1)</sup> Reflects net short and long positions for exposures to similar exchanges.

## Publicly Traded Equity Performance Risk

The tables below show the potential impact on net income attributed to shareholders resulting from an immediate 10, 20 and 30 per cent change in market values of publicly traded equities followed by a return to the expected level of growth assumed in the valuation of policy liabilities. The potential impact is shown before and after taking into account the impact of the change in markets on the hedge assets.

While we cannot reliably estimate the amount of the change in dynamically hedged variable annuity policy liabilities that will not be offset by the profit or loss on the dynamic hedge assets, we make certain assumptions for the purposes of estimating the impact on shareholders' net income. We assume that for a 10, 20 and 30 per cent decrease in the market value of public equities, the profit from the hedge assets offsets 80, 75 and 70 per cent, respectively, of the loss arising from the change in the policy liabilities of the guarantees dynamically hedged. For a 10, 20 and 30 per cent market increase in the market value of public equities the loss on the dynamic hedges is assumed to be 120, 125 and 130 per cent of the gain from the dynamically hedged variable annuity policy liabilities, respectively.

As at December 31, 2011 the change in the value of the hedge assets was estimated to offset 60 to 70 per cent of the underlying impact on net income attributed to shareholders<sup>16</sup> from a 10 per cent decline in publicly traded equity value. The lower end of the range assumes that the dynamic hedge assets would cover 80 per cent of the loss from the dynamically hedged variable annuity guarantee liabilities and the upper end of the ranges assumes the dynamic hedge assets would completely offset the loss from the dynamically hedged variable annuity guarantee liabilities. The Company targets to have hedge assets mitigate 60 per cent of the underlying impact by the end of 2012 and 75 per cent of the underlying impact by the end of 2014.

Sensitivities at December 31, 2011 were largely unchanged as compared to December 31, 2010, with reductions in equity sensitivity as a result of the additional dynamic hedging on our in-force variable annuity business in Q1 2011 being largely offset by the increased equity sensitivity on our non-dynamically hedged in-force business as a result of equity market declines during Q3 2011.

### Potential impact on net income attributed to shareholders arising from changes to public equity returns<sup>(1)</sup>

As at December 31, 2011

(C\$ millions)	-30%	-20%	-10%	+10%	+20%	+30%
<b>Underlying sensitivity of net income attributed to shareholders<sup>(2)</sup></b>						
Variable annuity guarantees	\$ (6,080)	\$ (3,830)	\$ (1,780)	\$ 1,490	\$ 2,720	\$ 3,690
Asset based fees	(260)	(180)	(80)	90	180	260
General fund equity investments <sup>(3)</sup>	(300)	(200)	(110)	100	200	300
<b>Total underlying sensitivity</b>	<b>\$ (6,640)</b>	<b>\$ (4,210)</b>	<b>\$ (1,970)</b>	<b>\$ 1,680</b>	<b>\$ 3,100</b>	<b>\$ 4,250</b>
<b>Impact of hedge assets</b>						
Impact of macro hedge assets	\$ 1,420	\$ 950	\$ 470	\$ (470)	\$ (950)	\$ (1,420)
Impact of dynamic hedge assets assuming the change in the value of the hedge assets completely offsets the change in the dynamically hedged variable annuity guarantee liabilities	3,170	1,980	900	(710)	(1,240)	(1,610)
<b>Total impact of hedge assets assuming the change in value of the dynamic hedge assets completely offsets the change in the dynamically hedged variable annuity guarantee liabilities</b>	<b>\$ 4,590</b>	<b>\$ 2,930</b>	<b>\$ 1,370</b>	<b>\$ (1,180)</b>	<b>\$ (2,190)</b>	<b>\$ (3,030)</b>
<b>Net impact assuming the change in the value of the hedge assets completely offsets the change in the dynamically hedged variable annuity guarantee liabilities</b>	<b>\$ (2,050)</b>	<b>\$ (1,280)</b>	<b>\$ (600)</b>	<b>\$ 500</b>	<b>\$ 910</b>	<b>\$ 1,220</b>
Impact of assuming the change in value of the dynamic hedge assets does not completely offset the change in the dynamically hedged variable annuity guarantee liabilities <sup>(4)</sup>	(950)	(500)	(180)	(140)	(300)	(480)
<b>Net impact assuming the change in value of the dynamic hedge assets does not completely offset the change in the dynamically hedged variable annuity guarantee liabilities<sup>(4)</sup></b>	<b>\$ (3,000)</b>	<b>\$ (1,780)</b>	<b>\$ (780)</b>	<b>\$ 360</b>	<b>\$ 610</b>	<b>\$ 740</b>
<b>Percentage of underlying earnings sensitivity to movements in equity markets that is offset by hedges if dynamic hedge assets completely offset the change in the dynamically hedged variable annuity guarantee liability</b>	<b>69%</b>	<b>70%</b>	<b>70%</b>	<b>70%</b>	<b>71%</b>	<b>71%</b>
<b>Percentage of underlying earnings sensitivity to movements in equity markets that is offset by hedge assets if dynamic hedges do not completely offset the change in the dynamically hedged variable annuity guarantee liability<sup>(4)</sup></b>	<b>55%</b>	<b>58%</b>	<b>60%</b>	<b>79%</b>	<b>80%</b>	<b>83%</b>

<sup>(1)</sup> See "Caution Related to Sensitivities" above.

<sup>(2)</sup> Defined as earnings sensitivity to a change in public equity markets including settlements on reinsurance contracts existing at September 30, 2010, but before the offset of hedge assets or other risk mitigants.

<sup>(3)</sup> This impact for general fund equities is calculated as at a point-in-time and does not include: (i) any potential impact on public equity weightings; (ii) any gains or losses on public equities held in the Corporate and Other segment; or (iii) any gains or losses on public equity investments held in Manulife Bank. The sensitivities assume that the participating policy funds are self-supporting and generate no material impact on net income attributed to shareholders as a result of changes in equity markets.

<sup>(4)</sup> For a 10, 20 and 30 per cent market decrease the gain on the dynamic hedge assets is assumed to be 80, 75 and 70 per cent of the loss from the dynamically hedged variable annuity policy liabilities, respectively. For a 10, 20 and 30 per cent market increase the loss on the dynamic hedges is assumed to be 120, 125 and 130 per cent of the gain from the dynamically hedged variable annuity policy liabilities, respectively. For presentation purposes, numbers are rounded.

<sup>16</sup> Defined as earnings sensitivity to a 10 per cent decline in public equity markets including settlements on reinsurance contracts existing at September 30, 2010, but before the offset of hedge assets or other risk mitigants.

## Potential impact on net income attributed to shareholders arising from changes to public equity returns<sup>(1)</sup>

As at December 31, 2010

(C\$ millions)	-30%	-20%	-10%	+10%	+20%	+30%
<b>Underlying sensitivity of net income attributed to shareholders<sup>(2)</sup></b>						
Variable annuity guarantees	\$ (4,840)	\$ (2,940)	\$ (1,300)	\$ 1,010	\$ 1,830	\$ 2,300
Asset based fees	(270)	(180)	(90)	90	180	270
General fund equity investments <sup>(3)</sup>	(270)	(180)	(90)	100	200	300
<b>Total underlying sensitivity</b>	<b>\$ (5,380)</b>	<b>\$ (3,300)</b>	<b>\$ (1,480)</b>	<b>\$ 1,200</b>	<b>\$ 2,210</b>	<b>\$ 2,870</b>
<b>Impact of hedge assets</b>						
Impact of macro hedge assets	\$ 1,270	\$ 850	\$ 420	\$ (420)	\$ (850)	\$ (1,270)
Impact of dynamic hedge assets assuming the change in the value of the hedge assets completely offsets the change in the dynamically hedged variable annuity guarantee liabilities	1,680	980	400	(260)	(440)	(560)
<b>Total impact of hedge assets assuming the change in value of the dynamic hedge assets completely offsets the change in the dynamically hedged variable annuity guarantee liabilities</b>	<b>\$ 2,950</b>	<b>\$ 1,830</b>	<b>\$ 820</b>	<b>\$ (680)</b>	<b>\$ (1,290)</b>	<b>\$ (1,830)</b>
<b>Net impact assuming the change in the value of the hedge assets completely offsets the change in the dynamically hedged variable annuity guarantee liabilities</b>	<b>\$ (2,430)</b>	<b>\$ (1,470)</b>	<b>\$ (660)</b>	<b>\$ 520</b>	<b>\$ 920</b>	<b>\$ 1,040</b>
Impact of assuming the change in value of the dynamic hedge assets does not completely offset the change in the dynamically hedged variable annuity guarantee liabilities <sup>(4)</sup>	(500)	(240)	(80)	(60)	(110)	(170)
<b>Net impact assuming the change in value of the dynamic hedge assets does not completely offset the change in the dynamically hedged variable annuity guarantee liabilities<sup>(4)</sup></b>	<b>\$ (2,930)</b>	<b>\$ (1,710)</b>	<b>\$ (740)</b>	<b>\$ 460</b>	<b>\$ 810</b>	<b>\$ 870</b>
<b>Percentage of underlying earnings sensitivity to movements in equity markets that is offset by hedges if dynamic hedge assets completely offset the change in the dynamically hedged variable annuity guarantee liability</b>	<b>55%</b>	<b>55%</b>	<b>55%</b>	<b>57%</b>	<b>58%</b>	<b>64%</b>
<b>Percentage of underlying earnings sensitivity to movements in equity markets that is offset by hedge assets if dynamic hedges do not completely offset the change in the dynamically hedged variable annuity guarantee liability<sup>(4)</sup></b>	<b>46%</b>	<b>48%</b>	<b>50%</b>	<b>62%</b>	<b>63%</b>	<b>70%</b>

<sup>(1)</sup> See "Caution Related to Sensitivities" above.

<sup>(2)</sup> Defined as earnings sensitivity to a change in public equity markets including settlements on reinsurance contracts existing at September 30, 2010, but before the offset of hedge assets or other risk mitigants.

<sup>(3)</sup> For a 10, 20 and 30 per cent market decrease the gain on the dynamic hedges is assumed to be 80, 75 and 70 per cent of the loss from the dynamically hedged variable annuity policy liabilities, respectively. For a 10, 20 and 30 per cent market increase the loss on the dynamic hedges is assumed to be 120, 125 and 130 per cent of the gain from the dynamically hedged variable annuity policy liabilities, respectively. For presentation purposes, numbers are rounded.

<sup>(4)</sup> This impact for general fund equities is calculated as at a point-in-time and does not include: (i) any potential impact on public equity weightings; (ii) any gains or losses on public equities held in the Corporate and Other segment; or (iii) any gains or losses on public equity investments held in Manulife Bank. The sensitivities assume that the participating policy funds are self-supporting and generate no material impact on net income attributed to shareholders as a result of changes in equity markets.

Changes in equity markets impact our available and required components of the MCCR ratio. The following table shows the potential impact to MLI's MCCR ratio resulting from changes in public equity market values, assuming that the change in the value of the hedge assets does not completely offset the change of the related variable annuity guarantee liabilities.

## Potential impact on MLI's MCCR ratio arising from public equity returns different than the expected return for policy liability valuation<sup>(1),(2)</sup>

As at December 31,	2011						2010					
	-30%	-20%	-10%	10%	20%	30%	-30%	-20%	-10%	10%	20%	30%
Impact on MLI MCCR (percentage points)	(27)	(15)	(7)	2	3	4	(27)	(16)	(7)	7	15	24

<sup>(1)</sup> See "Caution Related to Sensitivities" above.

<sup>(2)</sup> For a 10, 20 and 30 per cent market decrease the gain on the dynamic hedge assets is assumed to be 80, 75 and 70 per cent of the loss from the dynamically hedged variable annuity policy liabilities, respectively. For a 10, 20 and 30 per cent market increase the loss on the dynamic hedge assets is assumed to be 120, 125 and 130 per cent of the gain from the dynamically hedged variable annuity policy liabilities, respectively.

## Interest Rate and Spread Risk

The following table shows the potential impact on net income attributed to shareholders of a change of one per cent, in current government, swap and corporate rates for all maturities across all markets with no change in credit spreads between government, swap and corporate rates, and with a floor of zero on government rates, relative to the rates assumed in the valuation of policy liabilities. We also assume no change to the ultimate reinvestment rate ("URR").

### Potential impact on annual net income attributed to shareholders of an immediate one per cent parallel change in interest rates relative to rates assumed in the valuation of policy liabilities<sup>(1),(2),(3),(4)</sup>

As at December 31, (C\$ millions)	2011		2010	
	-100bp	+100bp	-100bp	+100bp
General fund products <sup>(2)</sup>	\$ (500)	\$ 350	\$ (1,400)	\$ 1,200
Variable annuity guarantees <sup>(3)</sup>	(500)	350	(400)	300
<b>Total</b>	<b>\$ (1,000)</b>	<b>\$ 700</b>	<b>\$ (1,800)</b>	<b>\$ 1,500</b>

<sup>(1)</sup> See "Caution Related to Sensitivities" above.

<sup>(2)</sup> The sensitivities assume that the participating policy funds are self-supporting and generate no material impact on net income attributed to shareholders as a result of changes in interest rates.

<sup>(3)</sup> For variable annuity liabilities that are dynamically hedged, it is assumed that interest rate hedges are rebalanced at 20 basis point intervals.

<sup>(4)</sup> Sensitivities are based on projected asset and liability cash flows at the beginning of the quarter adjusted for the estimated impact of new business and investment market and activities during the quarter. Any true-up to these estimates, as a result of the final asset and liability cash flows to be used in the next quarter's projection, are reflected in the next quarter's sensitivities.

The decline in exposures was primarily driven by the actions to extend the duration of our fixed income investments supporting policyholder liabilities. These impacts were partially offset by generally lower interest rates in the markets where we operate and the impact of increases to policy liabilities as a result of our annual review of policy valuation assumptions.

Actuarial reserves are determined by testing a range of future interest rate scenarios, including those prescribed by actuarial standards of practice. These future scenarios are derived from interest rates and spreads at the end of the quarter. The scenario that produces the highest reserve requirement determines the reserve that is held at the end of the quarter and is called the booking scenario.

Should interest rates and/or corporate spreads decline as indicated in the sensitivities above (and potentially smaller amounts), the future interest rate scenario that would produce the highest reserve, or booking scenario, could change in some jurisdictions. The current booking scenario begins with current rates grading to a URR with corporate bond spreads that grade to an expected long-term level over five years and a proportional reduction in future investment in corporate bonds to zero over 20 years. The potential change is one where then current interest rates, spreads and investment in corporate bonds prevail for the lifetime of the business.

The impact of the change in the booking scenario, should interest rates and spreads decline in parallel and by the amounts indicated, is incorporated into the earnings sensitivities shown above. For this reason, the impact of changes less than the amounts indicated are unlikely to be linear relative to this estimate. The change in booking scenario added approximately \$500 million to the impact of a 100 basis point decline in interest rates and \$300 million to the impact of a 50 basis point reduction in corporate spreads. Actual results in the future will be affected by a wide variety of factors and no simple formula can accurately predict the potential impact.

The potential impact on annual net income attributed to shareholders provided in the table above does not include any impact arising from the sale of fixed income assets held in our surplus segment. Changes in the market value of these assets may provide a natural economic offset to the interest rate risk arising from our product liabilities. In order for there to also be an accounting offset, the Company would need to realize a portion of the AFS fixed income asset unrealized gains or losses. It is not certain we would crystallize any of the unrealized gains or losses available. As at December 31, 2011 the AFS fixed income assets held in the surplus segment were in a net after-tax unrealized gain position of \$131 million (gross after-tax unrealized gains were \$400 million and gross after-tax unrealized losses were \$269 million).

The following table shows the potential impact on net income attributed to shareholders including the change in the market value of fixed income assets held in our surplus segment, which could be realized through the sale of these assets.

### Potential impact on annual net income attributed to shareholders of an immediate one per cent parallel change in interest rates including on the change in market value of AFS fixed income assets in the surplus segment<sup>(1),(2)</sup>

As at December 31, (C\$ millions)	2011		2010	
	-100bp	+100bp	-100bp	+100bp
Impact excluding the change in the market value of AFS fixed income assets held in the surplus segment	\$ (1,000)	\$ 700	\$ (1,800)	\$ 1,500
Impact of the change in the market value of AFS fixed income assets held in the surplus segment <sup>(2)</sup>	800	(700)	1,200	(900)
Including 100% of the change in the market value of fixed income assets held in the surplus segment <sup>(2)</sup>	\$ (200)	\$ –	\$ (600)	\$ 600

<sup>(1)</sup> See "Caution Related to Sensitivities" above.

<sup>(2)</sup> The amount of gain or loss that can be realized on AFS fixed income assets held in the surplus segment will depend on the amount of unrealized gain or loss. The table above only shows the change in the unrealized position, as the total unrealized position will depend upon the unrealized position at the beginning of the period.

The following table shows the potential impact on MLI's MCCR ratio from an immediate change in interest rates.

#### Potential impact on MLI's MCCR ratio arising from an immediate one per cent parallel change in interest rates<sup>(1)</sup>

As at December 31, (percentage points)	2011		2010	
	-100bp	+100bp	-100bp	+100bp
Impact excluding the change in the market value of AFS fixed income assets held in the surplus segment	(18)	13	(23)	19
Impact including 100% of the change in the market value of the AFS fixed income assets held in the surplus segment <sup>(2)</sup>	(13)	8	(14)	12

<sup>(1)</sup> See "Caution Related to Sensitivities" above.

<sup>(2)</sup> The amount of gain or loss that can be realized on AFS fixed income assets held in the surplus segment will depend on the amount of unrealized gain or loss. The table above only shows the change in the unrealized position, as the total unrealized position will depend upon the unrealized position at the beginning of the period.

The following tables show the potential impact on net income attributed to shareholders resulting from a change in corporate spreads and swap spreads over government bond rates for all maturities across all markets with a floor of zero on the total interest rate, relative to the spreads assumed in the valuation of policy liabilities.

#### Potential impact on net income attributed to shareholders arising from changes to corporate spreads<sup>(1),(2)</sup>

As at December 31, (C\$ millions)	2011		2010	
	-50bp	+50bp	-50bp	+50bp
Corporate spreads <sup>(3),(4),(5)</sup>	\$ (900)	\$ 500	\$ (500)	\$ 400

<sup>(1)</sup> See "Caution Related to Sensitivities" above.

<sup>(2)</sup> The sensitivity was estimated as 50% of the sensitivity to a 100 basis point change. Actual results may differ materially from these estimates.

<sup>(3)</sup> The impact on net income attributed to shareholders assumes no gains or losses are realized on our AFS fixed income assets held in the surplus segment and excludes the impact arising from changes in segregated fund bond fund value arising from changes in credit spreads. The sensitivities assume that the participating policy funds are self-supporting and generate no material impact on net income attributed to shareholders as a result of changes in corporate spreads.

<sup>(4)</sup> Corporate spreads are assumed to grade to the long-term average over five years.

<sup>(5)</sup> Sensitivities are based on projected asset and liability cash flows at the beginning of the quarter adjusted for the estimated impact of new business and investment market and activities during the quarter. Any true-up to these estimates, as a result of the final asset and liability cash flows to be used in the next quarter's projection, are reflected in the next quarter's sensitivities.

The sensitivity of shareholders' net earnings to changes in corporate spreads increased over 2011, primarily due to the change in the booking scenario described above and the decline in interest rates over the year.

#### Potential impact on net income attributed to shareholders arising from changes to swap spreads<sup>(1),(2),(3)</sup>

As at December 31, (C\$ millions)	2011		2010	
	-20bp	+20bp	-20bp	+20bp
Swap spreads <sup>(2)</sup>	\$ 600	\$ (600)	\$ 200	\$ (200)

<sup>(1)</sup> See "Caution Related to Sensitivities" above.

<sup>(2)</sup> The impact on net income attributed to shareholders assumes no gains or losses are realized on our AFS fixed income assets held in the surplus segment and excludes the impact arising from changes in segregated fund bond fund value arising from changes in credit spreads. The sensitivities assume that the participating policy funds are self-supporting and generate no material impact on net income attributed to shareholders as a result of changes in swap spreads.

<sup>(3)</sup> Sensitivities are based on projected asset and liability cash flows at the beginning of the quarter adjusted for the estimated impact of new business and investment market and activities during the quarter. Any true-up to these estimates, as a result of the final asset and liability cash flows to be used in the next quarter's projection, are reflected in the next quarter's sensitivities.

The sensitivity of shareholders' net earnings to changes in swap spreads increased over the year due to the additional forward starting swaps executed.

#### Alternative Non-Fixed Income Asset Performance Risk

The following table shows the potential impact on net income attributed to shareholders resulting from changes in market values of alternative non-fixed income assets different than the expected levels assumed in the valuation of policy liabilities.

#### Potential impact on net income attributed to shareholders arising from changes in alternative non-fixed income asset returns<sup>(1),(2)</sup>

As at December 31, (C\$ millions)	2011		2010	
	-10%	+10%	-10%	+10%
Real estate, agriculture and timber assets	\$ (750)	\$ 750	\$ (500)	\$ 600
Private equities and other alternative non-fixed income assets	(550)	550	(400)	400
Alternative non-fixed income assets	\$ (1,300)	\$ 1,300	\$ (900)	\$ 1,000

<sup>(1)</sup> See "Caution Related to Sensitivities" above.

<sup>(2)</sup> This impact is calculated as at a point-in-time impact and does not include: (i) any potential impact on non-fixed income asset weightings; (ii) any gains or losses on non-fixed income investments held in the Corporate and Other segment; or (iii) any gains or losses on non-fixed income investments held in Manulife Bank. The sensitivities assume that the participating policy funds are self-supporting and generate no material impact on net income attributed to shareholders as a result of changes in alternative non-fixed income asset returns.

The increased sensitivity from December 31, 2010 to December 31, 2011 is primarily related to the drop in fixed income rates (reducing the rate at which funds can reinvest) as well as the change in foreign exchange rates.

### Foreign Exchange Risk

The following table shows the impact on net income attributed to shareholders of a ten per cent change in the Canadian dollar relative to our key operating currencies.

#### Potential impact on net income attributed to shareholders<sup>(1)</sup>

As at December 31, (C\$ millions)	2011		2010	
	+10% strengthening	-10% weakening	+10% strengthening	-10% weakening
10% change relative to the U.S. Dollar	\$ 91	\$ (91)	\$ 129	\$ (129)
10% change relative to the Japanese Yen	(8)	8	9	(9)

<sup>(1)</sup> See "Caution Related to Sensitivities" above. Normally, a strengthening Canadian dollar would reduce the Canadian dollar equivalent of our foreign denominated earnings. Applying a ten per cent strengthening of the Canadian dollar to the U.S. dollar denominated losses experienced in 2010 and 2011 and the Japanese Yen denominated losses in 2010 reduces these losses and therefore would have a positive impact to shareholders' earnings.

The following table shows the impact on shareholders' equity of a ten per cent change in the Canadian dollar relative to our key operating currencies.

#### Potential impact on shareholders' equity<sup>(1)</sup>

As at December 31, (C\$ millions)	2011		2010	
	+10% strengthening	-10% weakening	+10% strengthening	-10% weakening
10% change relative to the U.S. Dollar	\$ (1,564)	\$ 1,564	\$ (1,807)	\$ 1,807
10% change relative to the Japanese Yen	(310)	310	(292)	292

<sup>(1)</sup> See "Caution Related to Sensitivities" above.

### Liquidity Risk

**Liquidity risk is the risk of not having access to sufficient funds or liquid assets to meet both expected and unexpected cash and collateral demands.**

### Key Risk Factors

Manulife Financial is exposed to liquidity risk in each of our operating companies and in our holding company. In the operating companies, expected cash and collateral demands arise day-to-day to fund anticipated policyholder benefits, withdrawals of customer deposit balances, reinsurance settlements, derivative instrument settlements/collateral pledging, expenses, investment and hedging activities. Under stressed conditions, unexpected cash and collateral demands could arise primarily from an increase in the level of policyholders either terminating policies with large cash surrender values or not renewing them when they mature, withdrawals of customer deposit balances, borrowers renewing or extending their loans when they mature, derivative settlements or collateral demands, and reinsurance settlements or collateral demands. The implementation of Dodd-Frank in the United States in 2012 will require certain derivatives to migrate from bilateral arrangements to clearing houses, and this is expected to increase liquidity requirements to support these contracts.

The ability of our holding company to fund its cash requirements depends upon it receiving dividends, distributions and other payments from our operating subsidiaries. These subsidiaries are generally required to maintain solvency and capital standards imposed by their local regulators and, as a result, may have restrictions on payments which they may make to MFC.

In the normal course of business, third party banks issue letters of credit on our behalf. In lieu of posting collateral, our businesses utilize letters of credit for which third parties are the beneficiaries, as well as for affiliate reinsurance transactions between subsidiaries of MFC. Letters of credit and letters of credit facilities must be renewed periodically. At time of renewal, the Company is exposed to repricing risk and under adverse conditions increases in costs will be realized. In the most extreme scenarios, letters of credit capacity could become constrained due to non-renewals which would restrict our flexibility to manage capital at the operating company level. This could negatively impact our ability to meet local capital requirements or our sales of products in jurisdictions in which our operating companies have been affected. Although the Company did not experience any material change in aggregate capacity during the financial crisis of the past three years, changes in prices and conditions were adverse during the market turbulence. There were no assets pledged against these outstanding letters of credit as at December 31, 2011.

### Risk Management Strategy

Global liquidity management policies and procedures are designed to provide adequate liquidity to cover cash and collateral obligations as they come due, and to sustain and grow operations in both normal and stressed conditions. They take into account any legal, regulatory, tax, operational or economic impediments to inter-entity funding.

We seek to reduce liquidity risk by diversifying our business across different products, markets, geographical regions and policyholders. We design insurance products to encourage policyholders to maintain their policies in-force, to help generate a diversified and stable flow of recurring premium income. We design the policyholder termination features of our wealth management products and related investment strategies with the goal of mitigating the financial exposure and liquidity risk related to unexpected policyholder terminations. We establish and implement investment strategies intended to match the term profile of the assets to the liabilities they support, taking into account the potential for unexpected policyholder terminations and resulting liquidity needs. Liquid assets represent a large portion of our total assets. We aim to reduce liquidity risk in our deposit funded businesses by diversifying our funding sources and appropriately managing the term structure of our funding. We forecast and monitor daily operating liquidity and cash movements in various individual entities and operations as well as centrally, aiming to ensure liquidity is available and cash is employed optimally.

We also maintain centralized cash pools and access to other sources of liquidity such as repurchase funding agreements. Our centralized cash pool consists of cash or near-cash, high quality short-term investments that are continually monitored for their credit quality and market liquidity.

Through the normal course of business, pledging of assets is required to comply with jurisdictional regulatory and other requirements including collateral pledged to mitigate derivative counterparty credit risk, assets pledged to exchanges as initial margin and assets held as collateral for repurchase funding agreements. Total unencumbered assets were \$261.8 billion as at December 31, 2011 (2010 – \$214.6 billion).

The market values of our derivative portfolio are periodically stress tested based on shocks to interest rates, underlying indices, and foreign exchange rates to assess the potential collateral and cash settlement requirements under stressed conditions. Increased use of derivatives for hedging purposes has necessitated greater emphasis on measurement and management of contingent liquidity risk. In 2011, comprehensive new liquidity stress testing was implemented which measures, on an integrated basis, the impact of equity market and rate shocks on derivative collateral requirements, reserve requirements, reinsurance settlements, policyholder behaviour and the market value of eligible liquid assets. We manage the asset mix of our balance sheet taking into account the need to hold adequate unencumbered and appropriate liquid assets to satisfy the potential additional requirements arising under stressed scenarios and to allow our liquidity ratios to remain strong.

Consolidated group operating and strategic liquidity levels are managed against established minimums. We set minimum operating liquidity as the level of one month's operating cash outflows. We measure strategic liquidity under both immediate (within one month) and ongoing (within one year) stress scenarios. Our policy is to maintain the ratio of adjusted liquid assets to adjusted policy liabilities at or above a pre-established target. Adjusted liquid assets include unencumbered cash and short-term investments, and marketable bonds and stocks that are discounted to reflect convertibility to cash, net of maturing debt obligations. Policy liabilities are adjusted to reflect their potential for withdrawal. In addition to managing the consolidated liquidity levels, each entity maintains sufficient liquidity to meet its standalone demands.

Manulife Bank has a liquidity risk management policy framework, managed on a standalone basis. The framework includes stress testing, cashflow modeling, a funding plan and a contingency plan. The bank has established a securitization infrastructure which enables the bank to access a range of funding and liquidity sources.

## Risk Exposure Measures

Our strategic liquidity ratios are provided in the following table.

As at December 31, (C\$ millions, unless otherwise stated)	2011		2010	
	Immediate Scenario	Ongoing Scenario	Immediate Scenario	Ongoing Scenario
Adjusted liquid assets	\$ 123,429	\$ 124,685	\$ 103,787	\$ 106,341
Adjusted policy liabilities	\$ 27,452	\$ 35,656	\$ 24,467	\$ 32,058
Liquidity ratio	450%	350%	424%	332%

## Credit Risk

***Credit risk is the risk of loss due to the inability or unwillingness of a borrower or counterparty to fulfill its payment obligations.***

## Key Risk Factors

Worsening or continued poor economic conditions could result in borrower or counterparty defaults or downgrades, and could lead to increased provisions or impairments related to our general fund invested assets and off-balance sheet derivative financial instruments, and an increase in provisions for future credit impairments to be included in our policy liabilities. Any of our reinsurance providers being unable or unwilling to fulfill their contractual obligations related to the liabilities we cede to them could lead to an increase in policy liabilities.

## Risk Management Strategy

The Company has established objectives for overall quality and diversification of our general fund investment portfolio and criteria for the selection of counterparties, including derivative counterparties, reinsurers and insurance providers. Our policies establish exposure

limits by borrower, corporate connection, quality rating, industry, and geographic region, and govern the usage of credit derivatives. Corporate connection limits vary according to risk rating. Our general fund fixed income investments are primarily investment grade bonds and commercial mortgages. While we have minimal exposure to credit default swaps, we have recently launched a program for selling CDS that employs a highly selective, diversified and conservative approach. All CDS decisions will follow the same rigorous underwriting standards as our cash bond portfolio and we believe the addition of this asset class will allow us to better diversify our overall credit portfolio.

Our credit-granting units follow a defined evaluation process that provides an objective assessment of credit proposals. We assign each investment a risk rating based on a detailed examination of the borrower that includes a review of business strategy, market competitiveness, industry trends, financial strength, access to funds, and other risks facing the organization. We assess and update risk ratings regularly, based on a standardized 22-point scale consistent with those of external rating agencies. For additional input to the process, we also assess credit risks using a variety of industry standard market-based tools and metrics. We map our risk ratings to pre-established probabilities of default and loss given defaults, based on historical industry and Company experience, and to resulting default costs.

We establish delegated credit approval authorities and make credit decisions on a case-by-case basis at a management level appropriate to the size and risk level of the transaction, based on the delegated authorities that vary according to risk rating. We refer all major credit decisions to the Credit Committee and the largest credit decisions to the CEO for approval and, in certain cases, to the Board of Directors.

We limit the types of authorized derivatives and applications and require pre-approval of all derivative application strategies and regular monitoring of the effectiveness of derivative strategies. Derivative counterparty exposure limits are established based on a minimum acceptable counterparty credit rating of A- from internationally recognized rating agencies. We measure derivative counterparty exposure as net potential credit exposure, which takes into consideration mark-to-market values of all transactions with each counterparty, net of any collateral held, and an allowance to reflect future potential exposure. We measure reinsurance counterparty exposure, taking into account current exposures and potential future exposures reflecting the level of ceded policy liabilities. We require all reinsurance counterparties and insurance providers to meet minimum risk rating criteria.

Regular reviews of the credits within the various portfolios are undertaken with the goal of identifying changes to credit quality, and where appropriate, taking corrective action. Prompt identification of problem credits is a key objective. CRM provides independent credit risk oversight by reviewing assigned risk ratings, and monitoring problem and potential problem credits.

We establish an allowance for losses on a loan when it becomes impaired as a result of deterioration in credit quality, to the extent there is no longer assurance of timely realization of the carrying value of the loan and related investment income. We reduce the carrying value of an impaired loan to its estimated net realizable value when we establish the allowance. We establish an allowance for losses on reinsurance contracts when a reinsurance counterparty becomes unable or unwilling to fulfill its contractual obligations. We base the allowance for loss on current recoverables and ceded policy liabilities. There is no assurance that the allowance for losses will be adequate to cover future potential losses or that additional allowances or asset write-downs will not be required.

Policy liabilities include general provisions for credit losses from future asset impairments. We set these conservatively, taking into account average historical levels and future expectations, with a provision for adverse deviations. Fluctuations in credit default rates and deterioration in credit ratings of borrowers may result in losses if actual rates exceed expected rates.

Throughout the recent challenging credit environment, our credit policies and procedures and investment strategies have remained fundamentally unchanged. Credit exposure in our investment portfolio is actively managed to reduce risk and mitigate losses and derivative counterparty exposure is managed proactively. Defaults and downgrade charges were generally below the historical average in 2011, however, we still expect volatility on a quarterly basis and losses could potentially rise above long-term expected levels.

### Risk Exposure Measures

As at December 31, 2011 and December 31, 2010, for every 50 per cent that credit defaults over the next year exceeded the rates provided for in policy liabilities, net income attributed to shareholders would be reduced by \$63 million and \$65 million, respectively. Downgrades could also be higher than assumed in policy liabilities resulting in policy liability increases and a reduction in net income.

The table below shows net impaired assets and allowances for loan losses.

### Net Impaired Assets and Loan Losses

As at December 31,  
(C\$ millions, unless otherwise stated)

	2011	2010
Net impaired fixed income assets	\$ 486	\$ 536
Net impaired fixed income assets as a per cent of total invested assets	0.21%	0.27%
Allowance for loan losses	\$ 94	\$ 118

## Insurance Risk

***Insurance risk is the risk of loss due to actual experience emerging differently than assumed when a product was designed and priced with respect to mortality and morbidity claims, policyholder behaviour and expenses.***

### Key Risk Factors

We make a variety of assumptions related to the future level of claims, policyholder behaviour, expenses and sales levels when we design and price products, and when we establish policy liabilities. Assumptions for future claims are based on both Company and industry experience and predictive models, and assumptions for future policyholder behaviour are based on Company experience and predictive models. Assumptions for future policyholder behaviour includes assumptions related to the retention rates for insurance and wealth products. Losses may result should actual experience be materially different than that assumed in the design, pricing and sale of products. Such losses could have a significant adverse effect on our results of operations and financial condition. In addition, we periodically review the assumptions we make in determining our policy liabilities and the review may result in an increase in policy liabilities and a decrease in net income attributable to shareholders. Such assumptions require significant professional judgment, and actual experience may be materially different than the assumptions we make.

Life and health insurance claims may be impacted by the unusual onset of disease or illness, natural disasters, large-scale manmade disasters and acts of terrorism. The ultimate level of lifetime benefits paid to policyholders may be impacted by unexpected changes in life expectancy. Policyholder behaviour including premium payment patterns, policy renewals, lapse rates and withdrawal and surrender activity are influenced by many factors including market and general economic conditions, and the availability and relative attractiveness of other products in the marketplace. For example, a weak or declining economic environment could increase the value of guarantees associated with variable annuities or other embedded guarantees and contribute to adverse policyholder behaviour experience. As well, adverse claims experience could result from systematic anti-selection, which could arise from the development of investor owned and secondary markets for life insurance policies, underwriting process failures, or other factors.

We purchase reinsurance protection on certain risks underwritten by our various business segments. External market conditions determine the availability, terms and cost of the reinsurance protection for new business and, in certain circumstances, the cost of reinsurance for business already reinsured. Accordingly, we may be forced to incur additional costs for reinsurance or may not be able to obtain sufficient reinsurance on acceptable terms, which could adversely affect our ability to write future business or result in the assumption of more risk with respect to those policies we issue.

### Risk Management Strategy

We have established a broad framework for managing insurance risk, together with all other elements of product design, product pricing, underwriting and reinsurance purchase practices, set out by our Product Design and Pricing Policy, Underwriting and Claims Management Policy and Reinsurance Risk Management Policy, and we have established global product design and pricing standards and guidelines, and reinsurance guidelines, aimed to help ensure our product offerings align with our risk taking philosophy and risk targets, and achieve acceptable profit margins. These cover:

- product design features
- use of reinsurance
- pricing models and software
- internal risk-based capital allocations
- target profit objectives
- pricing methods and assumption setting
- stochastic and stress scenario testing
- required documentation
- review and approval processes
- experience monitoring programs

In each business unit, we designate individual pricing officers who are accountable for all pricing activities and chief underwriters who are accountable for the underwriting activities. The general manager and chief financial officer of each business unit, the divisional risk officer and CRM, approve the design and pricing of each product, including key claims, policyholder behaviour, investment return and expense assumptions, as well as reinsurance treaties with third parties, with the goal of meeting corporate standards. Corporate Actuarial approves all policy liability valuation methods and assumptions and approves reinsurance treaties related to business in-force, as well as all related party reinsurance treaties. We perform annual risk and compliance self-assessments of the product development and pricing activities of all businesses. We also facilitate knowledge transfer between staff working with similar businesses in different geographies in order to leverage best practices.

We utilize a global underwriting manual intended to ensure insurance underwriting practices for direct written life business are consistent across the organization while reflecting local conditions. Each business unit establishes underwriting policies and procedures, including criteria for approval of risks and claims adjudication policies and procedures.

We apply retention limits per insured life that are intended to reduce our exposure to individual large claims which are monitored in each business unit. These retention limits vary by market and jurisdiction. We reinsure exposure in excess of these limits with other companies. Our current global retention limit is US\$30 million for a single life (US\$35 million for survivorship life policies) and is shared across businesses. We apply lower limits in some markets and jurisdictions. We aim to further reduce exposure to claims concentrations by applying geographical aggregate retention limits for certain covers. Enterprise-wide, we aim to reduce the likelihood of high aggregate claims by operating internationally and insuring a wide range of unrelated risk events.

The Company's aggregate exposure to each of policyholder behaviour risk and claims risk are managed against enterprise-wide economic capital, regulatory capital and earnings at risk targets. The policyholder behaviour risk targets cover the combined risk arising from policyholder renewal activity, policy lapses and surrenders, withdrawals, premium payment patterns, fund selections, and other policyholder driven activity. The claims risk targets cover the combined risk arising from mortality, longevity and morbidity.

Internal experience studies, as well as trends in our experience and that of the industry, are monitored to update current and projected claims and policyholder behaviour assumptions, resulting in updates to policy liabilities as appropriate.

We continue to seek state regulatory approvals for price increases on existing long-term care business in the United States. We cannot be certain whether or when each approval will be granted. Our policy liabilities reflect our estimates of the impact of these price increases, but should we be less successful than anticipated in obtaining them, then policy liabilities would increase accordingly.

### Risk Exposure Measures

Fluctuations in claims experience may result in losses. The table below shows the potential change in earnings attributable to shareholders, for every five per cent that actual mortality and morbidity rates over the next year differ from the rates provided for in policy liabilities.

#### Potential Impact on Net Income Attributed to Shareholders<sup>(1),(2)</sup>

As at December 31, (C\$ millions)	2011		2010	
	-5%	+5%	-5%	+5%
Impact of change in mortality rates	\$ 34	\$ (34)	\$ 58	\$ (58)
Impact of change in morbidity rates	93	(93)	86	(86)
<b>Total</b>	<b>\$ 127</b>	<b>\$ (127)</b>	<b>\$ 144</b>	<b>\$ (144)</b>

<sup>(1)</sup> See "Caution Related to Sensitivities" above.

<sup>(2)</sup> These exposure measures were determined under the assumption that claims experience would subsequently return to normal levels and as such no change would be required to policy liabilities for future years. The sensitivities assume that the participating policy funds are self supporting and generate no material impact on net income attributed to shareholders as a result of changes in mortality or morbidity rates.

### Operational Risk

***Operational risk is the risk of loss resulting from inadequate or failed internal processes, risk management policies and procedures, systems failures, human performance failures or from external events.***

### Key Risk Factors

Operational risk is naturally present in all of our business activities and encompasses a broad range of risks, including regulatory compliance failures, legal disputes, technology failures, business interruption, information security and privacy, human resource management and employment practices, processing errors, complex modeling, business integration, theft and fraud, and damage to physical assets. Exposures can take the form of financial losses, regulatory sanctions, loss of competitive positioning, or damage to reputation. Operational risk is also embedded in all the practices we use to manage other risks; therefore, if not managed effectively, can impact our ability to manage other key risks such as credit risk, market risk, liquidity risk and insurance risk.

### Risk Management Strategy

Our corporate governance practices, corporate values, and integrated, enterprise-wide approach to managing risk set the foundation for mitigating operational risks. We strengthen this base by establishing appropriate internal controls and systems, compensation programs, and by seeking to retain trained and competent people throughout the organization. We align compensation programs with business strategy, long-term shareholder value and good governance practices, and we benchmark them against peer companies. We establish enterprise-wide risk management programs for specific operational risks that could materially impact our ability to do business or impact our reputation. Within established corporate standards, business unit general managers are accountable for the day-to-day management of the operational risks inherent in their operations. Business units and functional areas perform risk control self-assessments to identify, document and assess inherent operational risks and effectiveness of internal controls. They monitor key risk indicators that provide early warnings of emerging control issues and proactively modify procedures.

Through our corporate insurance program, we transfer a portion of our operational risk exposure by purchasing global and local insurance coverage that provides some protection against unexpected material losses resulting from events such as criminal activity, property loss or damage and liability exposures, or that satisfies legal requirements and contractual obligations. We determine the nature and amount of insurance coverage we purchase centrally, considering our enterprise-wide exposures and risk tolerances.

The following is a further description of key operational risk factors with associated management strategies.

### Legal and Regulatory Risk

In addition to the regulatory and capital requirements described under Strategic Risk, the Company is subject to extensive regulatory oversight by insurance and financial services regulators in the jurisdictions in which we conduct business. While many of these laws and regulations are intended to protect policyholders, beneficiaries, depositors and investors in our products and services, others also set standards and requirements for the governance of our operations. Failure to comply with applicable laws or regulations could result in financial penalties or sanctions, and damage our reputation. We are also regularly involved in litigation, both as a plaintiff or defendant, which could result in an unfavourable resolution.

Global Compliance oversees our regulatory compliance program and function, supported by designated Chief Compliance Officers in every Division. The program is designed to promote compliance with regulatory obligations worldwide and to assist in making the Company aware of the laws and regulations that affect us, and the risks associated with failing to comply. Divisional compliance groups monitor emerging legal and regulatory issues and changes and prepare us to address new requirements. Global Compliance also independently assesses and monitors the effectiveness of a broad range of regulatory compliance processes and business practices against potential legal, regulatory, fraud and reputation risks, and helps to ensure significant issues are escalated and proactively mitigated. Among these processes and business practices are: product design, sales and marketing practices, sales compensation practices, asset management practices, fiduciary responsibilities, employment practices, underwriting and claims processing, privacy (i.e., handling of personal information) and regulatory filings. In addition, we have policies, processes and controls in place to help protect the Company, our customers and other related third parties from acts of fraud and from risks associated with money laundering and terrorist financing. Audit Services and Global Compliance periodically assess the effectiveness of the control environment. For further discussion of government regulation and legal proceedings, refer to “Government Regulation” and “Legal Proceedings” in our most recent Annual Information Form.

### **Technology, Information Security and Business Continuity Risks**

Technology is used in virtually all aspects of our business and operations including the creation and support of new products and services. Our technology infrastructure, information services and applications are governed and managed according to operational integrity, resiliency, data integrity and information security policies, standards and controls. Disruption to Information Services operations due to system failure, security breach or global crisis can have negative consequences for our businesses. We have business continuity and disaster recovery, information security, technology risk and other policies, plans and procedures in place designed to minimize the impact of business disruptions, ensure compliance with laws and regulations and protect confidential/personal information; however these may not be completely effective at avoiding impact to the business. Disruptions, breaches or violations caused by errors, natural disasters, man-made disasters, criminal activity, fraud, cyber attacks, pandemics or other events beyond our control, could prevent us from effectively operating our business, or could adversely impact us from a financial, operational and reputational perspective.

Technology related risks are managed through a standard systems development methodology, business continuity processes and information security practices as part of our Global Information Risk Management program. Global Information Services implements controls to mitigate risks associated with information security, information systems privacy and compliance, business continuity and disaster recovery. The Global Information Risk Management team maintains and updates policies along with standards of practice designed to ensure to the extent practical, key business functions can continue normal operations effectively and efficiently, in the event of a major disruption. Each business unit is accountable for preparing and maintaining its own detailed business continuity plans and processes and the global program incorporates periodic scenario analysis designed to validate the assessment of both critical and non-critical units, as well as the establishment and testing of appropriate business continuity plans for all critical functions. The business continuity team establishes and regularly tests crisis management plans and global crisis communications protocols. The divisions maintain off-site backup facilities and failover capability designed to minimize downtime and accelerate system recovery. As part of our standard vendor management process we subject our outsourcing arrangements, whereby a service provider performs a service activity on behalf of the Company, to standard review procedures, prior to their approval. We have policies and procedures in place to monitor the ongoing results and contractual compliance of such third party arrangements.

### **Human Resource Risks**

We compete with other insurance companies and financial institutions for qualified executives, employees and agents. Competition for the best people is intense and an inability to recruit qualified individuals may negatively impact our ability to execute on business strategies or to conduct our operations. We have established and implemented a number of human resource policies, practices and programs in order to manage these risks, including recruiting programs at every level of the organization, training and development programs, and competitive compensation programs that are designed to attract, motivate and retain high-performing employees.

### **Model Risk**

Our reliance on highly complex models for pricing, valuation and risk measurement, and for input to decision making, is increasing. Consequently, the risk of inappropriate use or interpretation of our models or their output, or the use of deficient models, data or assumptions is growing. Our model risk oversight program includes processes intended to ensure that our critical business models are conceptually sound, used as intended, and to assess the appropriateness of the inputs, assumptions, calculations and outputs.

### **Environmental Risk**

Our Environmental Policy reflects the Company’s commitment to conducting all business activities in a manner that recognizes the need to preserve the quality of the natural environment. Environmental Procedures have been designed to manage environmental risk and to achieve compliance with all applicable environmental laws and regulations for business units, affiliates and subsidiaries. Environmental risk may originate from investment properties that are subject to natural or man-made environmental risk. The environmental risk may result from on-site or off-site (adjacent) due to migration of regulated pollutants or contaminants with financial or reputational environmental risk and liability consequences by virtue of strict liability. Real estate assets may be owned, leased and/or managed, as well as mortgaged by Manulife who might enter into the chain of liability due to foreclosure ownership when in default. Environmental risk could also arise from natural disasters (e.g. weather, fire, earthquake, floods, pests) or human activities (use of chemicals, pesticides) conducted within the site or when impacted from adjacent sites. To mitigate environmental

risk, business units have established protocols and due diligence standards to identify environmental issues in advance of acquisition. Historic and background investigation and subsequent soil and ground water subsurface testing may be conducted as required to assess manageable environmental risk. Regular property inspections and limitations on permitted activities further manage environmental liability or financial risk. Other potentially significant financial risks for individual assets, such as fire and earthquake, have generally been insured where practicable.

### **Additional Risk Factors That May Affect Future Results**

The Accounting Standards Board of the CICA makes changes to the financial accounting and reporting standards that govern the preparation of our financial statements. These changes may be difficult to anticipate and may materially impact how we record and present our financial condition and results of operations. As discussed under "Critical Accounting and Actuarial Policies", the preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts and disclosures made in the financial statements and accompanying notes. These estimates and assumptions may require revision and actual results may differ materially from these estimates. As well, as noted under "Cautionary Statement Concerning Forward-Looking Statements", forward-looking statements involve risks and uncertainties and actual results may differ materially from those expressed or implied in such statements. Key risk factors and their management have been described above, summarized by major risk category.

Other factors that may affect future results include changes in government trade policy; monetary policy; fiscal policy; political conditions and developments in or affecting the countries in which we operate; technological changes; public infrastructure disruptions; climate change; changes in consumer spending and saving habits; the possible impact on local, national or global economies from public health emergencies, such as an influenza pandemic, and international conflicts and other developments including those relating to terrorist activities. Although we take steps to anticipate and minimize risks in general, unforeseen future events may have a negative impact on our business, financial condition and results of operations.

We caution that the preceding discussion of risks that may affect future results is not exhaustive. When relying on our forward-looking statements to make decisions with respect to our Company, investors and others should carefully consider the foregoing risks, as well as other uncertainties and potential events, and other external and Company specific risks that may adversely affect the future business, financial condition or results of operations of our Company.

# Capital Management Framework

Manulife seeks to manage its capital with the objectives of:

- Operating with sufficient capital to be able to honour all policyholder and other obligations with a high degree of confidence;
- Securing stability and flexibility to operate, ensuring best access to capital markets and maintaining target credit ratings; and
- Seeking to optimize return on capital to meet shareholders expectations, subject to constraints and considerations of adequate levels of capital established to meet the first two objectives.

Capital is managed and monitored in accordance with the Capital Management Policy, which is reviewed and approved by the Board of Directors. The policy establishes guidelines regarding the quantity and quality of capital, capital mobility, integration with risk and financial frameworks and proactive assessment of future capital requirements. The Board or its designated committees regularly review the Company's capital position and capital plans. Operational oversight of capital management is provided by the Finance Committee, consisting of senior finance, risk management and investment executives and chaired by the Chief Actuary. The committee reviews issues and initiatives that affect the capital position of MFC's subsidiaries and the Company as a whole.

In assessing appropriate levels of capital, the Company looks at both a global view and regulatory capital definitions and measures applicable to any given entity and jurisdiction in which we operate. The primary assessment measures compare available capital to required capital using risk based factors and methods. Assessments of capital adequacy include internal sensitivity testing, expectations of key external stakeholders such as regulators and rating agencies, peer comparisons and our internal risk capital measurement framework. To ensure ongoing compliance with regulatory constraints, our internal targets for capital exceed regulatory requirements as they take into account risk profiles and external stakeholder perspectives, among other considerations. Management monitors capital against those internal targets and initiates action appropriate given our business objectives.

Our capital assessment includes an annual Dynamic Capital Adequacy Testing ("DCAT"). This test is required by OSFI and assesses the strength of our capital position under severe shock scenarios that include assumptions determined in relation to our business and risk profile. Our DCAT typically includes assessments of shocks related to economic risks pertaining to the performance of equity markets, credit and interest rates, amongst others. The 2011 DCAT results demonstrate that we have sufficient assets to discharge policy liabilities in the various adverse scenarios tested. In addition to DCAT we periodically quantify impacts of various stress scenarios the results of which inform our ongoing proactive capital management.

Capital management is integrated into our product planning and performance management. Capital is generally allocated to business lines based on the higher of the internal risk-based capital and the regulatory capital levels applicable to each jurisdiction.

To manage our overall global capital levels, the currency mix of assets supporting capital is managed in relation to the Company's global required capital level. The impact of currency movements on the capital ratios is thus mitigated as both available and required capital rise (fall) when the Canadian dollar weakens (strengthens).

The composition of capital between equity and other capital instruments impacts the Company's financial strength ratings and therefore is an important consideration in determining the appropriate amount of leverage. The Company monitors and rebalances its capital mix through capital issuances and redemptions.

## MFC Consolidated Capital

The following measure of capital serves as the foundation of our capital management activities at the MFC level.

As at December 31, (C\$ millions)	2011	2010	2009 <sup>(2)</sup>
Total equity <sup>(1)</sup>	<b>\$ 24,879</b>	\$ 24,675	\$ 28,907
Less AOCI (loss) on cash flow hedges	<b>(91)</b>	(55)	(48)
Total equity less AOCI (loss) on cash flow hedges	<b>\$ 24,970</b>	\$ 24,730	\$ 28,955
Liabilities for preferred shares and qualifying capital instruments	<b>4,012</b>	4,004	4,037
Non-controlling interest in subsidiaries <sup>(3)</sup>	—	—	202
<b>Total capital</b>	<b>\$ 28,982</b>	\$ 28,734	\$ 33,194

<sup>(1)</sup> Total equity includes unrealized gains and losses on AFS bonds and AFS equities, net of taxes. Starting in 2009, the current year net unrealized gain or loss on AFS bonds is not part of OSFI regulatory capital. As at December 31, 2011, the gain on AFS bonds, net of taxes, was \$193 (2010 – \$168).

<sup>(2)</sup> 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

<sup>(3)</sup> Included in total equity under IFRS for December 31, 2011 and 2010.

At December 31, 2011, the Company's capital increased by \$0.3 billion compared to prior year. Contributing factors included: \$0.5 billion increase from the impact of the weaker Canadian dollar, \$0.4 billion of preferred shares issued and \$0.2 billion of earnings, partially offset by cash dividends of \$0.7 billion and a \$0.2 billion decrease in unrealized gains on AFS securities. The \$0.55 billion of MLI subordinated debt capital issued in the fourth quarter offset \$0.55 billion of MLI subordinated debt capital redeemed in the first quarter.

The “Total capital” above does not include senior debt raised by MFC, amounting to \$5.5 billion at December 31, 2011. However, the funds raised through senior indebtedness that do not meet OSFI’s definition of regulatory capital at MFC can be down-streamed into operating entities as qualifying regulatory capital at the subsidiary level. Rating agencies expect companies to limit this and other sources of financial leverage to levels appropriate for their ratings.

### **Capital and Funding Activities**

On February 16, 2011, we redeemed \$550 million of MLI 6.240% subordinated debentures. On May 31, 2011, \$220 million of 6.822% senior notes matured and were repaid, followed by the maturity and repayment of \$175 million of 6.646% of senior notes on November 30, 2011. During the year we issued \$200 million of 4.200% preferred shares on March 11, 2011; \$550 million of MLI 4.210% subordinated debentures on November 18, 2011 and \$200 million of 4.400% preferred shares on December 6, 2011.

In 2011, MFC’s Dividend Reinvestment Plan (“DRIP”) resulted in the issuance of 23 million common shares (2010 – 19 million) for a total consideration of \$298 million (2010 – \$314 million). The DRIP allows for issuance of common shares from treasury with a discount, at the discretion of the Board. For the first three quarterly dividends in 2010, the Company elected to issue DRIP shares from treasury with a discount of three per cent. The discount was changed to two per cent for the fourth quarter 2010 dividend and throughout 2011. Participation in the DRIP is strong, with enrolment of approximately one third of shares outstanding.

Our capital ratios were supported by the sale of our Life Retrocession business and by ceding a block of business in our Canadian Division to a third party reinsurer.

On June 30, 2012, the Company will have the right to call the total of \$1,000 million of capital notes issued by Manulife Financial Capital Trust, qualifying as Innovative Tier 1 capital under OSFI rules. The amount represents two tranches: \$940 million of 6.700% Manulife Financial Capital Trust Securities (“MaCS”) Series A Units and \$60 million of 7.000% MaCS Series B Units. Depending on, among other things, capital adequacy assessments and regulatory approval of redemption, management will decide whether or not to exercise the right to call these instruments.

### **Common Shareholder Dividends and Dividend Payout Ratio**

The declaration and payment of shareholder dividends and the amount thereof are subject to the discretion of the Board and depend upon the results of operations, financial conditions, cash requirements and future prospects of the Company, taking into account regulatory restrictions on the payment of shareholder dividends as well as other relevant factors. Manulife’s normal course target payout ratio for shareholder dividends ranges from 25% to 35% of earnings from operations excluding direct impacts of equity markets and interest rates, but the Board may approve dividends outside this range from time to time.

### **Regulatory Capital Position<sup>17</sup>**

The Company monitors and manages consolidated capital for MFC in compliance with the OSFI Guideline A2 – Capital Regime for Regulated Insurance Holding Companies and Non-Operating Life Companies, issued July 5, 2005. Under this regime our consolidated available capital is measured against a required amount of risk capital determined in accordance with the guideline. The capital position of consolidated MFC operations remains in excess of our internal targets.

MFC’s operating activities are mostly all conducted within MLI or its subsidiaries. Some reinsurance business is undertaken outside the MLI consolidated framework. MLI is regulated by OSFI and is subject to consolidated risk based capital requirements using the OSFI MCCSR framework.

Our MCCSR ratio for MLI ended the year at a comfortable 216 per cent. While lower than the 249 per cent at the end of 2010, 30 points of the decline was the result of changes in accounting policies, clarifications of regulatory capital policies and the impact of lower interest rates on the amount of regulatory required capital. Specifically the combination of the impact of new accounting standards (IFRS) and the elimination of credit for asset risk transfer on related party reinsurance agreements reduced MLI’s MCCSR ratio by approximately 18 points. In addition, lower interest rates not only reduced earnings and available capital, but also resulted in a decline of approximately 12 points due to the mechanics of the required capital formula. The year end ratio of 216 per cent should be considered in context of the significantly reduced earnings sensitivity to changes in interest rate and equity markets. The impact of risk reduction programs on capital ratio sensitivity has been somewhat more muted with most of our residual interest rate sensitivity resulting from the impact of lower interest rates on required capital, the lack of explicit credit in the capital formula for equity hedging and the impact of the smoothing formula for required capital for segregated fund guarantee required capital.

In addition to the 30 point impact discussed above, the beneficial impacts of the third party reinsurance transaction on our Canadian Individual Insurance business and the sale of the life retrocession business combined with earnings (net of goodwill write-off that is neutral for regulatory capital ratios) were more than offset over the year by the funding of shareholder dividends and growth in required capital not attributable to the decline in interest rates; netting to an additional three point reduction in the MCCSR ratio for 2011.

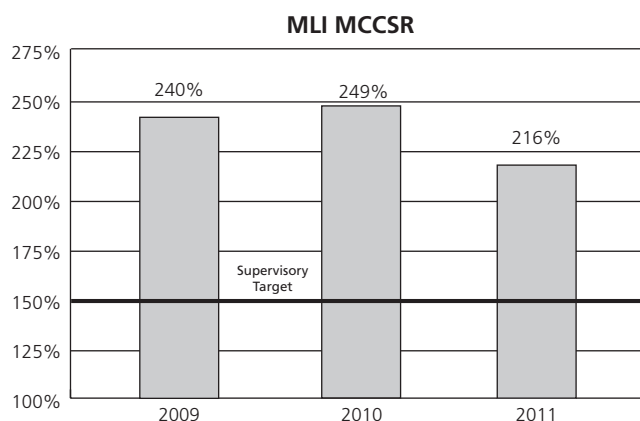
IFRS transition guidance outlined by OSFI required the impact of IFRS adoption on available capital to be phased-in over an eight quarter period which began with the first quarter of 2011. The impact on required capital is not subject to the phase-in rules. The phased-in adoption of IFRS reduced MLI’s MCCSR ratio by approximately five points over 2011 and is expected to reduce the ratio by approximately a further two points over the remainder of the two year phase-in period ending with the fourth quarter of 2012.

<sup>17</sup> The risk management section of the MD&A outlines a number of regulatory capital risks.

In 2011, credit for the transfer of asset risk via a reinsurance agreement could no longer be reflected in regulatory required capital unless the assets are also transferred. This change reduced MLI's MCCR ratio by approximately 13 points.

The write-off of goodwill had no impact on the overall regulatory capital position as goodwill is excluded from available regulatory capital.

MLI's non-consolidated operations and subsidiaries all maintained capital levels in excess of local requirements as at December 31, 2011, with their capital ratios exceeding or within their internal target ranges. In particular, Manulife Canada Ltd., an OSFI regulated Canadian operating insurance company, had an MCCR ratio of 223 per cent, above the regulator's supervisory target of 150 per cent.



Actual MLI ratios.  
OSFI regulatory minimum is 120%, with 150% supervisory target.  
2009 and 2010 ratios are calculated on a CGAAP basis.

## Credit Ratings

Manulife Financial's insurance operating companies have strong ratings from the credit rating agencies for financial strength and claims paying ability. Maintaining strong ratings on debt and capital instruments issued by MFC and its subsidiaries allows us to access the capital markets at competitive pricing levels. Should these credit ratings decrease materially, our cost of funds may increase and our access to funding and capital through the capital markets could be reduced.

During 2011, A.M. Best revised the outlook from negative to stable on MFC and its subsidiaries, and all rating agencies maintained their assigned ratings. At December 31, 2011, all five rating agencies had a stable outlook. In February 2012, Fitch affirmed the financial strength ratings of our insurance operating companies and credit ratings and revised the outlook from stable to negative.

The following table summarizes the financial strength and claims paying ability ratings of MLI and certain of its subsidiaries as at March 13, 2012.

### Financial Strength/Claims Paying Ability Ratings

	S&P	Moody's	DBRS	Fitch	A.M. Best
The Manufacturers Life Insurance Company	AA-	A1	IC-1	AA-	A+
John Hancock Life Insurance Company (U.S.A.)	AA-	A1	Not Rated	AA-	A+
Manulife (International) Limited	AA-	Not Rated	Not Rated	Not Rated	Not Rated
Manulife Life Insurance Company (Japan)	AA-	Not Rated	Not Rated	Not Rated	Not Rated

# Critical Accounting and Actuarial Policies

## Adoption of IFRS

Effective January 1, 2011, the Company adopted International Financial Reporting Standards ("IFRS") as a replacement of prior Canadian GAAP. The consolidated financial statements for the year ended December 31, 2011 reflect the Company's first set of annual financial statements prepared under IFRS and include corresponding comparative financial information for 2010. For an overview of the impacts of the adoption of IFRS including a description of accounting policies selected, refer to note 25 – First-time adoption of IFRS in the Consolidated Financial Statements for the year ended December 31, 2011. The adoption of IFRS did not have a significant impact on our disclosure controls and procedures, information technology systems or business activities.

The preparation of financial statements in accordance with IFRS requires management to make estimates and assumptions that affect the reported amounts and disclosures made in the consolidated financial statements and accompanying notes. These estimates and assumptions are based on historical experience, management's assessment of current events and conditions and activities that the Company may undertake in the future as well as possible future economic events. Actual results could differ from these estimates. The estimates and assumptions described in this section depend upon subjective or complex judgments about matters that may be uncertain and changes in these estimates and assumptions could materially impact the consolidated financial statements.

Our significant accounting policies are described in note 1 to the Consolidated Financial Statements. Significant estimation processes relate to the determination of insurance and investment contract liabilities, fair value of certain financial instruments, derivatives and hedge accounting, provisioning for asset impairment, determination of pension and other post-employment benefit obligations and expenses, income taxes and uncertain tax positions and valuation of goodwill and intangible assets as described below. In addition, in the determination of the fair values of invested assets, where observable market data is not available, management applies judgment in the selection of valuation models.

## Policy Liabilities

Policy liabilities for IFRS are valued under standards established by the Canadian Institute of Actuaries. These standards are designed to ensure we establish an appropriate liability on the balance sheet to cover future obligations to all our policyholders. Under IFRS, the assumptions underlying the valuation of policy liabilities are required to be reviewed and updated on an ongoing basis to reflect recent and emerging trends in experience and changes in risk profile of the business. In conjunction with prudent business practices to manage both product and asset related risks, the selection and monitoring of appropriate valuation assumptions is designed to minimize our exposure to measurement uncertainty related to policy liabilities.

## Determination of Policy Liabilities

Policy liabilities have two major components: a best estimate amount and a provision for adverse deviation. The best estimate amount represents the estimated value of future policyholder benefits and settlement obligations to be paid over the term remaining on in-force policies, including the costs of servicing the policies. The best estimate amount is reduced by the future expected policy revenues and future expected investment income on assets supporting the policies, before any consideration for reinsurance ceded. To determine the best estimate amount, assumptions must be made for a number of key factors, including future mortality and morbidity rates, investment returns, rates of policy termination, operating expenses, certain taxes (other than income taxes) and foreign currency. Reinsurance is used to transfer part or all of a policy liability to another insurance company at terms negotiated with that insurance company. A separate asset for reinsurance ceded is calculated based on the terms of the reinsurance treaties that are in force, with deductions taken for the credit standing of the reinsurance counterparties where appropriate.

To recognize the uncertainty involved in determining the best estimate actuarial liability assumptions, a provision for adverse deviation ("PfAD") is established. The PfAD is determined by including a margin of conservatism for each assumption to allow for possible mis-estimation of, or deterioration in, future experience in order to provide greater comfort that the policy liabilities will be sufficient to pay future benefits. The Canadian Institute of Actuaries establishes suggested ranges for the level of margins for adverse deviation based on the risk profile of the business. Our margins are set taking into account the risk profile of our business. The effect of these margins is to increase policy liabilities over the best estimate assumptions. The margins for adverse deviation decrease the income that is recognized at the time a new policy is sold and increase the income recognized in later periods as the margins release as the remaining policy risks reduce.

## Best Estimate Assumptions

***We follow established processes to determine the assumptions used in the valuation of our policy liabilities. The nature of each risk factor and the process for setting the assumptions used in the valuation are discussed below.***

## Mortality

Mortality relates to the occurrence of death. Mortality assumptions are based on our internal as well as industry past and emerging experience and are differentiated by sex, underwriting class, policy type and geographic market. For our North American business we make assumptions about future mortality improvements using historic experience derived from population data. Reinsurance is used to offset some of our direct mortality exposure on in-force life insurance policies with the impact of the reinsurance directly reflected in our policy valuation. Actual mortality experience is monitored against these assumptions separately for each business. Where

mortality rates are lower than assumed for life insurance the result is favourable, and where mortality rates are higher than assumed for payout annuities, mortality results are favourable. Overall 2011 experience was favourable when compared with our assumptions. Changes to future expected mortality assumptions in the policy liabilities in 2011 resulted in a reduction in policy liabilities.

### **Morbidity**

Morbidity relates to the occurrence of accidents and sickness for the insured risks. Morbidity assumptions are based on our internal as well as industry past and emerging experience and are established for each type of morbidity risk and geographic market. For our Long-Term Care business we make assumptions about future morbidity improvements. Actual morbidity experience is monitored against these assumptions separately for each business. Our morbidity risk exposure relates to future expected claims costs for long-term care insurance, as well as for group benefits and certain individual health insurance products we offer. Overall 2011 experience was unfavourable when compared with our assumptions.

### **Property and Casualty**

Our Property and Casualty business insures against losses from natural and human disasters and accidental events. Reserves are held for incurred claims not yet reported, for claims reported but not yet paid and for expected future claims related to premiums paid to date. In 2011, we had significant adverse experience on business assumed on our retrocession business related to the earthquakes in Japan and New Zealand.

### **Policy Termination and Premium Persistency**

Policy termination includes lapses and surrenders, where lapses represent the termination of policies due to non-payment of premiums and surrenders represent the voluntary termination of policies by policyholders. Premium persistency represents the level of ongoing deposits on contracts where there is policyholder discretion as to the amount and timing of deposits. Policy termination and premium persistency assumptions are primarily based on our recent experience adjusted for expected future conditions. Assumptions reflect differences by type of contract within each geographic market and actual experience is monitored against these assumptions separately for each business. Overall 2011 experience was unfavourable when compared to our assumptions. A number of revisions were made to future expected policyholder behaviour assumptions in 2011 to reflect the emerging experience resulting in significant increases in policy liabilities in 2011, most notably for our Variable Annuity business. However, persistency experience on Variable Annuity business is not included in this analysis, but rather is included in the aggregate Variable Annuity results.

### **Expenses and Taxes**

Operating expense assumptions reflect the projected costs of maintaining and servicing in-force policies, including associated overhead expenses. The expenses are derived from internal cost studies and are projected into the future with an allowance for inflation. For some developing businesses, there is an expectation that unit costs will decline as these businesses mature. Actual expenses are monitored against assumptions separately for each business. Overall maintenance expenses for 2011 were unfavourable when compared with our assumptions. Taxes reflect assumptions for future premium taxes and other non-income related taxes. For income taxes, policy liabilities are adjusted only for temporary tax timing and permanent tax rate differences on the cash flows available to satisfy policy obligations.

### **Investment Returns**

We segment assets to support liabilities by business segment and geographic market and establish investment strategies for each liability segment. The projected cash flows from these assets are combined with projected cash flows from future asset purchases/sales to determine expected rates of return for future years. The investment strategies for future asset purchases and sales are based on our target investment policies for each segment and the re-investment returns are derived from current and projected market rates for fixed interest investments and our projected outlook for non-fixed interest assets. Credit losses are projected based on our own and industry experience, as well as specific reviews of the current investment portfolio. Investment return assumptions for each asset class also incorporate expected investment management expenses that are derived from internal cost studies. In 2011, actual investment returns were unfavourable when compared to our assumptions. Overall investment results, excluding returns on variable annuities, were favourable. While the decline in interest rates and public equity markets were adverse in the year, this unfavourable experience was more than offset by favourable results from asset trading, asset duration extension and gains on real estate, oil and gas and other non-fixed income assets.

### **Segregated Funds**

We offer segregated funds to policyholders that offer certain guarantees, including guaranteed returns of principal on maturity or death, as well as guarantees of minimum withdrawal amounts or income benefits. The on-balance sheet liability for these benefits is the expected cost of these guarantees including appropriate valuation margins for the various contingencies including mortality and lapse. The most dominant assumption is the return on the underlying funds in which the policyholders invest. This risk is mitigated through a dynamic hedging strategy. In 2011, experience on assets underlying segregated fund business which has guarantees due to changes in market value of funds under management was unfavourable for both the business that is hedged and the business that is not hedged. Experience on the hedged block was unfavourable due to higher hedging costs resulting from higher realized volatility and the positive correlation between equities and interest rates as well as adverse experience on the portion of the business within the hedged block, such as PfADs and certain underlying funds, which we have chosen not to hedge. Experience on the unhedged block

was unfavourable due to the general decline in equity markets throughout the year, where Canadian and Japan markets were down 11 per cent and 19 per cent, respectively, in the year, while the U.S. market was unchanged. Even in an unchanged market an earnings loss results because the actual returns do not meet the expected returns in the valuation models.

### Foreign Currency

Foreign currency risk results from a mismatch of the currency of the policy liabilities and the currency of the assets designated to support these obligations. We generally match the currency of our assets with the currency of the liabilities they support, with the objective of mitigating the risk of loss arising from movements in currency exchange rates. Where a currency mismatch exists, the assumed rate of return on the assets supporting the liabilities is reduced to reflect the potential for adverse movements in exchange rates.

### Experience Adjusted Products

Where policies have features that allow the impact of changes in experience to be passed on to policyholders through policy dividends, experience rating refunds, credited rates or other adjustable features, the projected policyholder benefits are adjusted to reflect the projected experience. Minimum contractual guarantees and other market considerations are taken into account in determining the policy adjustments.

### Provision for Adverse Deviation

The aggregate provision for adverse deviation is the sum of the provisions for adverse deviation for each risk factor. Margins for adverse deviation are established by product type and geographic market for each assumption or factor used in the determination of the best estimate actuarial liability. The margins are established based on the risk characteristics of the business being valued.

In addition to the explicit margin for adverse deviation, the valuation basis for segregated fund liabilities explicitly limits the future revenue recognition in the valuation basis to the amount necessary to offset acquisition expenses, after allowing for the cost of any guarantee features. The fees that are in excess of this limitation are reported as an additional margin and are shown in segregated fund non-capitalized margins.

The provision for adverse deviation and the future revenue deferred in the valuation due to the limitations on recognition of future revenue in the valuation of segregated fund liabilities are shown in the table below.

As at December 31, (C\$ millions)	2011	2010
<b>Best estimate actuarial liability<sup>(1)</sup></b>	<b>\$ 134,514</b>	<b>\$ 111,782</b>
<b>Provision for adverse deviation</b>		
Insurance risks (mortality/morbidity)	\$ 9,008	\$ 8,455
Policyholder behavior (lapse/surrender/premium persistency)	3,074	3,089
Expenses	1,747	1,579
Investment risks (non-credit)	18,634	16,429
Investment risks (credit)	1,394	1,242
Segregated fund guarantees	5,240	3,012
Other	18	29
<b>Total provision for adverse deviation (PfAD)<sup>(1)</sup></b>	<b>\$ 39,115</b>	<b>\$ 33,835</b>
<b>Segregated funds – additional margins</b>	<b>8,686</b>	<b>9,316</b>
<b>Total of PfAD and additional segregated fund margins</b>	<b>\$ 47,801</b>	<b>\$ 43,151</b>

<sup>(1)</sup> Reported actuarial liabilities as at December 31, 2011 of \$173,629 (2010 – \$145,617) are composed of \$134,514 (2010 – \$111,782) of best estimate actuarial liability and \$39,115 (2010 – \$33,835) of PfAD.

The change in PfAD from period to period is impacted by changes in liability and asset composition, by movements in currency and movements in interest rates and by material changes in valuation assumptions. The overall increase in PfADs for insurance risks was driven by the decline in interest rates during the year as well as the appreciation of foreign currencies relative to the Canadian dollar.

### Sensitivity of Earnings to Changes in Assumptions

When the assumptions underlying our determination of policy liabilities are updated to reflect recent and emerging experience or change in outlook, the result is a change in the value of policy liabilities which in turn affects income. The sensitivity of after-tax income to changes in non-economic and certain asset related assumptions underlying policy liabilities is shown below, and assumes that there is a simultaneous change in the assumption across all business units.

For changes in asset related assumptions, the sensitivity is shown net of the corresponding impact on income of the change in the value of the assets supporting liabilities. In practice, experience for each assumption will frequently vary by geographic market and business and assumption updates are made on a business/geographic specific basis. Actual results can differ materially from these estimates for a variety of reasons including the interaction among these factors when more than one changes, changes in actuarial and investment return and future investment activity assumptions, actual experience differing from the assumptions, changes in business mix, effective tax rates and other market factors, and the general limitations of our internal models.

Participating business where we have the ability to pass both favourable and adverse experience to the policyholders through the participating dividend adjustment is excluded from this analysis.

## Sensitivity of Earnings to Changes in Non-economic Assumptions

For the years ended December 31, (C\$ millions)	Decrease in after-tax income	
	2011	2010
<b>Policy Related Assumptions</b>		
2% adverse change in future mortality rates <sup>(1)</sup>		
Products where an increase in rates increases policy liabilities	\$ (200)	\$ (300)
Products where a decrease in rates increases policy liabilities	(300)	(300)
5% increase in future morbidity rates <sup>(2),(3)</sup>	(1,200)	(1,100)
10% adverse change in future termination rates	(1,200)	(1,000)
5% increase in future expense levels	(300)	(300)

<sup>(1)</sup> An increase in mortality rates will generally increase policy liabilities for life insurance contracts whereas a decrease in mortality rates will generally increase policy liabilities for policies with longevity risk such as payout annuities.

<sup>(2)</sup> No amounts related to morbidity risk are included for policies where the policy liability provides only for claims costs expected over a short period, generally less than one year, such as Group Life and Health.

<sup>(3)</sup> The impacts of the sensitivities on LTC for morbidity, mortality and lapse are assumed to be moderated by partial offsets from the Company's ability to contractually raise premium rates in such events, subject to state regulatory approval.

## Potential impact on net income attributed to shareholders arising from changes in policy liabilities asset related assumptions

As at December 31, (C\$ millions)	Increase (decrease) in after-tax income			
	2011		2010	
	increase	decrease	increase	decrease
<b>Asset Related Assumptions Updated Periodically in Valuation Basis Changes</b>				
100 basis point change in ultimate fixed income reinvestment rates <sup>(1)</sup>	\$ 1,700	\$ (1,900)	\$ 1,500	\$ (1,900)
100 basis point change in future annual returns for public equities <sup>(2)</sup>	900	(900)	900	(900)
100 basis point change in future annual returns for other non-fixed income assets <sup>(3)</sup>	4,200	(3,800)	3,100	(2,900)
100 basis point change in equity volatility assumption for stochastic segregated fund modeling <sup>(4)</sup>	(300)	300	(300)	300

<sup>(1)</sup> Current URRs in Canada are 1.60% per annum and 3.70% per annum for short and long-term bonds, respectively, and in the U.S. are 1.10% per annum and 3.90% per annum for short and long-term bonds, respectively. Since the long-term URRs are based upon a five and ten year rolling average of government bond rates and the URR valuation assumptions are currently higher than the December 31, 2011 government bond rates, continuation of current rates or a further decline could have a material impact on net income. However, for this sensitivity, we assume the URRs decline with full and immediate effect.

<sup>(2)</sup> Expected long-term annual market growth assumptions for public equities pre-dividends for key markets are based on long-term historical observed experience and are 7.6% per annum in Canada, 8.0% per annum in the U.S., 5.2% per annum in Japan and 9.5% per annum in Hong Kong. These returns are then reduced by margins for adverse deviation to determine net yields used in the valuation. The amount includes the impact on both segregated fund guarantee reserves and on other policy liabilities. For a 100 basis point increase in expected growth rates, the impact from segregated fund guarantee reserves is \$700 million (2010 – \$700 million). For a 100 basis point decrease in expected growth rates, the impact from segregated fund guarantee reserves is \$700 million (2010 – \$800 million).

<sup>(3)</sup> Other non-fixed income assets include commercial real estate, timber and agricultural real estate, oil and gas, and private equities. The assumed returns on other non-fixed income assets net of provisions for adverse deviation and after taking into account the impact of differential taxation, have a similar impact on policyholder liabilities as the assumptions for public equities. The increased sensitivity from December 31, 2010 to December 31, 2011 is primarily related to the decline in fixed income rates over the year (reducing the rate at which funds can reinvest in) as well as the change in foreign exchange rates in the year.

<sup>(4)</sup> Volatility assumptions for public equities are based on long-term historic observed experience and are 18.05% per annum in Canada and 16.55% per annum in the U.S. for large cap public equities, and 18.35% per annum in Japan and 34.1% per annum in Hong Kong.

Under Canadian IFRS, we must test a number of prescribed interest rate scenarios. The scenario that produces the largest reserves is used and is called the booking scenario. The resulting interest scenario for most of our business is a gradual grading of market interest rates from current market levels to assumed ultimate reinvestment rates over 20 years.

The sensitivity of net income attributed to shareholders to a decline in the ultimate reinvestment rates is largely unchanged from last year primarily due to the change in the booking scenario for reserves should current rates decline by 100 basis points. This increases the sensitivity of that scenario and lowers the sensitivity of a change in the URR. The sensitivity to changes in public equity returns remains unchanged from 2010. Market returns in 2011 below the expected returns assumed in the valuation increased sensitivity but this was offset by the increased amounts of dynamic hedges that were put in place in 2011. The increase in sensitivity to a 100 basis point change in returns for other non-fixed income assets is primarily related to the decline in fixed income rates over the year, which reduces the rate at which we can reinvest, as well as the change in foreign exchange rates over the year.

## Review of Actuarial Methods and Assumptions

The 2011 full year review of the actuarial methods and assumptions underlying policy liabilities produced an increase in the policy liabilities of \$1,515 million net of reinsurance ceded. Net of the impacts on participating surplus and minority interests, this resulted in a decrease in net income attributable to shareholders of \$1,188 million post-tax.

The comprehensive 2011 review of valuation methods and assumptions was completed in the third quarter of 2011. In conjunction with prudent business practices to manage both product and asset related risks, the selection and monitoring of appropriate valuation assumptions are designed to minimize our exposure to measurement uncertainty related to policy liabilities. While the assumptions

selected represent the Company's current best estimates and assessment of risk, the ongoing monitoring of emerging actuarial and investment experience and the economic environment, are likely to result in future changes to the valuation assumptions, which could be material.

The following table summarizes the full year pre-tax policy liability impact of the basis changes by key category, as well as the corresponding impact on shareholders' net income (post-tax).

<b>For the year ended December 31, 2011</b>		
<b>(C\$ millions)</b>		
<b>Assumption</b>	<b>To policy liabilities</b>	<b>To net income attributed to shareholders</b>
Mortality and morbidity		
U.S. Life mortality update	\$ 754	\$ (475)
Other mortality updates	(986)	636
Future mortality and morbidity improvements	(180)	97
Lapses and policyholder behaviour		
VA lapse update	435	(309)
Insurance lapse update	114	(93)
Expenses	141	(85)
Investment returns		
URR update	612	(437)
Other updates	385	(327)
Other valuation model methodology and model refinements	240	(195)
<b>Net impact</b>	<b>\$ 1,515</b>	<b>\$ (1,188)</b>

### **Mortality and morbidity changes**

John Hancock Life Insurance completed a detailed study of life insurance mortality at the older ages. Based on our own experience as well as industry trends and observations, expected mortality rates at the older issue ages and attained ages were increased resulting in a reserve increase of \$754 million (post-tax charge of \$475 million).

Other mortality updates, resulting in a reserve reduction of \$986 million, included updates to U.S. Variable Annuities as well as assumption reviews and updates in Canada, Japan and Singapore.

A reduction in reserves of \$180 million resulted from the implementation of future mortality and morbidity improvements in reserves for North American insurance businesses. Valuation standards for reporting on a Canadian IFRS basis were amended in 2011 to allow future mortality improvements to be reflected in reserves where a decrease in reserves results.

### **Lapse and policyholder behavior assumptions**

Base lapse rates (i.e., lapse rates on out-of-the-money business) and other policyholder behaviour assumptions for Variable Annuity contracts were reduced to reflect more closely observed experience resulting in a reserve increase of \$435 million.

Lapse rates and premium persistency assumptions across several insurance business units were updated to reflect updated experience results. This resulted in a reserve increase of \$114 million.

### **Expenses**

Policy liabilities were increased by \$141 million to reflect the impact of projected letter of credit costs and expense study updates primarily in the U.S. business units, partially offset by release of redundant expense margins in Canada.

### **Investment returns**

Updates to the URR assumptions, most of which occurred in the second quarter of 2011, resulted in an increase of \$612 million to policy liabilities.

Policy liabilities increased by \$385 million for updates to commutation rates for GMWB business as well as updates to other non-fixed income assumptions including purchases.

### **Other valuation model methodology and model refinements**

A number of modeling refinements specific to individual business units were made to better model future cash flows that netted to a reserve increase of \$240 million. The major components are reserve increases due to a review of the modeling for payout annuities and refinements to modeling of Guaranteed Withdrawal Amounts partly offset by the impact of a systems conversion in the U.S.

### **2010**

The 2010 review of the actuarial methods and assumptions underlying policy liabilities produced a net increase in the policy liabilities of \$2,876 million. Net of the impacts on participating surplus, minority interests, and restatement of prior period retained earnings, this resulted in a decrease in 2010 shareholders' post-tax income of \$2,075 million.

## Change in Insurance Contract Liabilities

The change in insurance contract liabilities can be attributed to several sources: new business, acquisitions, in-force movement and currency impact. Changes in insurance contract liabilities are substantially offset in the financial statements by premiums, investment income, policy benefits and other policy related cash flows. The changes in insurance contract liabilities by business segment are shown below:

### 2011 Insurance Contract Liability Movement Analysis

(C\$ millions)	Asia Division	Canadian Division	U.S. Insurance	U.S. Wealth Management	Corporate and Other	Total
Balance, January 1, 2011	\$ 21,379	\$ 42,317	\$ 57,819	\$ 27,750	\$ 1,215	\$ 150,480
New business	\$ 273	\$ 444	\$ 949	\$ 686	\$ (2)	\$ 2,350
In-force movement	4,135	4,029	10,585	3,985	(917)	21,817
Changes in methods and assumptions	77	352	1,506	(399)	12	1,548
Currency impact	869	2	1,743	807	22	3,443
Total net changes	\$ 5,354	\$ 4,827	\$ 14,783	\$ 5,079	\$ (885)	\$ 29,158
<b>Balance, December 31, 2011</b>	<b>\$ 26,733</b>	<b>\$ 47,144</b>	<b>\$ 72,602</b>	<b>\$ 32,829</b>	<b>\$ 330</b>	<b>\$ 179,638</b>

For new business, the segments with large positive general account premium revenue at contract inception show increases in policy liabilities. For segments where new business deposits are primarily into segregated funds, the increase in policy liabilities related to new business is small since the increase measures only general account liabilities. New business policy liability impact is negative when estimated future premiums together with future investment income, is expected to be more than sufficient to pay estimated future benefits, policyholder dividends and refunds, taxes (excluding income taxes) and expenses on new policies issued.

The in-force movement over the year is an increase of \$21,817 million. A material part of the in-force movement increase was related to the decline in interest rates and the resulting impact on the fair value of assets which back those liabilities. The decrease in the Corporate and Other segment is related to the sale of the Reinsurance Life Retrocession business and John Hancock Accident and Health operation that is closed to new business and running off.

The increase of \$1,548 million from changes in methods and assumptions includes a comprehensive review of all valuation methods and assumptions and results in a decrease in pre-tax earnings.

Of the \$24,167 million net increase in insurance contract liabilities related to new business and in-force movement, \$23,634 million is an increase in actuarial liabilities. The remaining is an increase of \$533 million in other insurance contract liabilities.

The increase in policy liabilities from currency reflects the depreciation of the Canadian dollar relative to the U.S. dollar as well as Japanese yen. To the extent assets are currency matched to liabilities, the increase in insurance contract liabilities due to currency is offset by a corresponding increase from currency in the value of assets supporting those liabilities.

### 2010 Insurance Contract Liability Movement Analysis

(C\$ millions)	Asia Division	Canadian Division	U.S. Insurance	U.S. Wealth Management	Corporate and Other	Total
Balance, January 1, 2010	\$ 17,268	\$ 38,845	\$ 53,856	\$ 28,461	\$ 1,469	\$ 139,899
New business	\$ (43)	\$ 708	\$ 1,333	\$ 1,139	\$ (4)	\$ 3,133
In-force movement	3,697	2,405	3,843	(1,020)	(220)	8,705
Changes in methods and assumptions	214	361	1,727	509	68	2,879
Currency impact	243	(2)	(2,940)	(1,339)	(98)	(4,136)
Total net changes	\$ 4,111	\$ 3,472	\$ 3,963	\$ (711)	\$ (254)	\$ 10,581
<b>Balance, December 31, 2010</b>	<b>\$ 21,379</b>	<b>\$ 42,317</b>	<b>\$ 57,819</b>	<b>\$ 27,750</b>	<b>\$ 1,215</b>	<b>\$ 150,480</b>

For new business, the segments with large positive general account premium revenue at contract inception show increases in policy liabilities. For segments where new business deposits are primarily into segregated funds, the increase in policy liabilities related to new business is small since the increase measures only general account liabilities. New business policy liability impact is negative when estimated future premiums together with future investment income, is expected to be more than sufficient to pay estimated future benefits, policyholder dividends and refunds, taxes (excluding income taxes) and expenses on new policies issued.

The in-force movement over the year is an increase of \$8,705 million. A significant part of the in-force movement increase was related to the decline in interest rates and the resulting impact on the fair value of assets which back those liabilities. The large reduction of \$1,020 million for in-force movements on the U.S. Wealth Management block includes a reduction from net maturity benefits on institutional contracts, a product line that is intentionally being de-emphasized. The decrease in the Corporate and Other segment is related to the John Hancock Accident and Health operation that is closed to new business and running off.

The increase of \$2,879 million from changes in methods and assumptions includes a comprehensive review of all valuation methods and assumptions and results in a decrease in pre-tax earnings.

The reduction in policy liabilities from currency reflects the appreciation of the Canadian dollar relative to the U.S. dollar. To the extent assets are currency matched to liabilities, the reduction in policy liabilities due to currency is offset by a corresponding reduction from currency in the value of assets supporting those liabilities.

Of the \$11,838 million net increase in policy liabilities related to new business and in-force movement, \$10,950 million is an increase in actuarial liabilities. The remaining is an increase of \$888 million in other policy liabilities.

### **Consolidation**

Consolidation is required for those entities in which the Company, directly or indirectly, has power to exercise control over financial and operating policies in order to gain economic benefits. The existence and effect of potential voting rights that are currently exercisable or convertible are considered in assessing whether the Company controls another entity. Special Purpose Entities ("SPEs") are consolidated when the substance of the relationship between the Company and that entity indicates control.

Potential indicators of control include an assessment of the Company's exposure to the risks and benefits of the SPE. This assessment of risks and benefits is based on arrangements in place and the assessed risk exposures at inception. The initial assessment is reconsidered at a later date if:

- a) the Company acquires additional interests in the entity;
- b) the contractual arrangements of the entity are amended such that the relative exposure to risks and benefits change; or
- c) if the Company acquires control over the main operating and financial decisions of the entity.

Subsidiaries are consolidated from the date on which control is transferred to the Company and cease to be consolidated from the date that control ceases.

### **Fair Value of Invested Assets**

A large portion of the Company's invested assets are recorded at fair value. Refer to note 1 of the 2011 Consolidated Financial Statements for a description of the methods used in determining fair value for applicable invested assets. When quoted prices in active markets are not available for a particular investment, significant judgment is required to determine an estimated fair value based on market standard valuation methodologies. The market standard valuation methodologies utilized by the Company include discounted cash flow methodologies, matrix pricing or other similar techniques. The inputs to these market standard valuation methodologies include, but are not limited to: current interest rates or yields for similar instruments, credit rating of the issuer or counterparty, industry sector of the issuer, coupon rate, call provisions, sinking fund requirements, tenor (or expected tenor) of the instrument, management's assumptions regarding liquidity and estimated future cash flows. Accordingly, the estimated fair values are based on available market information and management's judgments about the key market factors impacting these financial instruments. Financial markets are susceptible to severe events evidenced by rapid depreciation in asset values accompanied by a reduction in asset liquidity. The Company's ability to sell securities, or the price ultimately realized for these securities, depends upon the demand and liquidity in the market and increases the use of judgment in determining the estimated fair value of certain securities.

### **Evaluation of Invested Asset Impairment**

AFS fixed income and equity securities are carried at fair market value, with changes in fair value recorded in Other Comprehensive Income ("OCI") with the exception of unrealized gains and losses on foreign currency translation of AFS fixed income securities which are included in income. Impaired securities are reviewed on a regular basis and any fair value decrement is transferred out of AOCI and recorded in income when it is deemed probable that the Company will not be able collect all amounts due according to the contractual terms of a fixed income security or when fair value of an equity security has declined significantly below cost or for a prolonged period of time.

Provisions for impairments of mortgage loans and private placement loans are recorded with losses reported in earnings when there is no longer reasonable assurance as to the timely collection of the full amount of the principal and interest.

Significant judgment is required in assessing whether an impairment has occurred and in assessing fair values and recoverable values. Key matters considered include economic factors, company and industry specific developments and specific issues with respect to single issuers and borrowers.

Changes in circumstances may cause future assessments of asset impairment to be materially different from current assessments, which could require additional provisions for impairment. Additional information on the process and methodology for determining the allowance for credit losses is included in the discussion of credit risk in note 10 to the Consolidated Financial Statements.

### **Derivative Financial Instruments**

The Company uses derivative financial instruments ("derivatives") to manage exposures to foreign currency, interest rate, equity and other market risks arising from on-balance sheet financial instruments, selected anticipated transactions and certain guarantee related actuarial liabilities. Refer to note 5 of the 2011 Consolidated Financial Statements for a description of the methods used to determine the fair value of derivatives.

The accounting for derivatives is complex and interpretations of the primary accounting guidance continue to evolve in practice. Judgment is applied in determining the availability and application of hedge accounting designations and the appropriate accounting

treatment under such accounting guidance. If it was determined that hedge accounting designations were not appropriately applied, reported net income could be materially affected. Differences in judgment as to the availability and application of hedge accounting designations and the appropriate accounting treatment may result in a differing impact on the consolidated financial statements of the Company from that previously reported. Assessments of hedge effectiveness and measurements of ineffectiveness of hedging relationships are also subject to interpretations and estimations and different interpretations or estimates may have a material effect on the amount reported in net income.

### **Employee Future Benefits**

The Company maintains a number of plans providing pension (defined benefit and defined contribution) and other benefits to eligible employees and agents after employment. The traditional defined benefit pension plans provide benefits based on years of service and average earnings at retirement. Due to the long-term nature of these plans and of the post-employment benefit plans, the calculation of the benefit expense and accrued benefit obligations depends on various economic assumptions such as discount rates, expected rates of return on plan assets, health care cost trend rates and compensation increase rates. These assumptions are determined by management and are reviewed annually. Differences between actual and assumed experience may affect the amount of the accrued benefit obligation and benefit expense. The key weighted average assumptions used, as well as the sensitivity of estimated liabilities to these assumptions, are presented in note 17 to the 2011 Consolidated Financial Statements.

Contributions to the defined benefit pension and funded post-employment plans are also subject to various projections and assumptions based on the demographic profile of the membership, expected rates of return on plan assets and compensation increase rates, as presented in note 17 to the 2011 Consolidated Financial Statements.

The Company's broad-based pension plans are funded in accordance with actuarially determined amounts required to satisfy any applicable pension regulations. During 2011 the Company contributed \$47 million (2010 – \$48 million) to the broad-based pension plans and as at December 31, 2011, the shortfall of fair value of plan assets over plan obligations amounted to \$252 million (2010 – \$119 million), as presented in note 17 to the 2011 Consolidated Financial Statements. For 2012, the required funding for the Company's largest Canadian and U.S. pension plans is expected to be approximately \$40 million.

The Company's supplemental pension plans for executives are for the most part unfunded. As at December 31, 2011, the shortfall of fair value of plan assets over plan obligations amounted to \$797 million (2010 – \$755 million), as presented in note 17 to the 2011 Consolidated Financial Statements.

The Company's other post-employment benefit plans are also for the most part unfunded. As at December 31, 2011, the shortfall of fair value of plan assets over plan obligations amounted to \$414 million (2010 – \$440 million), as presented in note 17 to the 2011 Consolidated Financial Statements.

The Company reviews the appropriateness of the plans' investment policy and strategy on a regular basis. The current asset mix and level of investment risk of the Company's pension plans reflects their long-term nature.

### **Income Taxes**

The Company is subject to income tax laws in various jurisdictions. Tax laws are complex and potentially subject to different interpretations by the taxpayer and the relevant tax authority. The provision for income taxes represents management's interpretation of the relevant tax laws and its estimate of current and future income tax implications of the transactions and events during the period. A deferred income tax asset or liability is recognized whenever an amount is recorded for accounting purposes but not for tax purposes or vice versa. Deferred tax assets and liabilities are recorded based on expected future tax rates and management's assumptions regarding the expected timing of the reversal of such temporary differences. The realization of deferred tax assets depends upon the existence of sufficient taxable income within the carryback or carryforward periods under the tax law in the applicable tax jurisdiction. Valuation allowances are established when management determines, based on available information, that it is more likely than not that deferred income tax assets will not be realized. Factors in management's determination consider the performance of the business including the ability to generate capital gains. Significant judgment is required in determining whether valuation allowances should be established, as well as the amount of such allowances. When making such determinations, consideration is given to, among other things, the following:

- a) future taxable income exclusive of reversing temporary differences and carryforwards;
- b) future reversals of existing taxable temporary differences;
- c) taxable income in prior carryback years; and
- d) tax planning strategies.

The Company may be required to change its provision for income taxes if the ultimate deductibility of certain items is successfully challenged by taxing authorities or if estimates used in determining valuation allowances on deferred tax assets significantly change, or when receipt of new information indicates the need for adjustment in valuation allowances. Additionally, future events, such as changes in tax laws, tax regulations, or interpretations of such laws or regulations, could have an impact on the provision for income tax, deferred tax balances and the effective tax rate. Any such changes could significantly affect the amounts reported in the consolidated financial statements in the year these changes occur.

The Company is an investor in a number of leasing transactions and has established provisions for possible disallowance of the tax treatment and for interest on past due taxes. The Company continues to believe that deductions originally claimed in relation to these

arrangements are appropriate. Should the tax attributes of all our lease transactions be fully denied, the maximum after-tax exposure amounts to the interest and other charges estimated to be an additional US\$127 million as at December 31, 2011.

### Goodwill and Intangible Assets

Under IFRS, goodwill is tested at the cash generating unit level ("CGU") or group of CGUs level. A CGU comprises the smallest group of assets that are capable of generating largely independent cash flows and is either a business segment or a level below. As a result of the current economic environment including the persistent low interest rates in 2011, the Company recorded a goodwill impairment charge of \$665 million (US\$650 million) attributable to our U.S. Life Insurance CGU. This non-cash charge recorded in our Corporate and Other segment does not effect our ongoing operations or our regulatory capital ratios. The tests performed in 2011 demonstrated that there was no impairment of intangible assets with indefinite lives.

Going forward, the impact of economic conditions and changes in product mix suggests a lower margin of recoverable value relative to carrying value attributable to our Canadian Individual Life CGU. As a result of these factors and the granular level of goodwill testing, impairment charges could occur in the future. The goodwill testing for 2012 will be updated based on the conditions that exist in 2012 and may result in further impairment charges, which could be material.

### Changes in Accounting Policies

#### Future Accounting and Reporting Changes

There are a number of accounting and reporting changes issued under IFRS including those still under development by the International Accounting Standards Board ("IASB") that will impact the Company beginning in 2012 and subsequently. A summary of the most recently issued new accounting standards are as follows:

Topic	Effective date	Measurement/ presentation	Expected impact
Amendments to IFRS 7 "Financial Instruments: Disclosures"	Jan. 1, 2012 Jan. 1, 2013	Disclosure	Not expected to be a significant impact.
Amendment to IAS 12 "Income Taxes"	Jan. 1, 2012	Measurement	Not expected to be a significant impact.
IFRS 10, IFRS 11, IFRS 12 and amendments to IAS 27 and IAS 28 regarding consolidation, disclosures and related matters	Jan. 1, 2013	Measurement and disclosure	Not expected to be a significant impact.
IFRS 13 "Fair Value Measurement"	Jan. 1, 2013	Measurement and disclosure	Not expected to be a significant impact.
Amendments to IAS 1 "Presentation of Financial Statements"	Jan. 1, 2013	Presentation	Not expected to be a significant impact.
Amendments to IAS 19 "Employee Benefits"	Jan. 1, 2013	Measurement	Could have a material adverse effect on the financial statements and regulatory capital at transition and subsequently.
IFRS 9 "Financial Instruments"	Jan. 1, 2015	Measurement	Currently assessing.

#### Amendments to IFRS 7 "Financial Instruments: Disclosures"

The amendments to IFRS 7 "Disclosures – Transfer of Financial Assets", issued in October 2010, increase the disclosure requirements for transactions involving transfers of financial assets. These amendments are intended to provide greater transparency around risk exposures when a financial asset is transferred but the transferor retains some level of continuing involvement in the asset. The amendments also require disclosures where transfers of financial assets do not occur evenly throughout the period.

The amendments to IFRS 7 are effective for fiscal years beginning on or after July 1, 2011. The adoption of these amendments is not expected to have a significant impact on the Consolidated Financial Statements.

#### Amendment to IAS 12 "Income Taxes"

An amendment to IAS 12 was issued in December 2010 that provides a practical approach to the measurement of deferred tax liabilities and deferred tax assets when investment property is measured using the fair value model under IAS 40 "Investment Property". Where entities measure deferred tax liabilities and deferred tax assets using a tax rate and tax base that are consistent with the expected manner of recovery or settlement, the amendment provides a rebuttable presumption for investment property measured using the fair value model that its carrying amount will be recovered through sale. This amendment is effective for fiscal years beginning on or after January 1, 2012. The adoption of these amendments is not expected to have a significant impact on the Consolidated Financial Statements.

## **IFRS 10 “Consolidated Financial Statements”, including:**

### **Amendments to IAS 27 “Separate Financial Statements”**

### **IFRS 11 “Joint Arrangements”**

### **IFRS 12 “Disclosure of Interests in Other Entities”**

### **Amendments to IAS 28 “Investments in Associates and Joint Ventures”**

IFRS 10 “Consolidated Financial Statements”, amendments to IAS 27 “Separate Financial Statements”, IFRS 11 “Joint Arrangements”, IFRS 12 “Disclosure of Interests in Other Entities” and amendments to IAS 28 “Investments in Associates and Joint Ventures” were all issued in May 2011 to improve consolidation and joint venture accounting. Each standard has an effective date for fiscal years beginning on or after January 1, 2013.

IFRS 10 replaces the consolidation guidance in IAS 27 “Separate Financial Statements” and SIC-12 “Consolidation – Special Purpose Entities” by introducing a single consolidation model for all entities based on control, irrespective of the nature of the investee. Under IFRS 10, control is based on whether an investor has 1) power over the investee; 2) exposure, or rights, to variable returns from its involvement with the investee; and 3) the ability to use its power over the investee to affect the amount of the returns. The adoption of IFRS 10 is not expected to have a significant impact on the consolidated financial statements although we expect that certain investments in private equity funds and a timber fund will be deconsolidated from our Consolidated Financial Statements.

IFRS 11 introduces new accounting requirements for joint arrangements, replacing IAS 31 “Interests in Joint Ventures”. The option to apply the proportional consolidation method when accounting for jointly controlled entities is removed. The adoption of IFRS 11 is not expected to have a significant impact on the Consolidated Financial Statements as the Company does not have significant joint venture arrangements.

IFRS 12 requires enhanced disclosures about both consolidated entities and unconsolidated entities in which an entity has involvement. The objective of IFRS 12 is to present information so that financial statement users may evaluate the basis of control, any restrictions on consolidated assets and liabilities, risk exposures arising from involvements with unconsolidated structured entities and non-controlling interest holders’ involvement in the activities of consolidated entities. The adoption of IFRS 12 is not expected to have a significant impact on the Consolidated Financial Statements.

IAS 28 is amended for conforming changes based on the issuance of IFRS 10, IFRS 11 and IFRS 12 and the adoption of these amendments is not expected to have a significant impact on the Consolidated Financial Statements.

### **IFRS 13 “Fair Value Measurement”**

IFRS 13 “Fair Value Measurement” was issued in May 2011 and replaces existing IFRS guidance on fair value measurement with a single standard. IFRS 13 defines fair value, provides guidance on how to determine fair value and requires disclosures about fair value measurements. IFRS 13 does not change the requirements regarding which items should be measured or disclosed at fair value. The standard is effective for fiscal years beginning on or after January 1, 2013. The adoption of IFRS 13 will result in additional financial statement disclosure but is not expected to have a significant impact on the Consolidated Financial Statements.

### **Amendments to IAS 1 “Presentation of Financial Statements”**

An amendment to IAS 1 was issued in June 2011 requiring changes to the presentation of items of other comprehensive income. Under the amendments, presentation of items within other comprehensive income will be separately presented based on whether or not the item will be subsequently reclassified into income. The amendments are effective for the Company for fiscal years beginning on or after January 1, 2013. The adoption of these amendments is not expected to have a significant impact on the Consolidated Financial Statements.

### **Amendments to IAS 19 “Employee Benefits”**

The amendments to IAS 19 “Employee Benefits” were issued in June 2011. The amendments require the full funded status of the plan to be reflected in the Consolidated Statements of Financial Position and eliminate the corridor approach for amortization of actuarial gains and losses. This will result in actuarial gains and losses being recognized in full in other comprehensive income when they occur and no longer recognized in income. Past service costs will be recognized when a plan is amended with no deferral over the vesting period. The net benefit cost for defined benefit plans will be disaggregated into service cost and finance cost components in the Consolidated Statements of Income. Finance cost will be calculated using interest rates based on high quality corporate bond yields. Further, these amendments include enhanced disclosures about the characteristics of defined benefit plans and the risks to which the entity is exposed through participation in those plans.

The amendments to IAS 19 are effective for fiscal years beginning on or after January 1, 2013. At December 31, 2011, the consolidated pre-tax unrecognized net actuarial loss for the Company’s pension and post-employment benefits was \$1,011 and \$58, respectively, which will be reflected in AOCI, a component of equity, upon adoption. If these amounts persist at the date of adoption, they are expected to result in a significant reduction of our capital ratios and could result in significant ongoing volatility in available capital, if regulatory capital includes this component of AOCI in the future. The actual impact to the Company will be based on actuarial estimates, market conditions and capital requirements that exist at the date of transition.

## **Amendments to IFRS 7 “Financial Instruments: Disclosure”**

### **Amendments to IAS 32 “Financial Instruments: Presentation”**

The amendments to IFRS 7 – Offsetting Financial Assets and Financial Liabilities issued in December 2011 introduce new disclosure requirements for financial instruments relating to their rights of offset and related arrangements under an enforceable master netting agreement or similar arrangements. The amendments to IFRS 7 are effective for fiscal years beginning on or after January 1, 2013. The Company is assessing the impact of these new disclosure requirements on its Consolidated Financial Statements.

The amendments to IAS 32 – Offsetting Financial Assets and Financial Liabilities also issued in December 2011 clarify the basis for offsetting financial instruments presented in the statement of financial position. The amendments to IAS 32 are effective for fiscal years beginning on or after January 1, 2014. The Company is currently assessing the impact of these amendments on its Consolidated Financial Statements.

### **IFRS 9 “Financial Instruments”**

IFRS 9 “Financial Instruments” issued in November 2009 and amended in October 2010 is the first phase of a three phase project to replace IAS 39 “Financial Instruments: Recognition and Measurement”. IFRS 9 currently provides that financial assets are measured at either amortized cost or fair value on the basis of the entity’s business model for managing the financial assets and the contractual cash flow characteristics of the financial assets. The classification and measurement for financial liabilities remains generally unchanged, however, revisions have been made in the accounting for changes in fair value of a financial liability attributable to changes in the credit risk of that liability. The other phases of this project which are currently under development include impairment and hedge accounting.

IFRS 9 is effective for annual periods beginning on or after January 1, 2015. The Company is assessing the impact of IFRS 9 on its Consolidated Financial Statements in conjunction with the completion of the other phases of this project.

## **Differences between IFRS and Hong Kong Financial Reporting Standards**

The consolidated financial statements of Manulife Financial are presented in accordance with IFRS. IFRS differs in certain respects from Hong Kong Financial Reporting Standards (“HKFRS”).

The primary difference between IFRS and HKFRS is the determination of policy liabilities. In certain interest rate environments, policy liabilities determined in accordance with HKFRS may be higher than those computed in accordance with current IFRS.

## **IFRS and Hong Kong Regulatory Requirements**

Insurers in Hong Kong are required by the Office of the Commissioner of Insurance to meet minimum solvency requirements. As at December 31, 2011, the Company has sufficient assets to meet the minimum solvency requirements under both Hong Kong regulatory requirements and IFRS.

# U.S. GAAP Disclosures

With the adoption of IFRS in 2011, the Company is no longer required to reconcile its annual financial results to U.S. GAAP in the consolidated financial statements. Instead, we have elected to disclose certain consolidated U.S. GAAP information in our MD&A.

For the full year 2011, net income in accordance with U.S. GAAP<sup>18</sup> was \$3,765 million, \$3,520 million higher than our results under IFRS. Variable annuity accounting differences totaled \$2,927 million and investment related accounting differences totaled (\$120) million.

As we are no longer reconciling our annual financial results under U.S. GAAP in our consolidated financial statements, net income in accordance with U.S. GAAP is considered a non-GAAP financial measure. A reconciliation of the major differences in net income attributed to shareholders is as follows:

## U.S. GAAP Results

For the years ended December 31,  
(C\$ millions)

	2011	2010	2009 <sup>(1)</sup>
<b>Net income (loss) attributed to shareholders in accordance with IFRS</b>	<b>\$ 129</b>	<b>\$ (1,663)</b>	<b>\$ 1,402</b>
Non-controlling interest and participating policyholders' income under IFRS	116	137	34
<b>Net income (loss) in accordance with IFRS</b>	<b>\$ 245</b>	<b>\$ (1,526)</b>	<b>\$ 1,436</b>
<b>Key earnings differences:</b>			
For variable annuity guarantee liabilities	<b>\$ 2,927</b>	<b>\$ 214</b>	<b>\$ (1,774)</b>
Related to the impact of mark-to-market accounting and investing activities on investment income and policy liabilities under IFRS <sup>(2)</sup> compared to net realized gains on investments supporting policy liabilities and derivatives in surplus under U.S. GAAP	<b>(120)</b>	1,147	2,389
New business differences including acquisition costs	<b>(274)</b>	(202)	(316)
Charges due to lower fixed income ultimate reinvestment rate assumptions used in the valuation of policy liabilities under IFRS only	<b>437</b>	309	132
Changes in actuarial methods and assumptions	<b>349</b>	1,614	1,031
Gain on sale of Life Retrocession business	<b>(303)</b>	—	—
Goodwill impairment	<b>153</b>	91	—
Other differences	<b>351</b>	65	245
<b>Total earnings difference</b>	<b>\$ 3,520</b>	<b>\$ 3,238</b>	<b>\$ 1,707</b>
<b>Net income in accordance with U.S. GAAP</b>	<b>\$ 3,765</b>	<b>\$ 1,712</b>	<b>\$ 3,143</b>

<sup>(1)</sup> Amounts presented for 2009 reflect a comparison of CGAAP prior to the adoption of IFRS with U.S. GAAP.

<sup>(2)</sup> Until the new IFRS standard for insurance contracts is effective, the requirements under prior Canadian GAAP for the valuation of insurance liabilities (CALM) will be maintained. Under CALM, the measurement of insurance liabilities is based on projected liability cash flows, together with estimated future premiums and net investment income generated from assets held to support those liabilities.

The primary earnings differences in accounting bases relate to:

- *Accounting for variable annuity guarantee liabilities* – The Canadian version of IFRS follows a predominantly “mark-to-market” accounting approach to measure variable annuity guarantee liabilities whereas U.S. GAAP only uses “mark-to-market” accounting for certain benefit guarantees, and reflects the Company’s own credit standing in the measurement of the liability. In 2011, we reported a net gain of \$682 million (2010 – \$4 million; 2009 – \$1,097 million) in our total variable annuity businesses under U.S. GAAP as the increase in the variable annuity guarantee liabilities was more than offset by the significant dynamic hedge asset gains. This compared to a net loss of \$2,245 million (2010 – net loss of \$210 million; 2009 – net gain of \$2,871 million) under IFRS.
- *Investment income and policy liabilities* – Under IFRS, accumulated unrealized gains and losses arising from investments and derivatives supporting policy liabilities are largely offset in the valuation of the policy liabilities. The 2011 IFRS impacts on insurance liabilities of fixed income reinvestment assumptions, general fund equity investments, activities to reduce interest rate exposures and certain market and trading activities of \$941 million (2010 – loss of \$473 million; 2009 – loss of \$3,153 million) compared to U.S. GAAP net realized gains on investments supporting policy liabilities of \$821 million (2010 – gain of \$674 million; 2009 – loss of \$764 million) including net unrealized losses on interest rate swaps in the surplus segment not in a hedge accounting relationship under U.S. GAAP of \$849 million (2010 – net loss of \$71 million; 2009 – gain of \$223 million).
- *Differences in the treatment of acquisition costs and other new business items* – Acquisition costs that are related to and vary with the production of new business are explicitly deferred and amortized under U.S. GAAP but are recognized as an implicit reduction in insurance liabilities along with other new business gains and losses under IFRS. In 2011, IFRS results benefited from lower new business strain compared to U.S. GAAP.

<sup>18</sup> Net income in accordance with U.S. GAAP is a non-GAAP measure. See “Performance and Non-GAAP Measures” below.

- *Changes in actuarial methods and assumptions* – The charges recognized under IFRS from the annual review of actuarial methods and assumptions of \$751 million (2010 – \$1,766 million; 2009 – \$1,154 million) excluding URR changes compared to charges of \$402 million (2010 – \$152 million; 2009 – \$123 million) on a U.S. GAAP basis as actuarial methods and assumptions for traditional long duration products are generally “locked in” at issuance unless the expected premiums are not sufficient to cover the expected benefits and related expenses.
- *Gain on sale of Life Retrocession business* – The total IFRS gain of \$303 million compares to a total gain of \$216 million under U.S. GAAP which is deferred and amortized over the expected life of the reinsurance agreement. The 2011 results under U.S. GAAP reflect a nil net impact of the gain amortization and transaction and other expenses.

Total equity in accordance with U.S. GAAP<sup>19</sup> as at December 31, 2011 was approximately \$16 billion higher than under IFRS. Of this difference, approximately \$10 billion is attributable to the higher cumulative net income on a U.S. GAAP basis with the remaining difference primarily attributable to the treatment of unrealized gains on fixed income investments and derivatives in a cash flow hedging relationship which are reported in equity under U.S. GAAP, but where the investments and derivatives are supporting policy liabilities, these accumulated unrealized gains are largely offset in the valuation of the policy liabilities under IFRS. The fixed income investments and derivatives have significant unrealized gains as a result of the current low levels of interest rates. The majority of the difference in equity between the two accounting bases as at December 31, 2011 arises from our U.S. businesses.

A reconciliation of the major differences in total equity is as follows:

As at December 31, (C\$ millions)	2011	2010	2009 <sup>(1)</sup>
<b>Total equity in accordance with IFRS/CGAAP<sup>(1)</sup></b>	<b>\$ 24,879</b>	<b>\$ 24,675</b>	<b>\$ 28,907</b>
Differences in shareholders' retained earnings and participating policyholders' equity <sup>(2)</sup>	<b>10,095</b>	6,600	1,710
Difference in Accumulated Other Comprehensive Income attributable to:			
(i) AFS securities and others;	<b>4,366</b>	1,723	468
(ii) Cash flow hedges; and	<b>2,570</b>	458	600
(iii) Translation of net foreign operations <sup>(3)</sup>	<b>(1,286)</b>	(1,418)	(841)
Differences in share capital, contributed surplus and non-controlling interest in subsidiaries <sup>(4)</sup>	<b>195</b>	162	464
<b>Total equity in accordance with U.S. GAAP</b>	<b>\$ 40,819</b>	<b>\$ 32,200</b>	<b>\$ 31,308</b>

<sup>(1)</sup> December 31, 2009 total equity is based on CGAAP. Amounts presented as at December 31, 2011 and 2010 reflect total equity in accordance with IFRS.

<sup>(2)</sup> Opening U.S. GAAP retained earnings at January 1, 2009 has been reduced by \$190 million to reflect the correction of errors identified in the fourth quarter of 2011 related to accounting for deferred tax assets and liabilities under U.S. GAAP.

<sup>(3)</sup> Reflects the net difference in the currency translation account after the reset to zero through retained earnings upon adoption of IFRS at January 1, 2010. The amounts presented for the year 2009 under Canadian GAAP do not reflect the reset.

<sup>(4)</sup> Non-controlling interest was not a component of equity under CGAAP and as such, the difference presented for 2009 excludes the impact of non-controlling interest under CGAAP.

<sup>19</sup> Total equity in accordance with U.S. GAAP is a non-GAAP measure. See “Performance and Non-GAAP Measures” below.

# 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 is recorded, processed, summarized and reported accurately and completely and within the time periods specified under Canadian and U.S. securities laws. Our process includes controls and procedures that are designed to ensure that information is accumulated and communicated to management, including the CEO and CFO, to allow timely decisions regarding required disclosure.

As of December 31, 2011, management evaluated the effectiveness of its disclosure controls and procedures as defined under the rules adopted by the U.S. Securities and Exchange Commission and the Canadian securities regulatory authorities. This evaluation was performed under the supervision of the Audit Committee, the CEO and CFO.

Based on that evaluation, the CEO and CFO concluded that our disclosure controls and procedures were effective as at December 31, 2011.

## Management's Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control system was designed to provide reasonable assurance to management and the Board of Directors regarding the preparation and fair presentation of published financial statements in accordance with generally accepted accounting principles. All internal control systems, no matter how well designed, have inherent limitations due to manual controls. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Management maintains a comprehensive system of controls intended to ensure that transactions are executed in accordance with management's authorization, assets are safeguarded, and financial records are reliable. Management also takes steps to ensure that information and communication flows are effective and to monitor performance, including performance of internal control procedures.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2011 based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control – Integrated Framework. Based on this assessment, management believes that, as of December 31, 2011, the Company's internal control over financial reporting is effective.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2011 has been audited by Ernst & Young LLP, the Company's independent registered public accounting firm that also audited the consolidated financial statements of the Company for the year ended December 31, 2011. Their report expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting as of December 31, 2011.

## Changes in Internal Control over Financial Reporting

No changes were made in our internal control over financial reporting during the year ended December 31, 2011 that have significantly affected, or are reasonably likely to significantly affect, our internal control over financial reporting.

# Performance and Non-GAAP Measures

We use a number of non-GAAP financial measures to measure overall performance and to assess each of our businesses. A financial measure is considered a non-GAAP measure for Canadian securities law purposes if it is presented other than in accordance with generally accepted accounting principles used for the Company's audited historical financial statements which is prior Canadian GAAP for 2010 and earlier and IFRS for 2011 and beyond. Non-GAAP measures include: net income (loss) excluding the direct impact of equity markets and interest rates; net income (loss) excluding notable items; net income in accordance with U.S. GAAP; total equity in accordance with U.S. GAAP; return on common shareholders' equity; constant currency basis; deposits; premiums and deposits; funds under management; capital; and sales. Non-GAAP financial measures are not defined terms under GAAP and, therefore, with the exception of net income in accordance with U.S. GAAP and total equity in accordance with U.S. GAAP (which are comparable to the equivalent measures of issuers whose financial statements are prepared in accordance with U.S. GAAP), are unlikely to be comparable to similar terms used by other issuers. Therefore, they should not be considered in isolation or as a substitute for any other financial information prepared in accordance with GAAP.

**Net income (loss) excluding the direct impact of equity markets and interest rates** is a non-GAAP profitability measure. It shows what the net income (loss) attributed to shareholders would have been assuming that existing hedges are unchanged and that interest and equity markets performed as assumed in our policy valuation. The direct impact of equity markets and interest rates is relative to our policy liability valuation assumptions and includes changes to the interest rate assumptions. We also include gains and losses on the sale of AFS bonds as management may have the ability to partially offset the direct impacts of changes in interest rates reported in the liability segments. We consider the gains or losses on the variable annuity business that is dynamically hedged to be an indirect impact, not a direct impact, of changes in equity markets and interest rates and accordingly, such gains and losses are reflected in this measure.

**Net income (loss) excluding notable items** is a non-GAAP measure. It shows what the net income (loss) attributed to shareholders would have been excluding the direct impact of equity markets and interest rates (as described above) and also excluding other notable items as listed on page 12.

### 2011 net income excluding notable items

(C\$ millions)	Asia	Canada	U.S.	Corporate and Other	Total
Net income (loss)	\$ (48)	\$ 910	\$ 638	\$ (1,371)	\$ 129
Direct impact of equity markets and interest rates	(1,159)	12	(397)	480	(1,064)
Net income excluding the direct impact of equity markets and interest rates	\$ 1,111	\$ 898	\$ 1,035	\$ (1,851)	\$ 1,193
Other notable items (as disclosed on page 12)	173	64	15	(1,641)	(1,389)
<b>Net income (loss) excluding notable items</b>	<b>\$ 938</b>	<b>\$ 834</b>	<b>\$ 1,020</b>	<b>\$ (210)</b>	<b>\$ 2,582</b>

**Net income in accordance with U.S. GAAP** is a non-GAAP profitability measure. It shows what the net income would have been if the Company had applied U.S. GAAP as its primary financial reporting basis. We consider this to be a relevant profitability measure given our large U.S. domiciled investor base and for comparability to our U.S. peers who report under U.S. GAAP.

**Total equity in accordance with U.S. GAAP** is a non-GAAP measure. It shows what the total equity would have been if the Company had applied U.S. GAAP as its primary financial reporting basis. We consider this to be a relevant measure given our large U.S. domiciled investor base and for comparability to our U.S. peers who report under U.S. GAAP.

**Return on common shareholders' equity** ("ROE") is a non-GAAP profitability measure that presents the net income available to common shareholders as a percentage of the capital deployed to earn the income. The Company calculates return on common shareholders' equity using average common shareholders' equity excluding Accumulated Other Comprehensive Income (Loss) ("AOCI") on AFS securities and cash flow hedges.

Return on common shareholders' equity (C\$ millions)	Quarterly results		Year ended	
	4Q 2011	4Q 2010	2011	2010
Net income (loss) attributed to common shareholders	\$ (90)	\$ 1,776	\$ 44	\$ (1,742)
Opening total equity attributed to common shareholders	\$ 23,077	\$ 21,856	\$ 22,683	\$ 25,836
Closing total equity attributed to common shareholders	\$ 22,402	\$ 22,683	\$ 22,402	\$ 22,683
<b>Weighted average total equity available to common shareholders</b>	<b>\$ 22,740</b>	<b>\$ 22,270</b>	<b>\$ 22,543</b>	<b>\$ 24,259</b>
Opening AOCI on AFS securities and cash flow hedges	\$ 28	\$ 584	\$ 278	\$ 641
Closing AOCI on AFS securities and cash flow hedges	\$ 13	\$ 278	\$ 13	\$ 278
<b>Adjustment for average AOCI</b>	<b>\$ (21)</b>	<b>\$ (431)</b>	<b>\$ (146)</b>	<b>\$ (459)</b>
<b>Weighted average total equity attributed to common shareholders excluding average AOCI adjustment</b>	<b>\$ 22,719</b>	<b>\$ 21,839</b>	<b>\$ 22,397</b>	<b>\$ 23,800</b>
<b>ROE based on weighted average total equity attributed to common shareholders (annualized)</b>	<b>(1.6)%</b>	<b>31.6%</b>	<b>0.2%</b>	<b>(7.2)%</b>
<b>ROE based on weighted average total equity attributed to common shareholders excluding average AOCI adjustment (annualized)</b>	<b>(1.6)%</b>	<b>32.3%</b>	<b>0.2%</b>	<b>(7.3)%</b>

The Company also uses financial performance measures that are prepared on a **constant currency basis**, which exclude the impact of currency fluctuations and which are non-GAAP measures. Quarterly amounts stated on a constant currency basis in this report are calculated, as appropriate, using the income statement and balance sheet exchange rates effective for the fourth quarter of 2010. Annual amounts stated on a constant currency basis in this report are calculated, as appropriate, using the income statement and balance sheet exchange rates effective for 2010.

**Premiums and deposits** is a non-GAAP measure of top line growth. The Company calculates premiums and deposits as the aggregate of (i) general fund premiums, net of reinsurance, reported as premiums on the Consolidated Statement of Income, (ii) premium equivalents for administration only group benefit contracts, (iii) premiums in the Canadian Group Benefits reinsurance ceded agreement, (iv) segregated fund deposits, excluding seed money, (v) mutual fund deposits, (vi) deposits into institutional advisory accounts, and (vii) other deposits in other managed funds.

<b>Premiums and deposits</b> (C\$ millions)	Quarterly results		Year ended	
	4Q 2011	4Q 2010	2011	2010
Premium income	\$ 4,540	\$ 4,714	\$ 17,504	\$ 18,098
Deposits from policyholders	5,575	6,025	21,689	24,544
<b>Premiums and deposits per financial statements</b>	<b>\$ 10,115</b>	<b>\$ 10,739</b>	<b>\$ 39,193</b>	<b>\$ 42,642</b>
Investment contract deposits	126	135	289	298
Mutual fund deposits	3,309	3,662	16,640	12,612
Institutional advisory account deposits	627	443	2,807	2,700
ASO premium equivalents	666	662	2,679	2,647
Group benefits ceded premiums	941	933	3,754	3,675
Other fund deposits	133	145	699	532
<b>Total premiums and deposits</b>	<b>\$ 15,917</b>	<b>\$ 16,719</b>	<b>\$ 66,061</b>	<b>\$ 65,106</b>
Currency impact	(175)	–	1,558	–
<b>Constant currency premiums and deposits</b>	<b>\$ 15,742</b>	<b>\$ 16,719</b>	<b>\$ 67,619</b>	<b>\$ 65,106</b>

**Funds under management** is a non-GAAP measure of the size of the Company. It represents the total of the invested asset base that the Company and its customers invest in.

<b>Funds under management</b> (C\$ millions)	Quarterly results		Year ended	
	4Q 2011	4Q 2010	2011	2010
Total invested assets	\$ 226,520	\$ 201,222	\$ 226,520	\$ 201,222
Total segregated funds net assets	196,058	199,120	196,058	199,120
<b>Funds under management per financial statements</b>	<b>\$ 422,578</b>	<b>\$ 400,342</b>	<b>\$ 422,578</b>	<b>\$ 400,342</b>
Mutual funds	49,399	47,726	49,399	47,726
Institutional advisory accounts (excluding segregated funds)	20,294	20,918	20,294	20,918
Other funds	7,381	7,971	7,381	7,971
<b>Total fund under management</b>	<b>\$ 499,652</b>	<b>\$ 476,957</b>	<b>\$ 499,652</b>	<b>\$ 476,957</b>
Currency impact	(9,744)	–	(9,744)	–
<b>Constant currency funds under management</b>	<b>\$ 489,908</b>	<b>\$ 476,957</b>	<b>\$ 489,908</b>	<b>\$ 476,957</b>

**Capital** The definition we use for capital, a non-GAAP measure, serves as a foundation of our capital management activities at the MFC level. For regulatory reporting purposes, the numbers are further adjusted for various additions or deductions to capital as mandated by the guidelines used by OSFI. Capital is calculated as the sum of: (i) total equity excluding AOCI on cash flow hedges and (ii) liabilities for preferred shares and capital instruments.

<b>Capital</b> (C\$ millions)	Quarterly results		Year ended	
	4Q 2011	4Q 2010	2011	2010
<b>Total equity</b>	<b>\$ 24,879</b>	<b>\$ 24,675</b>	<b>\$ 24,879</b>	<b>\$ 24,675</b>
Add AOCI loss on cash flow hedges	91	55	91	55
Add liabilities for preferred shares and capital instruments	4,012	4,004	4,012	4,004
<b>Total Capital</b>	<b>\$ 28,982</b>	<b>\$ 28,734</b>	<b>\$ 28,982</b>	<b>\$ 28,734</b>

**Sales** are measured according to product type:

- For total individual insurance, sales include 100 per cent of new annualized premiums and 10 per cent of both excess and single premiums. For individual insurance, new annualized premiums reflect the annualized premium expected in the first year of a policy that requires premium payments for more than one year. Sales are reported gross before the impact of reinsurance. Single premium is the lump sum premium from the sale of a single premium product, e.g., travel insurance.
- For group insurance, sales include new annualized premiums and administrative services only premium equivalents on new cases, as well as the addition of new coverages and amendments to contracts, excluding rate increases.
- For individual wealth management contracts, all new deposits are reported as sales. This includes individual annuities, both fixed and variable; variable annuity products; mutual funds; college savings 529 plans; and authorized bank loans and mortgages.
- For group pensions/retirement savings, sales of new regular premiums and deposits reflect an estimate of expected deposits in the first year of the plan with the Company. Single premium sales reflect the assets transferred from the previous plan provider. Sales include the impact of the addition of a new division or of a new product to an existing client. Total sales include both new regular and single premiums and deposits.

# Additional Disclosures

## Contractual Obligations

In the normal course of business, the Company enters into contracts that give rise to obligations fixed by agreement as to the timing and dollar amount of payment.

As at December 31, 2011, the Company's contractual obligations and commitments are as follows:

Payments due by period (C\$ millions)	Total	Less than 1 year	1 – 3 years	3 – 5 years	After 5 years
Long-term debt <sup>(1)</sup>	\$ 6,970	\$ 282	\$ 1,842	\$ 2,371	\$ 2,475
Liabilities for capital instruments <sup>(1),(2)</sup>	14,296	208	416	416	13,256
Purchase obligations	808	182	252	197	177
Operating leases	863	131	200	100	432
Insurance contract liabilities <sup>(3)</sup>	507,157	8,713	9,178	11,758	477,508
Investment contract liabilities <sup>(1)</sup>	3,749	272	641	575	2,261
Bank deposits	18,078	15,141	1,253	1,684	–
Other	1,061	701	173	86	101
<b>Total contractual obligations</b>	<b>\$ 552,982</b>	<b>\$ 25,630</b>	<b>\$ 13,955</b>	<b>\$ 17,187</b>	<b>\$ 496,210</b>

<sup>(1)</sup> The contractual payments include principal, interest and distributions. The contractual payments reflect the amounts payable from January 1, 2012 up to and including the final contractual maturity date. In the case of floating rate obligations, the floating rate index is based on the interest rates as at December 31, 2011 and is assumed to remain constant to the final contractual maturity date. The Company may have the contractual right to redeem or repay obligations prior to maturity and if such right is exercised, total contractual obligations paid and the timing of payment could vary significantly from the amounts and timing included in the table.

<sup>(2)</sup> Liabilities for preferred shares – Class A, Series 1 are not included in the contractual obligation table. These preferred shares are redeemable by the Company by payment of cash or issuance of MFC common shares and are convertible at the option of the holder into MFC common shares on or after December 15, 2015.

<sup>(3)</sup> Insurance contract liabilities cash flows include estimates related to the timing and payment of death and disability claims, policy surrenders, policy maturities, annuity payments, minimum guarantees on segregated fund products, policyholder dividends, commissions and premium taxes offset by contractual future premiums on in-force contracts. These estimated cash flows are based on the best estimate assumptions used in the determination of insurance contract liabilities. These amounts are undiscounted and reflect recoveries from reinsurance agreements. Due to the use of assumptions, actual cash flows may differ from these estimates (see "Policy Liabilities"). Cash flows include embedded derivatives measured separately at fair value.

In the normal course of business, the Company enters into investment commitments, which are not reflected in the consolidated financial statements. As at December 31, 2011, there were \$3,431 million of investment commitments (2010 – \$3,154 million), of which \$1,886 million matures within one year (2010 – \$2,310 million), \$1,068 million within one to three years (2010 – \$452 million), \$391 million matures within three to five years (2010 – \$278 million) and \$86 million matures after five years (2010 – \$114 million).

## Legal and Regulatory Proceedings

The Company is regularly involved in legal actions, both as a defendant and as a plaintiff. The legal actions naming the Company as a defendant ordinarily involve its activities as a provider of insurance protection and wealth management products, as well as an investment adviser, employer and taxpayer. In addition, government and regulatory bodies in Canada, the United States, Asia and other jurisdictions where the Company conducts business regularly make inquiries and, from time to time, require the production of information or conduct examinations concerning the Company's compliance with, among other things, insurance laws, securities laws, and laws governing the activities of broker-dealers.

The Company announced on April 21, 2011 that it had been informed by staff of the Ontario Securities Commission ("OSC") that staff would not seek any orders from OSC in connection with the enforcement notice delivered by staff in June 2009 relating to the Company's disclosure before March 2009 of risks related to the Company's variable annuity guarantee and segregated funds business.

A class action covering Quebec residents only is pending in Quebec against the Company and proposed class action lawsuits against the Company have been filed in Ontario and the United States, on behalf of investors in Canada (except for Quebec residents) and the United States, respectively. These proceedings are based on allegations that the Company failed to meet its disclosure obligations related to its exposure to market price risk in its segregated funds and variable annuity guaranteed products. The Company may become subject to other similar lawsuits by investors.

The Company believes that its disclosure satisfied applicable disclosure requirements and intends to vigorously defend itself against any claims based on these allegations.

Plaintiffs in class action and other lawsuits against the Company may seek very large or indeterminate amounts, including punitive and treble damages, and the damages claimed and the amount of any probable and estimable liability, if any, may remain unknown for substantial periods of time. A substantial legal liability or a significant regulatory action could have a significant adverse effect on the Company's business, results of operations, financial condition and capital position and adversely affect its reputation. Even if the Company ultimately prevails in the litigation, regulatory action or investigation, it could suffer reputational harm, which could have an adverse effect on its business, results of operations, financial condition and capital position, including its ability to attract new customers, retain current customers and recruit and retain employees.

## Key Planning Assumptions and Uncertainties

Manulife's 2015 management objectives do not constitute guidance and were established in November 2010 based on certain key planning assumptions, including then current accounting and capital standards; no acquisitions or divestitures; equity market returns and interest rates consistent with then current best estimate of long-term assumptions; no net impact from any future basis changes, additional expected cost of hedging<sup>20</sup>, benefits of potential variable annuity required capital releases (based upon current required capital standards and long-term assumptions for equity market performance); additional favourable investment experience expected with improved economic conditions; and no net issuance of debt or capital. In addition, uncertainties regarding market and investment risks; potential accounting standard changes; potential regulatory and capital regime changes; timing and approach to expanded hedging and other risks<sup>21</sup> could cause actual results to differ significantly from management objectives.

## Quarterly Financial Information

The following table provides summary information related to our eight most recently completed quarters:

As at and for the three months ended (C\$ millions, except per share amounts)	Dec 31, 2011	Sep 30, 2011	Jun 30, 2011	Mar 31, 2011	Dec 31, 2010	Sep 30, 2010	Jun 30, 2010	Mar 31, 2010
<b>Revenue</b>								
Premium income								
Life and health insurance	\$ 3,651	\$ 3,490	\$ 3,452	\$ 3,593	\$ 3,663	\$ 3,568	\$ 3,433	\$ 3,268
Annuities and pensions	889	772	730	927	1,051	1,035	986	1,094
Total premium income	\$ 4,540	\$ 4,262	\$ 4,182	\$ 4,520	\$ 4,714	\$ 4,603	\$ 4,419	\$ 4,362
Investment income	2,034	3,697	2,609	2,027	2,243	3,052	2,087	2,195
Realized and unrealized gains (losses) on assets supporting insurance and investment contract liabilities and deposits <sup>(1)</sup>	1,360	13,491	2,266	(1,247)	(5,187)	4,027	3,709	1,036
Other revenue	1,765	2,005	1,708	1,764	1,650	1,565	1,552	1,591
<b>Total revenue</b>	<b>\$ 9,699</b>	<b>\$ 23,455</b>	<b>\$ 10,765</b>	<b>\$ 7,064</b>	<b>\$ 3,420</b>	<b>\$ 13,247</b>	<b>\$ 11,767</b>	<b>\$ 9,184</b>
Income (loss) before income taxes	\$ 119	\$ (1,799)	\$ 532	\$ 1,296	\$ 2,174	\$ (2,598)	\$ (3,408)	\$ 1,507
Income tax (expense) recovery	(174)	615	(37)	(307)	(349)	421	1,001	(274)
<b>Net income (loss)</b>	<b>\$ (55)</b>	<b>\$ (1,184)</b>	<b>\$ 495</b>	<b>\$ 989</b>	<b>\$ 1,825</b>	<b>\$ (2,177)</b>	<b>\$ (2,407)</b>	<b>\$ 1,233</b>
<b>Net income (loss) attributed to shareholders</b>	<b>\$ (69)</b>	<b>\$ (1,277)</b>	<b>\$ 490</b>	<b>\$ 985</b>	<b>\$ 1,796</b>	<b>\$ (2,249)</b>	<b>\$ (2,434)</b>	<b>\$ 1,224</b>
<b>Basic earnings (loss) per common share</b>	<b>\$ (0.05)</b>	<b>\$ (0.73)</b>	<b>\$ 0.26</b>	<b>\$ 0.54</b>	<b>\$ 1.00</b>	<b>\$ (1.28)</b>	<b>\$ (1.39)</b>	<b>\$ 0.68</b>
<b>Diluted earnings (loss) per common share, excluding convertible instruments</b>	<b>\$ (0.05)</b>	<b>\$ (0.73)</b>	<b>\$ 0.26</b>	<b>\$ 0.54</b>	<b>\$ 1.00</b>	<b>\$ (1.28)</b>	<b>\$ (1.39)</b>	<b>\$ 0.68</b>
<b>Diluted earnings (loss) per common share</b>	<b>\$ (0.05)</b>	<b>\$ (0.73)</b>	<b>\$ 0.26</b>	<b>\$ 0.53</b>	<b>\$ 0.96</b>	<b>\$ (1.28)</b>	<b>\$ (1.39)</b>	<b>\$ 0.66</b>
<b>Segregated funds deposits</b>	<b>\$ 5,575</b>	<b>\$ 5,109</b>	<b>\$ 5,086</b>	<b>\$ 5,919</b>	<b>\$ 6,025</b>	<b>\$ 5,347</b>	<b>\$ 5,968</b>	<b>\$ 7,204</b>
<b>Total assets</b>	<b>\$ 462,102</b>	<b>\$ 455,076</b>	<b>\$ 427,597</b>	<b>\$ 423,397</b>	<b>\$ 424,767</b>	<b>\$ 438,448</b>	<b>\$ 420,318</b>	<b>\$ 408,786</b>
<b>Weighted average common shares (in millions)</b>	<b>1,795</b>	<b>1,789</b>	<b>1,783</b>	<b>1,778</b>	<b>1,773</b>	<b>1,767</b>	<b>1,762</b>	<b>1,758</b>
<b>Diluted weighted average common shares, excluding convertible instruments (in millions)</b>	<b>1,795</b>	<b>1,789</b>	<b>1,786</b>	<b>1,781</b>	<b>1,776</b>	<b>1,767</b>	<b>1,762</b>	<b>1,763</b>
<b>Diluted weighted average common shares (in millions)</b>	<b>1,795</b>	<b>1,789</b>	<b>1,871</b>	<b>1,861</b>	<b>1,873</b>	<b>1,767</b>	<b>1,762</b>	<b>1,834</b>
<b>Dividends per common share</b>	<b>\$ 0.13</b>	<b>\$ 0.13</b>	<b>\$ 0.13</b>	<b>\$ 0.13</b>	<b>\$ 0.13</b>	<b>\$ 0.13</b>	<b>\$ 0.13</b>	<b>\$ 0.13</b>
<b>CDN\$ to \$1US – Statement of Financial Position</b>	<b>1.0170</b>	<b>1.0389</b>	<b>0.9643</b>	<b>0.9718</b>	<b>0.9946</b>	<b>1.0298</b>	<b>1.0606</b>	<b>1.0156</b>
<b>CDN\$ to \$1US – Statement of Operations</b>	<b>1.0232</b>	<b>0.9807</b>	<b>0.9679</b>	<b>0.9855</b>	<b>1.0128</b>	<b>1.0391</b>	<b>1.0276</b>	<b>1.0401</b>

<sup>(1)</sup> For fixed income assets supporting insurance and investment contract liabilities and for equities supporting pass-through products and derivatives related to variable hedging programs, the impact of realized and unrealized (losses) gains on the assets is largely offset in the change in insurance and investment contract liabilities.

<sup>20</sup> In its financial model supporting the 2015 management objectives, the Company has modeled for an additional \$400 million per annum, after-tax, to cover the expected cost of hedging, though actual results are expected to vary.

<sup>21</sup> See "Caution regarding forward-looking statements".

## Selected Annual Financial Information

As at and for the years ended December 31,  
(C\$ millions, except per share amounts)

	2011	2010	2009 <sup>(1)</sup>
<b>Revenue</b>			
Asia Division	\$ 8,428	\$ 7,403	\$ 6,833
Canadian Division	11,451	9,559	10,984
U.S. Insurance	18,982	11,190	10,577
U.S. Wealth Management	9,923	7,405	11,177
Corporate and Other	2,199	2,061	536
<b>Total revenue</b>	<b>\$ 50,983</b>	<b>\$ 37,618</b>	<b>\$ 40,107</b>
<b>Total assets</b>	<b>\$ 462,102</b>	<b>\$ 424,767</b>	<b>\$ 205,845</b>
<b>Long-term financial liabilities</b>			
Long-term debt	\$ 5,503	\$ 5,841	\$ 3,308
Non-controlling interest in subsidiaries <sup>(2)</sup>	—	—	202
Liabilities for preferred shares and capital instruments	4,012	4,004	4,581
	<b>\$ 9,515</b>	<b>\$ 9,845</b>	<b>\$ 8,091</b>
Dividend per common share	\$ 0.52	\$ 0.52	\$ 0.78
Cash dividend per Class A Share, Series 1	\$ 1.025	\$ 1.025	\$ 1.025
Cash dividend per Class A Share, Series 2	\$ 1.16252	\$ 1.16252	\$ 1.16252
Cash dividend per Class A Share, Series 3	\$ 1.125	\$ 1.125	\$ 1.125
Cash dividend per Class A Share, Series 4	\$ 1.65	\$ 1.65	\$ 1.3087
Cash dividend per Class 1 Share, Series 1	\$ 1.40	\$ 1.40	\$ 0.76425
Cash dividend per Class 1 Share, Series 3	\$ 0.81267	\$ —	\$ —

<sup>(1)</sup> Where applicable, 2009 amounts shown are based on CGAAP prior to the adoption of IFRS.

<sup>(2)</sup> Under IFRS, non-controlling interest in subsidiaries is classified as equity.

## Additional Information Available

Additional information relating to Manulife Financial, including MFC's Annual Information Form, is available on the Company's website at [www.manulife.com](http://www.manulife.com) and on SEDAR at [www.sedar.com](http://www.sedar.com).

## Outstanding Shares – Selected Information

### Class A Shares Series 1

As at March 15, 2012, MFC had 14 million Class A Shares Series 1 ("Series 1 Preferred Shares") outstanding at a price of \$25.00 per share, for an aggregate amount of \$350 million. The Series 1 Preferred Shares are non-voting and are entitled to non-cumulative preferential cash dividends payable quarterly, if and when declared, at a per annum rate of 4.10%. With regulatory approval, the Series 1 Preferred Shares may be redeemed by MFC, in whole or in part, at declining premiums that range from \$1.25 to nil per Series 1 Preferred Share, by either payment of cash or the issuance of MFC common shares. On or after December 19, 2015, the Series 1 Preferred Shares will be convertible at the option of the holder into MFC common shares, the number of which is determined by a prescribed formula, and is subject to the right of MFC prior to the conversion date to redeem for cash or find substitute purchasers for such preferred shares. The prescribed formula is the face amount of the Series 1 Preferred Shares divided by the greater of \$2.00 and 95% of the then market price of MFC common shares.

### Common Shares

As at March 13, 2012 MFC had 1,801,113,056 common shares outstanding.

## Subsequent Events

On February 22, 2012, MFC issued 10 million Class 1 Shares Series 7 ("Class 1 Series 7 Preferred Shares") at a price of \$25 per share, for an aggregate amount of \$250 million. The Class 1 Series 7 Preferred Shares are entitled to non-cumulative preferential cash dividends, payable quarterly, if and when declared, at a per annum rate of 4.60% until March 19, 2017 after which the dividend rate will be reset every five years at a rate equal to the five year Government of Canada bond yield plus 3.13%. On March 19, 2017 and on March 19 every five years thereafter, the Class 1 Series 7 Preferred Shares will be convertible at the option of the holder into Class 1 Shares Series 8 ("Class 1 Series 8 Preferred Shares"). The Class 1 Series 8 Preferred Shares are entitled to non-cumulative preferential cash dividends, payable quarterly, if and when declared, at a rate equal to the three month Government of Canada Treasury Bill yield plus 3.13%. Subject to regulatory approval, MFC may redeem Class 1 Series 7 Preferred Shares, in whole or in part, at par, on March 19, 2017 and on March 19 every five years thereafter.

On February 17, 2012, MLI issued \$500 million in subordinated fixed/floating debentures, which mature June 1, 2022. The debentures are guaranteed by MFC on a subordinated basis. The debentures bear interest at a fixed rate of 4.165% per annum, payable semi-annually for five years and thereafter at the 90-day Bankers' Acceptance rate plus 2.45% payable quarterly. With regulatory approval, MLI may redeem the debentures, in whole or in part, on or after June 1, 2017, at par, together with accrued and unpaid interest. The subordinated debentures form part of the Company's Tier 2B regulatory capital.