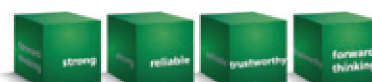
Manulife | John Hancock

Manulife Financial Corporation

Management's Discussion and Analysis

For the year ended December 31, 2015



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 2016 management objectives for core earnings and Core ROE, Core ROE expansion over the medium term and the drivers of such expansion, the contribution of recent major acquisitions and partnerships to annual core earnings over the medium term, the anticipated benefits and costs of the acquisition of Standard Life, the reasonableness of Manulife's long-term through-the-cycle investment-related experience estimate, estimated net pre-tax savings in 2016 from our E&E initiative, and the anticipated impact of an update to ASB's URR assumptions. 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 2016 management objectives for core earnings and Core ROE, the assumptions described under "Key Planning Assumptions and Uncertainties" in this document 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" in this document; 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 applicable in any of the territories in which we operate; changes in regulatory capital requirements applicable in any of the territories in which we operate; 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 provisions against future tax assets; the accuracy of estimates relating to morbidity, mortality and policyholder behaviour; the accuracy of other estimates used in applying accounting policies, actuarial methods and embedded value 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, including through our collaboration arrangements with Standard Life plc; bancassurance partnership with DBS Bank Ltd and distribution agreement with Standard Chartered; unforeseen liabilities or asset impairments arising from acquisitions and dispositions of businesses, including with respect to the; acquisitions of Standard Life, New York Life's Retirement Plan Services business, and Standard Chartered's MPF and ORSO 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 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 failure to realize some or all of the expected benefits of the acquisitions of Standard Life, of New York Life's Retirement Plan Services business, and Standard Chartered's MPF and ORSO businesses; the disruption of or changes to key elements of the Company's system or public infrastructure systems; environmental concerns; our ability to protect our intellectual property and exposure to claims of infringement; and our inability to withdraw cash from subsidiaries. Additional information about material risk 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 this document under "Risk Management", "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 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. The forward-looking statements in this document are, unless otherwise indicated, stated as of the date hereof and are presented for the purpose of assisting investors and others in understanding our financial position and results of operations, our future operations, as well as our objectives and strategic priorities, and may not be appropriate for other purposes. We do not undertake to update any forward-looking statements, except as required by law.

2015 Manulife Financial Corporation Management's Discussion and Analysis

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Management's Discussion and Analysis

This Management's Discussion and Analysis ("MD&A") is current as of February 18, 2016.

Overview

Manulife Financial Corporation is a leading international financial services group providing forward-thinking solutions to help people with their big financial decisions. We operate as John Hancock in the United States, and Manulife elsewhere. We provide financial advice, insurance and wealth and asset management solutions for individuals, groups and institutions. At the end of 2015, we had almost 34,000 employees, 63,000 agents, and thousands of distribution partners, serving over 20 million customers. We had $935 billion (US$676 billion) in assets under management and administration, and in the previous 12 months we made more than $24.6 billion in benefits, interest and other payments to our customers. Our principal operations are in Asia, Canada and the United States – where we have served customers for more than 100 years. Our global headquarters is in Toronto, Canada and we trade as 'MFC' on the Toronto, New York, and the Philippine stock exchanges and under '945' in Hong Kong.

In this document, the terms "Company", "Manulife" and "we" mean Manulife Financial Corporation ("MFC") and its subsidiaries. The term "MLI" means The Manufacturers Life Insurance Company and its subsidiaries.

Manulife's net income attributed to shareholders was $2.2 billion in 2015 compared with $3.5 billion in 2014. Net income attributed to shareholders is comprised of core earnings[1] (consisting of items we believe reflect the underlying earnings capacity of the business), which amounted to $3.4 billion in 2015 compared with $2.9 billion in 2014, and items excluded from core earnings, of $1.2 billion of charges in 2015 compared with $0.6 billion of gains in 2014.

The key drivers of the $540 million increase in core earnings were $155 million related to recent acquisitions, the impact of new business growth and $325 million related to changes in foreign exchange rates, partially offset by the non-recurrence of $200 million of core investment gains[1] reported in 2014.

The $1.2 billion of net charges related to items excluded from core earnings in 2015 included $876 million of investment-related experience charges due to the sharp decline in oil and gas prices. Whereas, in 2014, we reported strong investment-related experience as well as gains related to the direct impact of equity markets and interest rates.

Net income per common share was $1.06 in 2015, compared with $1.82 in 2014 and return on common shareholders' equity ("ROE") was 5.8% in 2015, compared with 11.9% for 2014. Fully diluted core earnings per share[1] was $1.68 in 2015 compared with $1.48 in 2014 and core return on shareholders' equity ("Core ROE")[1] was 9.2% in 2015 compared with 9.8% in 2014.

This was a disappointing year in terms of net income and ROE, largely due to the sharp market decline in oil and gas prices. However, our core earnings, before giving effect to investment-related impacts, rose 28% in 2015 compared with 2014, which was ahead of plan, and which highlights Manulife's powerful operating momentum. In addition, we delivered strong top line growth in 2015, with most of it coming from businesses which generate our highest returns.

Looking ahead, we expect that some macroeconomic headwinds and energy price volatility will persist, and that unless energy prices strengthen, it will be difficult for us to achieve the $4 billion core earnings objective we have set for 2016.[2] Despite these challenges, we are confident about the underlying fundamentals and the long-term strategic positioning of our company. On this basis, on February 11, 2016 we increased our dividend, marking our third increase in less than two years.

We also expect Core ROE expansion over the medium term as we execute on our strategy and as investment experience normalizes[2]. Our underlying business results in 2015 demonstrate that we are on the right path. We generated strong net flows into our global wealth and asset management businesses, we substantially grew insurance sales, margins and new business value in Asia, and we delivered core earnings per share growth of over 20% before giving effect to investment-related impacts.

Insurance sales[2] were $3.4 billion in 2015, an increase of 24%[3] compared with 2014 largely due to Asia, which grew 28%, and normal variability in large-case group benefit sales in Canada. In Asia, we achieved the 3rd consecutive year of record insurance sales, reflecting the success of product and marketing initiatives and expansion of our distribution channels. In Canada, sales also benefited from strong retail sales. In the U.S., insurance sales decreased 3% as an increase in Life insurance sales was more than offset by lower Long-Term Care sales.

Wealth and Asset Management ("WAM") net flows[1] were $34.4 billion, an increase of $16.1 billion compared with 2014. Driving the strong net flows were robust gross flows[3] which were a record $114.7 billion in 2015, a 46% increase from the previous record reported in 2014 (up 32% excluding recently acquired businesses), and solid retention. Asia gross flows increased 56% compared with the prior year due to strong growth in mutual fund sales in mainland China and continued strong pension sales in Hong Kong. In Canada, gross flows increased 57% driven by strong pension and mutual fund gross flows and the impact of the recent acquisition of the Canadian-based operations of Standard Life plc ("Standard Life") (up 22% excluding the recent acquisition). U.S. gross flows increased 26%, driven by strong mutual fund gross flows and the recent acquisition of New York Life's pension

[1] This item is a non-GAAP measure. See "Performance and Non-GAAP Measures" below. The Company introduced new wealth and asset management disclosure at its May 11, 2015 Investor Day. For further information, please see the Investor Day press release.

[2] See "Caution regarding forward-looking statements" above.

[3] Growth (declines) in sales, gross flows, premiums and deposits and assets under management and administration are stated on a constant currency basis. Constant currency basis is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

business (up 10% excluding the recent acquisition). Manulife Asset Management ("MAM") gross flows more than doubled driven by significant fixed income mandates.

Other Wealth sales[4] were $7.5 billion in 2015, an 89% increase compared with 2014, as sales in Japan nearly tripled due to enhanced distribution and the success of new products, and sales in Canada benefited from contributions from the recent acquisition.[5]

The Minimum Continuing Capital and Surplus Requirements ("MCCSR") ratio for The Manufacturers Life Insurance Company ("MLI") was 223% at the end of 2015, compared with 248% as at December 31, 2014. The decrease of 25 points over the year primarily reflected capital deployed for the Standard Life acquisition and growth in required capital that outpaced earnings.

MFC's **financial leverage ratio** was 23.8% at December 31, 2015 compared with 27.8% at the end of 2014. The improvement reflected the impact of a strengthening U.S. dollar compared with the Canadian dollar, the conversion of subscription receipts into common equity following the closing of the Standard Life acquisition and an increase in retained earnings.

The operating divisions delivered $2.2 billion in **remittances**[6] to the Group in 2015, compared with $2.4 billion in 2014.

Strategic Direction

Our strategy has three key themes that will set the course for attaining our vision of "helping people with their significant financial decisions".

The first theme of our strategy is to develop more holistic and long-lasting customer relationships. Our strategy is to:

- Build a 360-degree view of our customers to engage them in more personalized and thoughtful sales conversations.
- Deliver a simpler, more customer needs-focused experience.
- Equip our distributors with tools that enable them to effectively meet a broader range of customer needs.
- Where appropriate, grow the channels where we have more control of the end-to-end customer experience and where a broader range of customer needs can be met. This includes growing direct channels and advice channels that can be accessed anytime, anywhere.

Our second theme is to continue to build and integrate our global wealth and asset management businesses in existing markets, as well as expand our investment and sales offices into new markets in order to meet the needs of our customers, from individual investors to institutions such as pension funds and sovereign wealth funds. The worldwide need for wealth and asset management services is growing, including in locations where we do not currently have operations, and the opportunity for asset managers to add value also exists in those locations. We will not restrict ourselves to geographies where we currently have, or expect to have, insurance operations.

Our third theme is to leverage skills and experience across our international operations. If we are going to achieve maximum advantage from the investments we are making, we need to amortize our investments across our global organization.

In 2015, we focused on realigning our organization to put the customer at the centre of everything we do. With that in mind, we launched tools, products and services including ePOS[7] and ManulifeMOVE, a wellness initiative that rewards customers for living active lifestyles, in Asia; we entered the Exchange Traded Fund market and launched LifeTrack with Vitality in the U.S.; and we launched Quick Issue Term and added more than 800 banking machines across Canada. In mainland China, we were also the first foreign invested life insurance company to be granted a licence to sell mutual funds through our agency force – an important step to strengthen our ability to provide holistic solutions to our customers in this growth market.

Across the Company, we continue to embrace innovation and technology. We opened innovation hubs in Boston and Toronto and we were the first company in Canada to introduce voice biometrics, as well as natural language understanding in an interactive voice response system, in both French and English. We also expanded the channels through which we reach our customers, and sales of insurance on WeChat, a popular messaging app, in Asia is a good example of this.

We continued to add new capabilities and scale to our businesses throughout the year. We successfully completed the acquisitions of Standard Life and New York Life's Retirement Plan Services business. We signed an exclusive regional distribution agreement with DBS covering four markets in Asia. DBS is the biggest bank in Singapore, making it a great partner for us as we continue to build out our businesses in the region. We announced our pension distribution partnership with Standard Chartered in Hong Kong, as well as a related agreement to acquire its Mandatory Provident Fund ("MPF") and Occupational Retirement Schemes Ordinance ("ORSO") businesses. We also signed smaller distribution agreements with other local banks in the region during the year.

We remain focused on increasing shareholder value by allocating capital to those parts of our business which offer the highest growth prospects and returns. As a result of strong earnings growth and our capital position, we raised the dividend on our common shares twice since May 2014.

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[4] This item is a non-GAAP measure. See "Performance and Non-GAAP Measures" below. The Company introduced new wealth and asset management disclosure at its May 11, 2015 Investor Day. For further information, please see the Investor Day press release.

[5] The U.S. Division does not have any products for sale in this category.

[6] Remittances are defined as the cash remitted or payable to the Group from operating subsidiaries and excess capital generated by stand-alone Canadian operations.

[7] ePOS is an electronic point-of-sale tool which provides an end-to-end digital experience from needs identification to e-signature and PDF policy.

Successfully investing in innovation is critical to our success. We use a shareholder value lens to view the investments we make and continue to focus on efficiency and effectiveness ("E&E") initiatives to help fund investments. Core ROE was 9.2% in 2015, and given the deployments of capital to pursue long-term growth, along with the impact on equity of the strengthening U.S. dollar compared to the Canadian dollar, we no longer believe our Core ROE objective of 13% is achievable in 2016. We expect Core ROE to expand toward 13% or more over the medium term as we execute on our strategy and investment-related experience normalizes.[8] We expect the primary driver of Core ROE expansion to be organic growth of our less capital intensive/higher ROE businesses, particularly our Asia and Wealth and Asset Management businesses, supplemented by contributions from recent major acquisitions as well as partnerships and further savings from our Efficiency and Effectiveness initiatives. We currently estimate that recent major acquisitions and partnerships will contribute $400 million to $450 million to annual core earnings over the medium term.[8] Thereafter, the contribution could grow further driven by long-term strategic partnerships in Asia and revenue synergies.[8] Recent major acquisitions and partnerships include transactions with Standard Life plc, New York Life, DBS, and Standard Chartered. Going forward, as a result of integration with our business, it will not be possible to isolate the individual core earnings impact from these transactions and therefore not possible to report on their contribution.

Financial Performance

As at and for the years ended December 31, (C$ millions, unless otherwise stated)	**2015**	2014	2013
Net income attributed to shareholders	**$ 2,191**	$ 3,501	$ 3,130
Preferred share dividends	**(116)**	(126)	(131)
Common shareholders' net income	**$ 2,075**	$ 3,375	$ 2,999
Reconciliation of core earnings to net income attributed to shareholders:			
Core earnings[(1)]	**$ 3,428**	$ 2,888	$ 2,617
Investment-related experience in excess of amounts included in core earnings	**(530)**	359	706
Core earnings and investment-related experience in excess of amounts included in core earnings	**$ 2,898**	$ 3,247	$ 3,323
Other items to reconcile core earnings to net income attributed to shareholders:			
Direct impact of equity markets and interest rates and variable annuity guarantee liabilities	**(93)**	412	(336)
Changes in actuarial methods and assumptions	**(451)**	(198)	(489)
Integration and acquisition costs	**(149)**	–	–
Other items	**(14)**	40	632
Net income attributed to shareholders	**$ 2,191**	$ 3,501	$ 3,130
Basic earnings per common share (C$)	**$ 1.06**	$ 1.82	$ 1.63
Diluted earnings per common share (C$)	**$ 1.05**	$ 1.80	$ 1.62
Diluted core earnings per common share (C$)[(1)]	**$ 1.68**	$ 1.48	$ 1.34
Return on common shareholders' equity ("ROE") (%)	**5.8%**	11.9%	12.8%
Core ROE (%)[(1)]	**9.2%**	9.8%	10.6%
Sales[(1)]			
Insurance products	**$ 3,380**	$ 2,544	$ 2,757
Wealth and Asset Management gross flows[(1)]	**$ 114,686**	$ 69,164	$ 59,781
Wealth and Asset Management net flows[(1)]	**$ 34,387**	$ 18,335	$ 19,737
Other Wealth products	**$ 7,494**	$ 3,866	$ 4,033
Premiums and deposits[(1)]			
Insurance products	**$ 29,509**	$ 24,938	$ 24,467
Wealth and Asset Management products	**$ 114,686**	$ 69,164	$ 59,781
Other Wealth products	**$ 6,718**	$ 3,752	$ 3,845
Corporate and Other	**$ 90**	$ 77	$ 82
Assets under management and administration (C$ billions)[(1)]	**$ 935**	$ 691	$ 599
Capital (C$ billions)[(1)]	**$ 49.9**	$ 39.6	$ 33.5
MLI's MCCSR ratio	**223%**	248%	248%

[(1)] This item is a non-GAAP measure. For a discussion of our use of non-GAAP measures, see "Performance and Non-GAAP Measures" below.

Analysis of Net Income

Manulife's full year 2015 net income attributed to shareholders was $2.2 billion compared with $3.5 billion for full year 2014. Net income attributed to shareholders is comprised of core earnings (consisting of items we believe reflect the underlying earnings capacity of the business), which amounted to $3.4 billion in 2015 compared with $2.9 billion in 2014, and items excluded from core earnings, which amounted to a net $1.2 billion in 2015 compared with a net $0.6 billion in 2014.

The $540 million increase in core earnings included $155 million related to recent acquisitions, the impact of new business growth and $325 million related to the impact of changes in foreign exchange rates, partially offset by inclusion of $200 million of core investment gains in 2014 core earnings while 2015 core earnings included none. On a divisional basis, Asia core earnings increased by 18%, after adjusting for the impact of currency rates, reflecting strong growth in new business volumes combined with higher product margins and favourable product mix and policyholder experience. Canada core earnings increased by 36%, of which

[8] See "Caution regarding forward-looking statements" above.

approximately half was related to the recent acquisition. U.S. core earnings declined 4% after adjusting for the impact of currency rates, reflecting unfavourable policyholder experience and lower tax benefits, partially offset by higher WAM fee income from higher asset levels. In 2015, unfavourable policyholder experience netted to a charge of $205 million, with unfavourable policyholder experience in the U.S. and Canada partially offset by favourable policyholder experience in Asia.

In 2015, the net charges related to items excluded from core earnings of $1.2 billion included $530 million of investment-related experience charges ($876 million related to the sharp decline in oil and gas prices offset by $346 million related to favourable investment-related experience in other asset classes and fixed-income reinvestment activities), $451 million of charges for changes in actuarial methods and assumptions, $149 million of integration and acquisition costs, $93 million related to the direct impact of interest rates and equity markets and a net $14 million of other smaller items.

In 2014, the net gains related to items excluded from core earnings of $613 million included $359 million of investment-related experience ($559 million total investment-related experience less the $200 million reclassification to core earnings), $412 million of gains mostly related to the direct impact of interest rates and equity markets of $412 million, partially offset by $198 million of charges for changes in actuarial methods and assumptions and a net gain of $40 million related to other smaller items.

The table below reconciles 2015 net income attributed to shareholders of $2,191 million to core earnings of $3,428 million.

For the years ended December 31, (C$ millions, unaudited)	**2015**	2014	2013
Core earnings[1]			
Asia Division	**$ 1,305**	$ 1,008	$ 921
Canadian Division	**1,258**	927	905
U.S. Division	**1,537**	1,383	1,510
Corporate and Other (excluding expected cost of macro hedges and core investment gains)	**(446)**	(446)	(506)
Expected cost of macro hedges[2]	**(226)**	(184)	(413)
Investment-related experience in core earnings[3]	**–**	200	200
Total core earnings	**$ 3,428**	$ 2,888	$ 2,617
Investment-related experience outside of core earnings[3]	**(530)**	359	706
Core earnings and investment-related experience outside of core earnings	**$ 2,898**	$ 3,247	$ 3,323
Changes in actuarial methods and assumptions[4]	**(451)**	(198)	(489)
Direct impact of equity markets and interest rates and variable annuity guarantee liabilities[3],[5] (see table below)	**(93)**	412	(336)
Integration and acquisition costs[6]	**(149)**	–	–
Material and exceptional tax related items[7]	**63**	4	47
Disposition of Taiwan insurance business	**–**	12	350
Other items[8]	**(77)**	24	235
Net income attributed to shareholders	**$ 2,191**	$ 3,501	$ 3,130

(1) This item is a non-GAAP measure. See “Performance and Non-GAAP Measures” below.

(2) The 2015 net gain from macro equity hedges was $8 million and consisted of a $226 million charge related to the estimated expected cost of the macro equity hedges relative to our long-term valuation assumptions and a gain of $234 million because actual markets underperformed relative to our valuation assumptions (included in the direct impact of equity markets and interest rates and variable annuity guarantee liabilities below).

(3) As outlined under “Critical Accounting and Actuarial Policies” below, net insurance contract liabilities under International Financial Reporting Standards (“IFRS”) for Canadian insurers are determined using the Canadian Asset Liability Method (“CALM”). Under CALM, the measurement of policy liabilities includes estimates regarding future expected investment income on assets supporting the policies. Experience gains and losses are reported when current period activity differs from what was assumed in the policy liabilities at the beginning of the period. These gains and losses can relate to both the investment returns earned in the period, as well as to the change in our policy liabilities driven by the impact of current period investing activities on future expected investment income assumptions. The direct impact of interest rates and equity markets is reported separately. Our definition of core earnings (see “Performance and Non-GAAP Measures”) includes up to $400 million (2014 – up to $200 million) of favourable investment-related experience reported in a single year.

(4) See “Critical Accounting and Actuarial Assumptions – Review of Actuarial Methods and Assumptions” below.

(5) The direct impact of equity markets and interest rates is relative to our policy liability valuation assumptions and includes changes to interest rate assumptions, as well as experience gains and losses on derivatives associated with our macro equity hedges. We also include gains and losses on the sale of available-for-sale (“AFS”) debt securities as management may have the ability to partially offset the direct impacts of changes in interest rates reported in the liability segments. See table below for components of this item.

(6) The 2015 charge of $149 million included integration and acquisition costs of $99 million and $50 million for the Standard Life transaction and New York Life RPS acquisition and closed block reinsurance transaction (“Closed Block”), respectively.

(7) The $63 million gain in 2015 primarily relates to the impact of tax rate changes in Canada and Japan. The $4 million gain in 2014 relates to tax rate changes in Asia and the $47 million gain in 2013 primarily reflects the impact on our deferred tax asset position of Canadian provincial tax rate changes.

(8) The $77 million charge in 2015 relates to the settlement cost from the buy-out of the U.K. pension plan and the recapture of a reinsurance treaty in Canada. The $24 million gain in 2014 relates to the recapture of reinsurance treaties in Canada. The net gain of $235 million in 2013 includes a $261 million gain that includes the impact on the measurement of policy liabilities of policyholder-approved changes to the investment objectives of separate accounts that support our Variable Annuity products in the U.S. partially offset by a restructuring charge of $26 million related to severance, pension and consulting costs for the Company’s Organizational Design Project, which was completed in 2Q13.

The net gain (loss) related to the direct impact of equity markets and interest rates and variable annuity guarantee liabilities in the table above is attributable to:

For the years ended December 31, (C$ millions, unaudited)	2015	2014	2013
Direct impact of equity markets and variable annuity guarantee liabilities[1]	**$ (299)**	$ (182)	$ 458
Fixed income reinvestment rates assumed in the valuation of policy liabilities[2]	**201**	729	(276)
Sale of AFS bonds and derivative positions in the Corporate and Other segment	**5**	(40)	(262)
Charges due to lower fixed income ultimate reinvestment rate ("URR") assumptions used in the valuation of policy liabilities[3]	**–**	(95)	(256)
Direct impact of equity markets and interest rates and variable annuity guarantee liabilities	**$ (93)**	$ 412	$ (336)

[1] In 2015, charges of $1,685 million from gross equity exposure were partially offset by gains of $1,152 million from dynamic hedging experience and $234 million from macro hedge experience, which resulted in a net charge of $299 million.
[2] The gain in 2015 for fixed income reinvestment assumptions was driven by a decrease in swap spreads and an increase in corporate spreads in the U.S. and Canada.
[3] The periodic URR charges have ceased effective 4Q14 due to revisions to the Canadian Actuarial Standards of Practice related to economic reinvestment assumptions.

Earnings per Common Share and Return on Common Shareholders' Equity

Net income per common share for 2015 was $1.06, compared with $1.82 in 2014. Return on common shareholders' equity for 2015 was 5.8%, compared with 11.9% for 2014.

Revenue

Revenues include (i) premiums received on life and health insurance policies and fixed annuity products, net of premiums ceded to reinsurers; (ii) investment income comprised of income earned on general fund assets, credit experience and realized gains and losses on assets held in the Corporate segment; (iii) fee and other income received for services provided; and, (iv) realized and unrealized gains (losses) on assets supporting insurance and investment contract liabilities and on our macro hedging program. Premium and deposit equivalents from administrative services only ("ASO"), as well as deposits received by the Company on investment contracts such as segregated funds, mutual funds and managed funds are not included in revenue; however, the Company does receive fee income from these products, which is included in revenue. Fees generated from deposits and ASO premium and deposit equivalents are an important part of our business and as a result, revenue does not fully represent sales and other activity taking place during the respective periods. The premiums and deposits metric below includes these factors.

For 2015, revenue before realized and unrealized losses and premiums ceded under the Closed Block reinsurance transaction was $45.5 billion compared with $37.3 billion in 2014. The increase was driven by business growth including the impact of recent acquisitions as well as the impact of foreign exchange rates.

In 2015, the net realized and unrealized losses on assets supporting insurance and investment contract liabilities and on the macro hedging program were $3.1 billion, primarily driven by the increase in North American swap and interest rates, and partially offset by real estate revaluation gains, primarily in the U.S.

See "Impact of Fair Value Accounting" below.

Revenue

For the years ended December 31, (C$ millions, unaudited)	2015	2014	2013
Gross premiums	**$ 32,020**	$ 25,156	$ 24,892
Premiums ceded to reinsurers[1]	**(8,095)**	(7,343)	(7,382)
Net premiums excluding the impact of the Closed Block reinsurance transaction	**23,925**	17,813	17,510
Investment income[1]	**11,465**	10,744	9,860
Other revenue[2]	**10,098**	8,739	8,876
Total revenue before items noted below	**45,488**	37,296	36,246
Realized and unrealized gains (losses) on assets supporting insurance and investment contract liabilities and on macro hedging program	**(3,062)**	17,092	(17,607)
Premiums ceded, net of ceded commissions and additional consideration relating to Closed Block reinsurance transaction[1]	**(7,996)**	–	–
Total revenue	**$ 34,430**	$ 54,388	$ 18,639

[1] For the purpose of comparable period-over-period reporting, we exclude the $7,996 million impact of the Closed Block reinsurance transaction, which is shown separately, for the full year 2015. For other periods, amounts in this subtotal equal the "net premiums" in the Consolidated Statements of Income.
[2] Other revenue in 2013 includes a pre-tax gain of $479 million on the sale of our Taiwan insurance business.

Premiums and Deposits

Premiums and deposits[9] is an additional measure of our top line growth, as it includes all customer cash inflows. Premiums and deposits for insurance products were $29.5 billion in 2015, which exclude the impact of the Closed Block reinsurance transaction, up 10% on a constant currency basis compared with 2014.

[9] This item is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

Premiums and deposits for Wealth and Asset Management products were $114.7 billion in 2015, an increase of $45.5 billion, or 46% on a constant currency basis over 2014. Premiums and deposits for Other Wealth products were $6.7 billion in 2015, an increase of $3.0 billion, or 65% on a constant currency basis, over 2014.

Assets under Management and Administration ("AUMA")

AUMA[10] as at December 31, 2015 were a record $935 billion, an increase of $244 billion, or 19% on a constant currency basis, compared with December 31, 2014. Excluding the net $118 billion from recent acquisitions and the Closed Block reinsurance transaction, the increase was 4%. We transferred $14.0 billion of invested assets to New York Life as part of the reinsurance ceded portion of the reinsurance transaction. These assets support 100% of the ceded insurance contract liabilities. We also recorded a reinsurance receivable for the 60% of the block that was ceded and a reinsurance receivable for funds withheld for the 40% of the block that has been retained. The reinsurance receivables are not included in AUMA. The wealth and asset management portion of AUMA was $511 billion and increased $196 billion. The increase was driven by strong net inflows and contributions of $109 billion related to recent acquisitions.

Assets under Management and Administration

As at December 31, (C$ millions)	2015	2014	2013
General fund	**$ 309,267**	$ 269,310	$ 232,709
Segregated funds net assets[(1)]	**313,249**	256,532	239,871
Mutual funds, institutional advisory accounts and other[(1),(2)]	**236,512**	165,287	126,353
Total assets under management	**859,028**	691,129	598,933
Other assets under administration	**76,148**	–	–
Total assets under management and administration	**$ 935,176**	$ 691,129	$ 598,933

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

(2) Other funds represent pension funds, pooled funds, endowment funds and other institutional funds managed by the Company on behalf of others.

Capital

Total capital[10] was $49.9 billion as at December 31, 2015 compared with $39.6 billion as at December 31, 2014, an increase of $10.3 billion. The increase from December 31, 2014 was primarily driven by net income attributed to shareholders of $2.2 billion, favourable impacts of foreign exchange rates of $5.3 billion, the Standard Life acquisition ($2.2 billion issuance of MFC common shares and assumption of $0.4 billion of outstanding Standard Life debt), and other net capital issued of $1.75 billion, partially offset by cash dividends of $1.4 billion over the period.

The MCCSR ratio for MLI was 223% at the end of 2015, compared with 248% at the end of 2014. MFC's financial leverage ratio was 23.6% at December 31, 2015 compared with 27.8% at the end of 2014.

Impact of Fair Value Accounting

Fair value accounting policies affect the measurement of both our assets and our liabilities. The difference between the reported amounts of our assets and liabilities determined as of the balance sheet date and the immediately preceding balance sheet date in accordance with the applicable mark-to-market accounting principles is reported as investment-related experience and the direct impact of equity markets and interest rates and variable annuity guarantees, each of which impacts net income (see "Analysis of Net Income" above).

We reported $3.1 billion of net realized and unrealized losses in investment income in 2015 (2014 – gains of $17.1 billion).

As outlined under "Critical Accounting and Actuarial Policies" below, net insurance contract liabilities under IFRS are determined using CALM, as required by the Canadian Institute of Actuaries. The measurement of policy liabilities includes 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, reduced by the future expected policy revenues and future expected investment income on assets supporting the policies. Investment returns are projected using the current asset portfolios and projected reinvestment strategies. Experience gains and losses are reported when current period activity differs from what was assumed in the policy liabilities at the beginning of the period. We classify gains and losses by assumption type. For example, current period investing activities that increase (decrease) the future expected investment income on assets supporting the policies will result in an investment-related experience gain (loss).

Public Equity Risk and Interest Rate Risk

At December 31, 2015, the impact of a 10% decline in equity markets was estimated to be a charge of $550 million and the impact of a 50 basis point decline in interest rates on our earnings was estimated to be a charge of $100 million. See "Risk Management" and "Risk Factors" below.

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10 This item is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

Impact of Foreign Exchange Rates

We have worldwide operations, including in Canada, the United States and various countries in Asia, and generate revenues and incur expenses in local currencies in these jurisdictions, all of which are translated into Canadian dollars. The bulk of our exposure to foreign exchange rates is to movements in the U.S. dollar.

Items impacting our Consolidated Statements of Income are translated to Canadian dollars using average exchange rates for the respective period. For items impacting our Consolidated Statements of Financial Position, period end rates are used for currency translation purpose. The following table provides the most relevant foreign exchange rates for 2015 and 2014.

	Quarterly					Full Year	
Exchange rate	**4Q15**	3Q15	2Q15	1Q15	4Q14	**2015**	2014
Average[1]							
U.S. dollar	**1.3360**	1.3089	1.2297	1.2399	1.1356	**1.2786**	1.1046
Japanese yen	**0.0110**	0.0107	0.0101	0.0104	0.0099	**0.0106**	0.0105
Hong Kong dollar	**0.1724**	0.1686	0.1586	0.1599	0.1464	**0.1649**	0.1425
Period end							
U.S. dollar	**1.3841**	1.3394	1.2473	1.2682	1.1601	**1.3841**	1.1601
Japanese yen	**0.0115**	0.0112	0.0102	0.0106	0.0097	**0.0115**	0.0097
Hong Kong dollar	**0.1786**	0.1728	0.1609	0.1636	0.1496	**0.1786**	0.1496

(1) Average rates for the quarter are from Bank of Canada which are applied against Consolidated Statements of Income items for each period. Average rate for the full year is a 4 point average of the quarterly average rates.

In general, our net income benefits from a weakening Canadian dollar and is adversely affected by a strengthening Canadian dollar as net income from the Company's foreign operations are translated to Canadian dollars. However, in a period of losses, the weakening of the Canadian dollar has the effect of increasing the losses. The relative impact of foreign exchange in any given period is driven by the movement of currency rates as well as the proportion of earnings generated in our foreign operations.

Changes in foreign exchange rates, primarily due to the strengthening of the U.S. dollar compared to the Canadian dollar, increased core earnings by $325 million in 2015 compared with 2014. The impact of foreign currency on items excluded from core earnings is not relevant given the nature of these items.

Fourth Quarter Financial Highlights

For the quarters ended December 31, (C$ millions, except per share amounts)	**2015**	2014	2013
Net income attributed to shareholders	**$ 246**	$ 640	$ 1,297
Core earnings[1],[2] (see next page for reconciliation)	**$ 859**	$ 713	$ 685
Diluted earnings per common share (C$)	**$ 0.11**	$ 0.33	$ 0.68
Diluted core earnings per common share (C$)[2]	**$ 0.42**	$ 0.36	$ 0.35
Return on common shareholders' equity (annualized)	**2.3%**	8.1%	20.2%
Sales[2]			
Insurance products	**$ 1,027**	$ 760	$ 617
Wealth and Asset Management gross flows[2]	**$ 31,089**	$ 17,885	$ 14,380
Wealth and Asset Management net flows[2]	**$ 8,748**	$ 2,806	$ 2,273
Other Wealth products	**$ 2,109**	$ 1,109	$ 903
Premiums and deposits[2]			
Insurance products	**$ 7,759**	$ 6,631	$ 6,152
Wealth and Asset Management products	**$ 31,089**	$ 17,885	$ 14,380
Other Wealth products	**$ 1,963**	$ 962	$ 970
Corporate and Other	**$ 26**	$ 18	$ 17

(1) Impact of currency movement on 4Q15 versus 4Q14 was $94 million.
(2) This item is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

Manulife's 4Q15 net income attributed to shareholders was $246 million compared with $640 million in 4Q14. Net income attributed to shareholders is comprised of core earnings (consisting of items we believe reflect the underlying earnings capacity of the business), which amounted to $859 million in 4Q15 compared with $713 million in 4Q14, and items excluded from core earnings, which netted to charges of $613 million in 4Q15 compared with charges of $73 million in 4Q14 for a period-over-period $540 million variance.

The $146 million increase in core earnings included $52 million related to our recent acquisitions, as well as the impact of higher sales volumes and product margins in Asia, higher fee income from our WAM businesses reflecting higher asset levels, and a $94 million positive impact of foreign exchange rates. This increase was partially offset by inclusion of $50 million of core investment gains in 4Q14 core earnings while 4Q15 core earnings had no core investment gains. Core earnings in 4Q15 included a policyholder experience charge of $50 million driven by adverse policyholder experience in the U.S., partially offset by favourable policyholder experience in Asia and Canada.

The charges for items excluded from core earnings in 4Q15 included a $361 million charge for investment-related experience, primarily due to the impact of sharply lower oil and gas prices on our investment portfolio, along with a number of smaller items

totaling $252 million. These items included the unfavourable impact of actuarial model refinements, integration costs, and the direct impact of equity markets and interest rates. In addition, updates to cash flows used in actuarial modelling and future tax impacts also contributed to investment-related experience charges in 4Q15.

The $73 million of charges for items excluded from core earnings in 4Q14 primarily related to a $377 million gain from the direct impact of interest rates and equity markets which was more than offset by $353 million of investment-related experience losses, a $50 million reclassification of investment-related experience to core earnings in 2014 as well as a few smaller items.

Analysis of Net Income

The table below reconciles the 4Q15 net income attributed to shareholders of $246 million to core earnings of $859 million.

(C$ millions, unaudited)	4Q 2015	4Q 2014
Core earnings[1]		
Asia Division	**$ 353**	$ 260
Canadian Division	**354**	224
U.S. Division	**350**	338
Corporate and Other (excluding expected cost of macro hedges and core investment gains)	**(124)**	(112)
Expected cost of macro hedges[2]	**(74)**	(47)
Investment-related experience in core earnings[3]	**–**	50
Core earnings	**859**	713
Investment-related experience outside of core earnings[3]	**(361)**	(403)
Core earnings and investment-related experience outside of core earnings	**498**	310
Other items to reconcile core earnings to net income attributed to shareholders:		
Direct impact of equity markets and interest rates and variable annuity guarantee liabilities (see table below)[3],[4]	**(29)**	377
Changes in actuarial methods and assumptions[5]	**(97)**	(59)
Integration and acquisition costs[6]	**(39)**	–
Other items excluded from core earnings[7]	**(87)**	12
Net income attributed to shareholders	**$ 246**	$ 640

[1] This item is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

[2] The 4Q15 net charge from macro equity hedges was $143 million and consisted of a $74 million charge related to the estimated expected cost of the macro equity hedges relative to our long-term valuation assumptions and a charge of $69 million because actual markets outperformed our valuation assumptions (included in direct impact of equity markets and interest rates and variable annuity guarantee liabilities below).

[3] As outlined under "Critical Accounting and Actuarial Policies" below, net insurance contract liabilities under IFRS for Canadian insurers are determined using CALM. Under CALM, the measurement of policy liabilities includes estimates regarding future expected investment income on assets supporting the policies. Experience gains and losses are reported when current period activity differs from what was assumed in the policy liabilities at the beginning of the period. These gains and losses can relate to both the investment returns earned in the period, as well as to the change in our policy liabilities driven by the impact of current period investing activities on future expected investment income assumptions. The direct impact of equity markets and interest rates is separately reported. Our definition of core earnings (see "Performance and Non-GAAP Measures") includes up to $400 million (2014 – up to $200 million) of favourable investment-related experience reported in a single year.

[4] The direct impact of equity markets and interest rates is relative to our policy liability valuation assumptions and includes changes to interest rate assumptions, including experience gains and losses on derivatives associated with our macro equity hedges. We also include gains and losses on derivative positions and the sale of AFS bonds in the Corporate and Other segment. See table below for components of this item.

[5] The 4Q15 charge of $97 million reflects several model refinements to the projection of both asset and liability cash flows across several business units.

[6] The 4Q15 charge of $39 million included integration costs of $34 million and $5 million for the Standard Life acquisition and Closed Block reinsurance transaction, respectively.

[7] The 4Q15 charge includes the $52 million charge from the recapture of a reinsurance treaty in Canada, the $37 million settlement cost from the wind-up of the U.K. pension plan and a $2 million gain related to tax rate changes.

The gain (charge) related to the direct impact of equity markets and interest rates and variable annuity guarantee liabilities in the table above is attributable to:

C$ millions, unaudited	4Q 2015	4Q 2014
Direct impact of equity markets and variable annuity guarantee liabilities[1]	**$ 77**	$ (142)
Fixed income reinvestment rates assumed in the valuation of policy liabilities[2]	**(97)**	533
Sale of AFS bonds and derivative positions in the Corporate and Other segment	**(9)**	(14)
Direct impact of equity markets and interest rates and variable annuity guarantee liabilities	**$ (29)**	$ 377

[1] In 4Q15, gains of $578 million from gross equity exposure were partially offset by losses of $432 million from dynamic hedging experience and $69 million from macro hedge experience, which resulted in a gain of $77 million.

[2] The loss in 4Q15 for fixed income reinvestment assumptions was driven by an increase in swap spreads in Canada.

Sales

Insurance sales were $1,027 million, an increase of 22% compared with 4Q14, driven by solid double digit growth in Asia and normal variability in large-case group benefit sales in Canada. In Asia, insurance sales increased 20%, driven by double digit growth in most territories. Canadian insurance sales increased 76%, driven by normal variability in large-case group benefits sales. U.S. insurance sales decreased 17% due to competitive pressures in the life insurance market and lower Long-Term Care sales.

Wealth and Asset Management net flows were $8.7 billion in 4Q15, an increase of $5.9 billion compared with 4Q14. 4Q15 marked the 24th consecutive quarter of positive net flows into our wealth and asset management businesses. Driving the strong net

flows were robust gross flows of $31.1 billion, up 53% from 4Q14 (up 29% excluding recently acquired businesses), and solid retention. Asia gross flows increased 7% compared with the prior year period due to strong growth in mutual fund sales in mainland China and continued strong pension sales in Hong Kong. In Canada, gross flows increased 45% driven by strong mutual fund gross flows and the impact of the recent acquisition (up 5% excluding the recent acquisition). U.S. gross flows increased 50% (up 21% excluding the impact of the recent acquisition), driven by a record quarter in pensions and continued strong mutual fund gross flows. Manulife Asset Management ("MAM") gross flows more than doubled driven by significant fixed income mandates in Japan and South Korea.

Other Wealth sales were $2.1 billion in 4Q15, an increase of 80% compared with 4Q14 (47% excluding recent acquisitions). Other Wealth sales in Asia almost doubled driven by expanded distribution and recent product launches in Japan, and sales in Canada benefited from contributions from the recent acquisition.

Update on Efficiency and Effectiveness Initiative

Our Efficiency and Effectiveness ("E&E") initiative, announced November 2012, is aimed at leveraging our global scale and capabilities to achieve operational excellence and cost efficiencies throughout the organization. We set a target of $400 million net pre-tax E&E savings in 2016, and we now expect to exceed that target.[11] In 2015, we achieved pre-tax savings of $350 million. These savings have enabled us to fund other new initiatives to sustain our long-term earnings growth. The amount of that investment is subject to change as our strategy unfolds. In particular, we intend to continue to ensure that projects are appropriately sequenced and prioritized.

Acquisition of Canadian-based operations of Standard Life plc

On January 30, 2015, we completed the purchase of 100% of the shares of Standard Life Financial Inc. and of Standard Life Investments Inc. for cash consideration of $4 billion. The cash consideration included $2.2 billion from net proceeds of subscription receipts issued to finance the acquisition and $1.8 billion from the general assets of the Company. Upon completion of the acquisition, the outstanding subscription receipts were automatically converted on a one-for-one basis for 105,647,334 MFC common shares with a stated value of $2.2 billion. In addition, pursuant to the terms of the subscription receipts, a dividend equivalent payment of $0.155 per subscription receipt ($16.4 million in the aggregate) was paid to holders of subscription receipts, which was an amount equal to the cash dividends declared on MFC common shares for which record dates had occurred during the period from September 15, 2014 to January 29, 2015.

The acquisition contributes to our growth strategy, particularly in the wealth and asset management space.

The assigned value of the net tangible assets acquired was $1.8 billion. The value of intangible assets after related taxes was $0.7 billion and the goodwill was $1.5 billion.

In 2015, Standard Life contributed $169 million to core earnings which included a $35 million post-tax charge for amortization of intangible assets. Standard Life contributed $2 million to net income, excluding $99 million of integration and acquisition costs which is excluded from core earnings. Other items excluded from core earnings attributable to the Standard Life acquisition were a net charge of $167 million of which $156 million was related to the direct impact of equity markets and interest rates as well as other investment-related experience and $11 million was due to the impact of changes in actuarial methods and assumptions.

In 2014, we disclosed our expectations against certain metrics and as reported below, we are on plan to achieve those targets.

- We expected earnings from the acquisition before for transition costs, integration costs and the direct impact of markets during 2015 would be marginally accretive in 2015 and accretive by approximately $0.03 to earnings per common share ("EPS") in 2016, 2017 and 2018.[11] When we set these expectations, we assumed a zero impact related to the direct impact of equity markets and interest rates. In 2015, post-close transaction earnings were $0.05 accretive both to Core EPS and to EPS adjusted for the above noted items.
- We expected to achieve $100 million of annual after-tax cost savings largely by the 3rd year.[11] At the end of 2015, we have achieved annual run rate cost savings of $65 million after-tax, well on our way to meeting the target.
- We also stated that we expected total integration costs over the first three years would be $150 million post-tax, which remains our best estimate.[11] In 2015, we incurred $80 million of post-tax integration costs.
- Going forward, as a result of merging of the businesses it will not be possible to segregate the earnings contribution from Standard Life and therefore not possible to report on EPS accretion; however, we expect to achieve these original targets and have built them into our plans.[11]

Distribution agreement with DBS

On April 8, 2015, we announced a 15-year regional distribution agreement with DBS. Manulife was selected as the exclusive provider of bancassurance solutions to DBS customers in Singapore, Hong Kong, Indonesia and mainland China effective January 1, 2016. This agreement significantly expands our existing, successful relationship with DBS. It accelerates Manulife's Asia growth strategy, deepens and diversifies our insurance business, and gives us access to a wider range of customers. Under the agreement, initial payments were made by Manulife to DBS totaling US$1.2 billion with the final instalment made on January 4, 2016, all of which Manulife funded from internal resources. There will also be ongoing, variable payments, which are based on the success of the partnership, and Manulife expects the agreement to be accretive to core earnings per share in 2017.[11] The initial payment for this regional distribution agreement will reduce MLI's MCCSR ratio by 3 points in 2016.[11]

[11] See "Caution regarding forward-looking statements" above.

Acquisition of New York Life's Retirement Plan Services business

On April 14, 2015, the Company completed the acquisition of New York Life's Retirement Plan Services business, the first of two components of the previously announced transaction with New York Life. The acquisition accelerates John Hancock's expansion into the mid-case and large-case retirement plan markets, added US$56.6 billion of plan assets under administration at acquisition and supports Manulife's global growth strategy for wealth and asset management businesses. The second component, in which New York Life agreed to assume a portion of certain John Hancock life insurance policies, closed on July 1, 2015. The US$300 million estimated accounting loss on the reinsurance component is accounted for as additional consideration on the acquired business. This resulted in overall intangibles and goodwill of US$620 million.

Distribution agreement with Standard Chartered Bank

On September 10, 2015, Manulife entered into an agreement with Standard Chartered under which Manulife will acquire Standard Chartered's Mandatory Provident Fund ("MPF") and Occupational Retirement Schemes Ordinance ("ORSO") businesses in Hong Kong, and the related investment management entity. Manulife and Standard Chartered also agreed on a 15-year distribution partnership providing Manulife the exclusive right to offer its MPF products to Standard Chartered's customers in Hong Kong. These arrangements will significantly expand Manulife's retirement business in Hong Kong. Subject to the receipt of all necessary approvals and other customary closing conditions, the transaction is anticipated to close in late 2016.[12]

[12] See "Caution regarding forward-looking statements" above.

Performance by Division

Asia Division

Manulife has been doing business in Asia for more than 100 years. Since issuing our first Asian policy in Shanghai in 1897, we have expanded both our product lines and services and our geographic reach, building a leading provider of financial protection and wealth and asset management products in Asia. We are focused on helping our customers to achieve their goals, and that focus drives our growth strategy and underpins our commitment to the region. We are diversified across Asia, including some of the world's largest and fastest-growing economies, with operations in Hong Kong, Japan, Indonesia, Singapore, the Philippines, mainland China, Taiwan, Vietnam, Malaysia, Thailand, Macau and Cambodia.

We offer a broad portfolio of products and services including life and health insurance, annuities, mutual funds and retirement solutions that cater to the needs of individuals and corporate customers through a multi-channel network, supported by a team of approximately 10,000 employees. We have a multi-channel distribution with more than 63,000 contracted agents, 100 bank partnerships and 1,000 independent agents, financial advisors and brokers selling our products. The bank partnerships include a regional partnership with DBS, effective January 1, 2016, which along with 6 other exclusive partnerships give us access to almost 18 million bank customers.

In 2015, Asia Division contributed 19% of the Company's total premiums and deposits and, as at December 31, 2015, accounted for 12% of the Company's assets under management and administration.

Financial Performance

Asia Division reported net income attributed to shareholders of $1,176 million in 2015 compared with $1,247 million in 2014. Net income attributed to shareholders is comprised of core earnings, which was $1,305 million in 2015 compared with $1,008 million in 2014, and items excluded from core earnings, which amounted to a net charge of $129 million for 2015 compared with a net gain of $239 million in 2014.

Expressed in U.S. dollars, the presentation currency of the division, net income attributed to shareholders was US$921 million in 2015 compared with US$1,129 million in 2014, core earnings was US$1,019 million in 2015 compared with US$913 million in 2014 and items excluded from core earnings amounted to a net charge of US$98 million in 2015 compared with a net gain of US$216 million in 2014.

Core earnings increased US$154 million, or 18%, compared with 2014 after adjusting for the US$48 million impact of changes in currency rates. The increase was driven by growth in new business volumes and higher product margins, favourable product mix and policyholder experience, offset by expenses related to growth initiatives. On a Canadian dollar basis, core earnings increased by $297 million due to the factors above, and reflect a net $120 million favourable impact due to the relative appreciation of local currencies in territories where we operate versus the Canadian dollar.

The change in items excluded from core earnings primarily related to the direct impact of the decline in equity markets in 2015 and to the direct impact of the declining interest rates together with the increase in equity markets in 2014.

The table below reconciles net income attributed to shareholders to core earnings for the Asia Division for 2015, 2014 and 2013.

For the years ended December 31,	Canadian $			US $		
($ millions)	**2015**	2014	2013	**2015**	2014	2013
Core earnings[1]	**$ 1,305**	$ 1,008	$ 921	**$ 1,019**	$ 913	$ 893
Items to reconcile core earnings to net income attributed to shareholders:						
Direct impact of equity markets and interest rates and variable annuity guarantee liabilities[2]	**(174)**	173	1,164	**(134)**	157	1,142
Investment-related experience related to fixed income trading, market value increases in excess of expected alternative assets investment returns, asset mix changes and credit experience	**25**	62	16	**20**	56	18
Favourable impact of enacted tax rate changes	**20**	4	–	**16**	3	–
Disposition of Taiwan insurance business	**–**	–	350	**–**	–	334
Impact of recapture of a reinsurance treaty	**–**	–	68	**–**	–	64
Net income attributed to shareholders	**$ 1,176**	$ 1,247	$ 2,519	**$ 921**	$ 1,129	$ 2,451

(1) Core earnings is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

(2) The direct impact of equity markets and interest rates is relative to our policy liability valuation assumptions and includes changes to interest rate assumptions. The net charge of $174 million in 2015 (2014 – net gain of $173 million) consisted of a $32 million charge (2014 – $47 million gain) related to variable annuities that are not dynamically hedged, a $89 million charge (2014 – $1 million gain) on general fund equity investments supporting policy liabilities and on fee income and a $1 million charge (2014 – $125 million gain) related to fixed income reinvestment rates assumed in the valuation of policy liabilities and a $52 million charge (2014 – nil) related to variable annuity guarantee liabilities that are dynamically hedged. The amount of variable annuity guaranteed value that was dynamically hedged at the end of 2015 was 53% (2014 – 51%). 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.

Sales

Insurance sales for 2015 were US$1.5 billion, an increase of 28% compared with 2014, driven by double digit sales growth in most of the territories in which we operate. Sales in Japan of US$640 million were 24% higher than the prior year driven by strong sales in corporate products and higher retail sales. Hong Kong sales of US$378 million increased 29% from 2014, reflecting the success of product launches, coupled with successful sales campaigns. In Indonesia, sales of US$97 million declined 4% compared to the prior year due to a challenging economic environment. Asia Other sales (excluding Japan, Hong Kong and Indonesia) of US$392 million were 46% higher than in 2014 reflecting strong growth in most markets, particularly the success of new products in Singapore.

Other Wealth sales for 2015 were US$3.0 billion, just over double compared with 2014. Other Wealth sales growth was mainly driven by Japan reflecting the success of new product launches and expansion in all distribution channels.

Wealth and Asset Management ("WAM") gross flows for 2015 were US$12.2 billion, an increase of 56% compared with 2014. Japan gross flows of US$369 million were 41% lower than the prior year due to unfavourable market conditions. Hong Kong gross flows of US$2.6 billion increased 21% from 2014, driven by continued momentum of the pension business and new fund launches. In Indonesia, gross flows of US$564 million declined 22% compared to 2014 as a result of the impact of unfavourable market sentiment on mutual fund sales. Asia Other gross flows of US$8.7 billion were double compared with 2014 in response to the success of new funds launches in mainland China.

Sales

For the years ended December 31, ($ millions)	Canadian $			US $		
	2015	2014	2013	**2015**	2014	2013
Insurance products	**$ 1,930**	$ 1,412	$ 1,052	**$ 1,507**	$ 1,278	$ 1,020
Wealth and asset management products gross flows	**15,495**	9,014	8,236	**12,240**	8,149	8,026
Other wealth products	**3,885**	1,818	1,774	**3,022**	1,644	1,728

Revenue

Total revenue in 2015 of US$11.0 billion increased US$149 million compared with 2014, primarily driven by the impact of fair value accounting (see "Financial Performance – Impact of Fair Value Accounting" above). Revenue before net realized and unrealized investment gains and losses increased by US$2.4 billion primarily due to higher premium income reflecting sales growth during the year. The decrease in other revenue from 2015 to 2014 was primarily due to the negative impact from currency rates. In 2013, other revenue included a US$454 million one-time gain on the sale of our Taiwan insurance business.

Revenue

For the years ended December 31, ($ millions)	Canadian $			US $		
	2015	2014	2013	**2015**	2014	2013
Net premium income	**$ 11,495**	$ 7,275	$ 6,330	**$ 8,953**	$ 6,583	$ 6,148
Investment income	**1,595**	1,271	1,224	**1,248**	1,150	1,187
Other revenue	**1,434**	1,334	1,963	**1,121**	1,208	1,898
Revenue before net realized and unrealized investment gains and losses	**14,524**	9,880	9,517	**11,322**	8,941	9,233
Net realized and unrealized investment gains and losses	**(446)**	2,078	(619)	**(365)**	1,867	(593)
Total revenue	**$ 14,078**	$ 11,958	$ 8,898	**$ 10,957**	$ 10,808	$ 8,640

Premium and Deposits

Premiums and deposits for the full year 2015 of US$22.6 billion increased 48% on a constant currency basis compared with 2014. Of this, premiums and deposits for insurance products of US$7.4 billion increased 23% compared with 2014, due to strong sales in most territories and from recurring premiums on in-force business. Premiums and deposits for wealth and asset management products of US$12.2 billion increased by 56% compared with 2014. The increase was driven by new fund launches supported by strong market sentiment in the first half of 2015, notably in mainland China, and solid growth in pension deposits. Premiums and deposits for other wealth products of US$3.0 billion were double 2014 levels due to successful products launches coupled with expanding distribution reach.

Premiums and Deposits

For the years ended December 31, ($ millions)	Canadian $			US $		
	2015	2014	2013	**2015**	2014	2013
Insurance products	**$ 9,431**	$ 7,066	$ 6,337	**$ 7,356**	$ 6,395	$ 6,154
Wealth and asset management products	**15,494**	9,015	8,234	**12,241**	8,149	8,026
Other wealth products	**3,875**	1,816	1,933	**3,015**	1,641	1,882
Total premiums and deposits	**$ 28,800**	$ 17,897	$ 16,504	**$ 22,612**	$ 16,185	$ 16,062

Assets under Management

Asia Division assets under management as at December 31, 2015 were US$77.7 billion, an increase of 6% on a constant currency basis compared with December 31, 2014, driven by net customer inflows of US$6.6 billion and higher investment income during 2015.

Assets under Management

As at December 31, ($ millions)	Canadian $			US $		
	2015	2014	2013	**2015**	2014	2013
General fund	**$ 55,322**	$ 41,991	$ 34,756	**$ 39,970**	$ 36,198	$ 32,680
Segregated funds	**24,384**	22,925	23,568	**17,612**	19,761	22,160
Mutual and other funds	**27,851**	22,167	18,254	**20,121**	19,108	17,164
Total assets under management	**$ 107,557**	$ 87,083	$ 76,578	**$ 77,703**	$ 75,067	$ 72,004

Strategic Direction

Asia Division aspires to be the clear customer advocacy leader in Asia for our customers' needs in life, health and wealth. Our strategy aligns with the key underlying customer trends and growth opportunities in Asia and draws upon our core strengths. We are well positioned to serve our target customers through delivering our strategic pillars including unsurpassed customer experience, holistic and integrated wealth management solutions, premium agency force, optimized bancassurance and market-leading digital customer engagement. These core strengths allow the Asia Division to build holistic and long-lasting customer relationships, build and integrate our global wealth and asset management businesses as well as leverage skills and experiences across our global operations.

In 2015, Manulife was selected as the exclusive provider of bancassurance solutions to DBS customers in Singapore, Hong Kong, Indonesia and mainland China effective January 1, 2016. This agreement significantly expands our existing, successful relationship with DBS. It accelerates Asia Division's growth strategy, deepens and diversifies our insurance business, and gives us access to a wider range of customers. We have also integrated our Asian wealth and asset management divisions under one umbrella to create an even stronger platform to uniquely position Manulife as a provider of holistic solutions including mutual funds, pensions and insurance-linked products in the region.

In Japan, in 2015, we enhanced customer experience and expanded distribution. From a customer perspective, we introduced new savings products to enrich our retirement solutions offering, introduced customer website self-service functionality and streamlined our underwriting process to utilize results from the mandatory comprehensive annual health check-up for Japanese residents. We executed an innovative brand campaign to promote our brand in the retirement field and expanded product offerings and reach of our bancassurance and retail managing general agency distribution channels.

In Hong Kong, in 2015, we continued to execute a growth strategy based on diversified product offerings and broadened distribution capabilities to solidify our leadership position in providing retirement and protection solutions to our customers. We signed an agreement[13] with Standard Chartered Bank to acquire its MPF and ORSO businesses and to enter into a 15-year exclusive distribution agreement for MPF products. We also introduced ManulifeMOVE, a wellness initiative that rewards customers for living active lifestyles.

In Indonesia, in 2015, we signed a co-operation agreement with Bank Muamalat, a local sharia bank, to be its exclusive partner in distributing our products to cater to the growing protection and investment needs of the middle class. In addition, we introduced an end-to-end digital platform to streamline the sales process and enhance customer service.

In the Other Asia territories, in 2015, we expanded and diversified our distribution channels, introduced new products and developed our wealth and asset management businesses. In addition to the DBS partnership, we entered into an exclusive agreement with Saigon Joint Stock Commercial Bank in Vietnam and a distribution partnership with Maybank in Cambodia; and extended our strategic bancassurance alliance with China Bank in the Philippines to include customers of its China Bank Savings business. In Singapore, we expanded distribution capabilities with the launch of a financial advisory firm, Manulife Financial Advisers Pte. Ltd. In mainland China, we became the first foreign invested joint-venture life insurance company authorized to sell mutual funds through our agency force. We also expanded online insurance sales and servicing through WeChat, one of the country's most popular messaging apps, and extended the use of an electronic point-of-sale solution.

[13] Subject to the receipt of all necessary regulatory approvals, the transaction is anticipated to close in late 2016.

Canadian Division

Serving one in five Canadians, our Canadian Division is one of the leading financial services organizations in Canada. We offer a broad portfolio of protection, estate planning, investment and banking solutions through a diversified independent distribution network, supported by a team of more than 10,500 employees.

Our Individual Insurance business offers a broad portfolio of insurance products, including universal, whole and term life, as well as living benefits insurance, designed to meet the protection, estate and retirement planning needs of middle- and upper-income customers. Manulife Investments offers a range of investment products and services that span the investor spectrum, from those just starting to build their financial portfolio to individuals and families with complex retirement and estate planning needs, while Manulife Private Wealth provides personalized investment management, private banking and estate solutions to affluent clients. Manulife Bank offers flexible debt and cash flow management solutions as part of a customer's financial plan. We also provide group life, health, disability and retirement solutions to Canadian employers; more than 22,000 Canadian businesses and organizations entrust their employee benefit programs to Manulife's Group Benefits. Life, health and specialty products, such as travel insurance, are also offered through alternative distribution channels, including sponsor groups and associations, as well as direct-to-customer marketing.

In 2015, Canadian Division contributed 19% of the Company's total premiums and deposits and, as at December 31, 2015, accounted for 23% of the Company's assets under management and administration.

Financial Performance

Canadian Division's net income attributed to shareholders was $486 million in 2015 compared with $1,003 million in 2014. Net income attributed to shareholders is comprised of core earnings, which was $1,258 million for 2015 compared with $927 million for 2014, and items excluded from core earnings, which amounted to a net charge of $772 million for 2015 compared with a net gain of $76 million in 2014.

The $331 million increase in core earnings over the prior year includes $158 million attributable to the Standard Life acquisition. The increase also reflects the favourable impact of a methodology change for attributing expected investment income on assets supporting provisions for adverse deviations and higher fee income on the Company's wealth and asset management business from higher asset levels, partially offset by unfavourable policyholder experience. The year-over-year decrease of $848 million in items excluded from core earnings was driven by unfavourable market and investment-related experience, integration expenses related to the acquired business and a number of one-time items.

The table below reconciles net income attributed to shareholders to core earnings for Canadian Division for 2015, 2014 and 2013.

For the years ended December 31, (C$ millions)	2015	2014	2013
Core earnings[1]	**$ 1,258**	$ 927	$ 905
Items to reconcile core earnings to net income attributed to shareholders:			
Investment gains (losses) related to fixed income trading, market value increases in excess of expected alternative assets investment returns, asset mix changes and credit experience	**(391)**	1	(34)
Direct impact of equity markets and interest rates and variable annuity guarantee liabilities[2]	**(283)**	51	(40)
Impact of a recapture of a reinsurance treaty and in-force product changes[3]	**(40)**	24	–
Tax items	**1**	–	(3)
Net impact of acquisitions and divestitures	**(59)**	–	–
Net income attributed to shareholders	**$ 486**	$ 1,003	$ 828

[1] Core earnings is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

[2] The direct impact of equity markets and interest rates is relative to our policy liability valuation assumptions and includes changes to interest rate assumptions. The charge of $283 million in 2015 (2014 – $51 million charge) consisted of a $81 million charge (2014 – $20 million gain) on general fund equity investments supporting policy liabilities, a $148 million charge (2014 – $30 million gain) related to fixed income reinvestment rates assumed in the valuation of policy liabilities, a $1 million gain (2014 – nil) related to unhedged variable annuities and a $55 million charge (2014 – $1 million gain) related to variable annuity guarantee liabilities that are dynamically hedged. The amount of variable annuity guaranteed value that was dynamically hedged at the end of 2015 was 88% (2014 – 90%). 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.

[3] The $40 million charge in 2015 relates to the recapture of reinsurance treaties.

Sales

Insurance sales for 2015 were $825 million, 43% higher than 2014 levels, reflecting success in Group Benefits large-case segment.

Wealth and Asset Management gross flows were $16.5 billion, an increase of $6.0 billion, or 57% (22% excluding acquired business), from 2014 levels driven by record sales in Group Retirement Solutions and mutual fund sales.

Other Wealth sales were $3.6 billion in 2015, an increase of $1.6 billion, or 76%, over 2014 driven by growth in segregated fund sales. Excluding acquired business, other wealth sales were 4% above 2014 levels, reflecting our deliberate rate positioning in the market.

Manulife Bank net lending assets were $19.4 billion as at December 31, 2015, in line with 2014 levels as growth continues to be challenged by competitive pressures in the residential mortgage market.

Sales

For the years ended December 31, (C$ millions)	2015	2014	2013
Retail Markets	**$ 181**	$ 167	$ 161
Institutional Markets	**644**	411	964
Insurance products	**$ 825**	$ 578	$ 1,125
Wealth and asset management gross flows	**$ 16,475**	$ 10,477	$ 10,376
Other wealth products	**3,609**	2,048	2,021

Revenue

Revenue of $10.1 billion in 2015 decreased $3.7 billion from $13.8 billion in 2014 due to the impact of fair value accounting. Revenue before net realized and unrealized gains and losses of $10.8 billion in 2015 increased $1.2 billion from $9.6 billion in 2014 due to higher premium income. Other income was $3.1 billion, up $0.5 billion from $2.6 billion in 2014, reflecting $0.4 billion from the acquisition of Standard Life.

Revenue

As at December 31, (C$ millions)	2015	2014	2013
Net premium income	**$ 4,430**	$ 3,728	$ 3,774
Investment income	**3,255**	3,298	3,346
Other revenue	**3,124**	2,611	2,644
Revenue before net realized and unrealized gains (losses)	**10,809**	9,637	9,764
Net realized and unrealized gains (losses)[1]	**(736)**	4,136	(3,704)
Total revenue	**$ 10,073**	$ 13,773	$ 6,060

[1] See "Financial Performance – Impact of Fair Value Accounting" above.

Premiums and Deposits

Premiums and deposits of $29.3 billion in 2015 were 36% higher (11% higher excluding acquired business) than the $21.6 billion in 2014, reflecting strong Group Retirement and mutual fund sales. Insurance products' premiums and deposits in 2015 were $11.6 billion, or 10%, above prior year due to higher Group Benefits sales and the addition of acquired business. Our wealth and asset management businesses and other wealth premiums and deposits were $16.5 billion and $3.6 billion, respectively, compared with $10.5 billion and $2.1 billion, respectively, in 2014.

Premiums and Deposits

For the years ended December 31, (C$ millions)	2015	2014	2013
Insurance products	**$ 11,551**	$ 10,508	$ 10,552
Wealth and asset management products	**16,474**	10,477	10,376
Other wealth products	**3,609**	2,052	2,021
Less: mutual funds held by segregated funds	**(2,290)**	(1,418)	(1,777)
Total premiums and deposits	**$ 29,344**	$ 21,619	$ 21,172

Assets under Management

Assets under management of $218.7 billion as at December 31, 2015 grew by $59.8 billion or 38% from $158.9 billion at December 31, 2014, driven by $54.4 billion related to the acquired business. Excluding the acquired business, AUM increased by $5.4 billion, or 3%, due to strong growth in wealth and asset management businesses.

Assets under Management

As at December 31, (C$ millions)	2015	2014	2013
General fund	**$ 102,942**	$ 85,070	$ 80,611
Segregated funds	**92,447**	57,028	51,681
Mutual and other funds	**44,884**	33,411	27,560
Less: mutual funds held by segregated funds	**(21,587)**	(16,605)	(14,641)
Total assets under management	**$ 218,686**	$ 158,904	$ 145,211

Strategic Direction

The Canadian Division strategy puts the customer at the centre of everything we do, with health and wealth being an overarching theme. By leveraging the strength of our group business franchise and the breadth of our product portfolio, we have the ability to integrate and connect both sides of the health and wealth equation to meet customer needs with holistic solutions. We intend to further expand and integrate our wealth, insurance and banking product portfolios to enable us to continue building holistic and long-lasting relationships with our customers. In addition, through data-driven marketing and predictive analytics, we intend to further enhance our understanding of customers' needs to deliver an optimized customer experience.

We completed the Standard Life acquisition at the end of January 2015, welcoming 1.4 million customers and 2,000 employees, and have continued to make steady progress on the integration throughout 2015. The acquisition contributes to our growth strategy, particularly in wealth and asset management. The transaction is transformative to our group retirement business as it doubled our group customer base and added approximately $32 billion to our assets under management. It also added approximately $7 billion to our mutual fund assets under management, and enhanced our presence in Quebec. We are focused on converting Standard Life's customers to our systems.

In 2015, we also made significant progress on our customer-focused initiatives:

- Recently signed an agreement with Vitality to launch wellness-based insurance in Canada;
- Piloted Retirement Redefined, a holistic program designed to engage pre-retirees and assist them in developing their retirement plans;
- Launched the DrugWatch program, which is an innovative solution designed to ensure Group Benefits clients get value for money on higher cost drugs;
- Introduced new technology to enable a customer's voice to act as their password and better direct their inquiries, providing a faster, more secure and better overall experience. We are proud to be the first company in Canada to introduce voice biometrics as well as natural language understanding in a single interactive voice response system offered in both English and French;
- Launched Manulife Quick Issue Term life insurance featuring a simple, online application with a streamlined underwriting process;
- Launched over 800 Manulife Bank-branded automated banking machines across Canada, helping our customers access banking services however and whenever they like;
- Launched new digital technologies for our group clients including My Drug Plan, a best-in-class drug look-up application, which provides plan members with access to information about drugs they are prescribed;
- Launched the My Retirement Tools mobile application, enabling plan members to calculate retirement savings and access planning tools from their mobile devices; and
- Launched an innovation hub in Toronto for employees to work cross-divisionally on disruptive and transformative ideas for new technologies and products.

As part of the Company's goal to grow its global wealth and asset management businesses and leverage our global scale, in 2015 we opened our Manulife Private Wealth Asia and Manulife Bank office in Hong Kong to assist affluent individuals emigrating to Canada.

Shifting demographics, increasing use of technology and growing trends toward wellness programs are redefining the Canadian financial services landscape. Our large customer base, broad product portfolio and diverse distribution network, coupled with our investment in technology solutions and advanced analytics positions us to capitalize on these trends. We continue to focus on increasingly engaging customers on digital platforms, simplifying processes, reducing costs and improving customer satisfaction through digitization across all our businesses.

U.S. Division

Operating under the John Hancock brand in the U.S., we focus on providing financial solutions at every stage of our clients' lives. Our product suite includes insurance and wealth management products and is distributed primarily through affiliated and non-affiliated licensed financial advisors. Our U.S. Division has a team of approximately 6,600 employees. John Hancock is a household name in the U.S. with 87% overall brand recognition[14].

John Hancock Insurance ("JH Insurance") offers a broad portfolio of insurance products, including universal, variable, whole, and term life insurance designed to provide estate, business, income protection and retirement solutions for high net worth and emerging affluent markets. We also provide long-term care ("LTC") insurance which is designed to cover the cost of long-term services and support, including personal and custodial care in a variety of settings such as the home, a community organization, or other facility in the event of an illness, accident, or through the normal effects of aging.

U.S. Wealth Management offers a broad range of products and services focused on individuals and business markets, as well as institutional oriented products. John Hancock Retirement Plan Services ("JH RPS") provides employer sponsored retirement plans for companies ranging from start-ups to some of the largest corporations in America. John Hancock Investments ("JH Investments") offers a variety of mutual funds, undertakings for collective investment in transferrable securities ("UCITS"), exchange traded funds ("ETF"), and 529 College Savings plans. We also manage an in-force block of fixed deferred, variable deferred and payout annuity products.

Signator Investors, Inc. is our affiliated broker/dealer and is comprised of a national network of independent firms with over 1,400 registered representatives.

In 2015, U.S. Division contributed 47% of the Company's total premiums and deposits and, as at December 31, 2015, accounted for 57% of the Company's assets under management and administration.

Financial Performance

U.S. Division reported net income attributed to shareholders of $1,531 million in 2015 compared with $2,147 million in 2014. Net income attributed to shareholders is comprised of core earnings, which was $1,537 million in 2015 compared with $1,383 million in 2014, and items excluded from core earnings, which amounted to net charges of $6 million in 2015 compared with net gains of $764 million in 2014. The strengthening of the U.S. dollar compared with the Canadian accounted for $207 million of the increase in full year core earnings.

Expressed in U.S. dollars, the functional currency of the division, 2015 net income attributed to shareholders was US$1,194 million compared with US$1,946 million in 2014, core earnings was US$1,205 million compared with US$1,252 million in 2014, and items excluded from core earnings were a net charge of US$11 million compared with a net gain of US$694 million in 2014. The US$47 million decrease in core earnings was driven by unfavourable policyholder experience, lower tax benefits, higher acquisition costs related to higher wealth and asset management gross flows and modestly lower new business gains in Insurance. These items were partially offset by lower amortization of deferred acquisition costs due to the run-off of the in-force variable annuity business and higher wealth and asset management fee income reflecting higher asset levels. The unfavourable policyholder experience in JH Insurance was primarily due to JH LTC and large claims in JH Life.

The US$705 million decrease in items excluded from core earnings compared with the prior year is largely attributable to the non-recurrence of favourable investment-related activity reported in 2014.

The table below reconciles net income attributed to shareholders to core earnings for U.S. Division for 2015, 2014 and 2013.

For the years ended December 31,	Canadian $			US $		
($ millions)	**2015**	2014	2013	**2015**	2014	2013
Core earnings[(1)]	**$ 1,537**	$ 1,383	$ 1,510	**$ 1,205**	$ 1,252	$ 1,469
Items to reconcile core earnings to net income attributed to shareholders:						
Investment-related experience related to fixed income trading, market value increases in excess of expected alternative assets investment returns, asset mix changes and credit experience	**(125)**	482	893	**(91)**	447	868
Direct impact of equity markets and interest rates and on variable annuity guarantee liabilities[(2)]	**164**	282	312	**117**	247	299
Integration costs and in-force product changes treaties[(3)]	**(45)**	–	193	**(37)**	–	184
Net income attributed to shareholders	**$ 1,531**	$ 2,147	$ 2,908	**$ 1,194**	$ 1,946	$ 2,820

(1) Core earnings is a non-GAAP measures. See "Performance and Non-GAAP Measure" below.

14 The 2015 GFK Brand Tracking Study.

(2) The direct impact of equity markets and interest rates is relative to our policy liability valuation assumptions and includes changes to interest rate assumptions. 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 US$117 million gain in 2015 (2014 – US$247million gain) consisted of a US$17 million charge (2014 – US$106 million charge) related to variable annuities that are dynamically hedged, a US$71 million charge (2014 – US$14 million gain) on general fund equity investments supporting policy liabilities, a US$76 million charge (2014 – US$8 million charge) related to variable annuities that are not dynamically hedged, and a US$281 million gain (2014 – US$347 million gain) related to fixed income reinvestment rates assumed in the valuation of policy liabilities. The amount of variable annuity guaranteed value that was dynamically hedged or reinsured at the end of 2015 was 94% (2014 – 94%).

(3) The 2015 charge of US$37 million related to one-time New York Life integration costs. The 2013 gain of US$184 million was related to policyholder-approved changes to the investment objectives of separate accounts that support our Variable Annuity products.

Sales

In 2015, we achieved record gross flows in our U.S. mutual fund business. JH RPS gross flows continued to grow due to ongoing contributions and new business sales for both our core small-case and mid-market products. Insurance sales benefited from several product enhancements and new product launches.

U.S. Division sales of insurance products were US$488 million in 2015, a decrease of US$13 million or 3% compared with 2014. We experienced continued strength in our protection–based universal life ("UL") and variable UL ("VUL") product lines, strong International UL sales and growth in the revamped term product. This was partially offset by ongoing competitive pressure in the accumulation oriented market and lower LTC sales resulting from the non-recurrence of the biennial inflation buy-up activity in the Federal program from 2014, as we continue to transition to the new Performance LTC product.

U.S. Division wealth and asset management products gross flows were US$47.2 billion in 2015, an increase of US$9.6 billion or 26% compared with 2014. JH RPS's recently acquired pension business contributed to US$5.7 billion in mid-market gross flows, while record sales in JH Investments and 5% growth in small-case market flows in JH RPS contributed the rest of the increase.

We achieved record mutual fund sales driven by our strong product line-up, including 36 Four- or Five- Star Morningstar[15] rated funds and broad placement of our funds on firms' recommended lists and models. In 2015, JH Investments launched 6 Exchange Traded Funds and a UCITS platform to expand our reach to passive investors as well as non-U.S. domiciled retail investors.

Sales

For the years ended December 31, ($ millions)	Canadian $			US $		
	2015	2014	2013	**2015**	2014	2013
Insurance products	**$ 625**	$ 554	$ 580	**$ 488**	$ 501	$ 563
Wealth and asset management products	**60,567**	41,488	37,197	**47,180**	37,570	36,137

Revenue

Total revenue in 2015 of US$7.9 billion decreased US$18.1 billion compared with 2014 primarily driven by unfavorable realized and unrealized gains and losses and US$6.1 billion of ceded premium resulting from the cession of 60% of the Closed Block. Revenue before net realized and unrealized investment gains (losses), excluding the ceded premium, was down US$0.2 billion from 2014 as reduced premium and investment income related to the ceded Closed Block was partially offset by higher wealth and asset management fee income reflecting higher asset levels.

Revenue

For the years ended December 31, ($ millions)	Canadian $			US $		
	2015	2014	2013	**2015**	2014	2013
Net premium income excluding the Closed Block reinsurance transaction(1)	**$ 7,910**	$ 6,733	$ 7,324	**$ 6,183**	$ 6,092	$ 7,112
Investment income	**6,679**	6,197	5,567	**5,229**	5,610	5,402
Other revenue	**5,349**	4,531	4,034	**4,182**	4,102	3,915
Revenue before items noted below	**19,938**	17,462	$ 16,925	**15,594**	15,804	16,429
Net realized and unrealized gains (losses)(2)	**(1,884)**	11,271	(11,187)	**(1,621)**	10,154	(10,896)
Premium ceded, net of ceded commissions and additional consideration relating to Closed Block reinsurance transaction(1)	**(7,996)**	–	–	**(6,109)**	–	–
Total revenue	**$ 10,058**	$ 28,733	$ 5,738	**$ 7,864**	$ 25,958	$ 5,533

(1) For the purpose of comparable period-over-period reporting, we exclude the $8.0 billion (US$6.1 billion) impact of the Closed Block reinsurance transaction which is shown separately, for full year 2015. For other periods as applicable, amounts in this line equal the "net premium income" in note 19 of the Consolidated Financial Statements.

(2) See "Financial Performance – Impact of Fair Value Accounting" above.

15 For each fund with at least a 3-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 3-, 5- 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.

Premiums and Deposits

U.S. Division total premiums and deposits for 2015 were US$55.0 billion, an increase of 21% compared with 2014. Premiums and deposits for insurance products of US$6.7 billion were flat compared with 2014, as sales activity was dampened by competitive pressures. Premiums and deposits for wealth and asset management products were US$47.2 billion, an increase of 26% compared with 2014, reflecting strong deposits in JH RPS including the recently acquired mid-market business, as well as from record deposits in JH Investments.

Premiums and Deposits

For the years ended December 31, ($ millions)	Canadian $			US $		
	2015	2014	2013	**2015**	2014	2013
Insurance products[1]	**$ 8,528**	$ 7,368	$ 7,579	**$ 6,667**	$ 6,665	$ 7,359
Wealth and asset management products	**60,567**	41,488	37,297	**47,180**	37,570	36,137
Other wealth products (Annuities)	**1,523**	1,297	1,669	**1,191**	1,176	1,618
Total premiums and deposits	**$ 70,618**	$ 50,153	$ 46,445	**$ 55,038**	$ 45,411	$ 45,114

[1] For the purpose of comparable period-over-period reporting, the impact of the 3Q15 Closed Block reinsurance transaction is excluded from insurance products premiums in this table. This transaction resulted in a net ceded premium (negative premium) of approximately $8.0 billion (US$6.1 billion) for the full year 2015.

Assets under Management and Administration

U.S. Division assets under management and administration as at December 31, 2015 were US$388.2 billion, up 13% from December 31, 2014. The acquisition of the Retirement Plan Services business in 2Q15 contributed US$45.3 billion (net increase in wealth and asset management assets of US$56.6 billion partially offset by the transfer of US$11.3 billion of assets as part of the Closed Block reinsurance transaction) and robust net mutual fund flows contributed an additional US$10.4 billion in 2015. These items were partially offset by the continued run-off of the in-force variable business.

Assets under Management and Administration

December 31, ($ millions)	Canadian $			US $		
	2015	2014	2013	**2015**	2014	2013
General fund	**$ 150,436**	$ 136,682	$ 112,930	**$ 108,690**	$ 117,821	$ 106,177
Segregated funds	**194,293**	174,397	162,596	**140,377**	150,330	152,873
Mutual funds and other	**116,425**	87,450	64,894	**84,117**	75,382	61,014
Total assets under management	**461,154**	398,529	340,420	**333,184**	343,533	320,064
Other assets under administration	**76,148**	–	–	**55,017**	–	–
Total assets under management and administration	**$ 537,302**	$ 398,529	$ 340,420	**$ 388,201**	$ 343,533	$ 320,064

Strategic Direction

John Hancock is committed to expanding our capabilities to attract new customers by providing the right financial solution, at the right time, through the most appropriate channel. This is being achieved by focusing on a customer-centric strategy that enables us to respond to the evolving needs of our customers. In 2015, John Hancock launched a number of initiatives designed to improve the overall customer experience of our clients.

Our customer-centric strategy also includes the development of analytical capabilities that help us better identify customers who are most interested in our products and reach those customers in ways that are most convenient to them.

To complement our traditional channels, our investment in technology continues to facilitate our work on a customer-service platform that leverages innovative software and behavioral finance to help investors make better financial decisions and manage their wealth. We have also focused on new product platforms designed to help us reach new customers. These include our 2015 entrance into the ETF business, our new offshore fund platform (UCITS Funds), and our expansion to mid- and large-employer sponsored retirement plans, all of which will continue as we move forward.

In 2015, JH Insurance became the first carrier in the U.S. to offer life insurance products fully integrated with wellness features. We did this through an exclusive, partnership with Vitality, the global leader in integrating wellness benefits with life insurance products. The partnership provides our customers with tools and technology that allow them to make small but impactful and measurable steps towards improved health. We believe this will lead to a more engaging ownership process that encourages customers to share their ongoing health progress with John Hancock in exchange for premium discounts and promotions on health and wellness-related products and services.

In addition, JH Insurance introduced an industry-first policy management tool, called LifeTrack, which uses personalized communications to help clients understand the current value of their variable life insurance benefits in real time. We also launched a long-term care insurance product, Performance LTC, which offers customers greater control over their premiums.

We are also focused on expanding our insurance distribution through new channels, as we believe this will help us attract new customers while still maintaining our position in the traditional intermediary-sold channel where we currently sell the majority of our products.

In 2015, JH Investments broadened its franchise by entering into the fast growing ETF market through a suite of 6 ETF's, adding a strong complement to our full suite of products currently available, and developing a UCITS platform, making our mutual funds available to international clients.

JH RPS completed its acquisition of New York Life's Retirement Plan Services business in 2015, adding strength and expertise in the mid- and large-case segments and complementing our leadership position in the small-case segment (9% share of assets in <$US10 million)[16], representing 56,000 retirement plans and over 2.7 million participants. Our leadership in these markets provides us the advantages of a significant asset base, industry-leading technical expertise, and deep distribution relationships. In addition, we expanded our recordkeeping services in the small-case market by focusing on delivering price competitiveness, fee transparency, new investment options, and exceptional customer service to our in-force plans. For JH RPS plan participants who are no longer part of an employer sponsored 401(k) group plan, we remain focused on providing education and advice services to them through our customer service employees and licensed registered representatives.

Our broker-dealer, Signator Investors, Inc., in 2015, announced plans to acquire Transamerica Financial Advisors ("TFA"). This acquisition will move Signator into the top 15 broker-dealers in the U.S.[17], expand its customer reach in every state in the country, and broadens its distribution opportunities through TFA's established bank-channel relationships. The transaction is expected to close during 2Q16.

In 2015, the U.S. Division invested in advanced analytics to modernize the purchase process and to better understand customer and distribution needs to provide a better customer experience. We launched a Boston-based innovation hub for employees to work cross-divisionally on disruptive and transformative ideas for new technologies and products. We also acquired Guide Financial, a provider of digital solutions for financial advisors, and will continue to build out our digital retail advice platform which will be designed to complement our current distribution channels while helping our clients to make better financial decisions employing state-of-the-art artificial intelligence and behavioral finance technology.

[16] Source: Plan Sponsor Magazine 2015 DC Recordkeeper Survey, June 2015
[17] Source: Investment News Broker-Dealer Data Center as at December 31, 2014

Corporate and Other

Corporate and Other is comprised of investment performance on assets backing capital, net of amounts allocated to operating divisions, financing costs, Investment Division's external asset management business (Manulife Asset Management), our Property and Casualty ("P&C") Reinsurance business as well as our run-off reinsurance business lines including variable annuities and accident and health.

For segment reporting purposes the impact of updates to actuarial assumptions, settlement costs for macro equity hedges and other non-operating items are included in this segment's earnings. This segment is also where we reclassify favourable investment-related experience to core earnings from items excluded from core earnings, subject to certain limits (see "Performance and Non-GAAP Measures" below). In each of the other segments, we report all investment-related experience in items excluded from core earnings.

In 2015, Corporate and Other contributed 15% of the Company's premiums and deposits and, as at December 31, 2015, accounted for 8% of the Company's assets under management and administration.

Financial Performance

Corporate and Other reported a full year 2015 net loss attributed to shareholders of $1,002 million compared with a net loss of $896 million for 2014. The net loss is comprised of core loss and items excluded from core loss. The core loss was $672 million in 2015 and $430 million in 2014; items excluded from core loss amounted to net charges of $330 million in 2015 compared with net charges of $466 million in 2014.

The $242 million increase in core loss is largely due to the inclusion in 2014 of $200 million of core investment gains in 2014 compared to nil in 2015. The remaining $42 million variance was driven by the currency impact on interest allocated to the U.S. and Asia divisions when expressed in Canadian dollars, higher macro hedging costs from increased hedging activity, and higher expenses primarily reflecting the non-recurrence of legal provision releases and increased project costs, partially offset by higher investment income reflecting higher realized gains on available-for-sale equities and higher asset levels.

The net charge in 2015 of $330 million for items excluded from core earnings consisted of $451 million of charges for changes in actuarial methods and assumptions, $39 million of other investment–related experience losses and $37 million in settlement costs related to our U.K. employee pension plan, partially offset by $200 million of favourable gains related to the direct impact of equity markets and interest rates.

The net charge in 2014 of $466 million for items excluded from core earnings consisted mostly of $198 million of charges for changes in actuarial methods and assumptions, $94 million of losses related to the direct impact of equity markets and interest rates and the $200 million reclassification of favourable investment-related experience to core earnings.

The table below reconciles the net loss attributed to shareholders to the core loss for Corporate and Other for 2015, 2014 and 2013.

For the years ended December 31, (C$ millions)	2015	2014	2013
Core loss excluding expected cost of macro hedges and core investment-related experience	**$ (446)**	$ (446)	$ (506)
Expected cost of macro hedge	**(226)**	(184)	(413)
Investment-related experience included in core earnings	–	200	200
Total core loss[1]	**(672)**	(430)	(719)
Items to reconcile core loss to net loss attributed to shareholders:			
Direct impact of equity markets and interest rates[2]	**200**	(94)	(1,772)
Changes in actuarial methods and assumptions	**(451)**	(198)	(489)
Investment-related experience related to mark-to-market items[3]	**(39)**	14	31
Reclassification to core investment-related experience above	**–**	(200)	(200)
Impact of tax changes, integration and acquisition costs	**(40)**	–	50
Restructuring charges and other	**–**	12	(26)
Net loss attributed to shareholders	**$ (1,002)**	$ (896)	$ (3,125)

(1) This item is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.

(2) The direct impact of equity markets and interest rates included $234 million (2014 – $120 million charge) of gains on derivatives associated with our macro equity hedges and gains of $5 million (2014 – charge of $40 million) on the sale of AFS bonds. Starting in 2013 the URR assumptions were updated quarterly and reported in the operating segments. In 2015, the charge reported in the operating divisions was $nil (2014 – $95 million). Other items in this category netted to a charge of $39 million (2014 – gain of $66 million).

(3) Investment-related experience includes mark-to-market gains or losses on assets held in the Corporate and Other segment other than gains on AFS equities and seed money investments in new segregated or mutual funds.

Revenue

Revenue was $221 million for 2015 compared with a net charge of $76 million in 2014. The favourable variance was primarily driven by lower macro hedging costs in 2015.

Revenue

For the years ended December 31, (C$ millions)	2015	2014	2013
Net premium income	**$ 90**	$ 77	$ 82
Investment income (loss)[1]	**(63)**	(23)	(276)
Other revenue	**191**	263	234
Revenue before net realized and unrealized investment gains (losses) and on the macro hedge program	**218**	317	40
Net realized and unrealized gains (losses)[2] and on the macro hedge program	**3**	(393)	(2,098)
Total revenue	**$ 221**	$ (76)	$ (2,058)

(1) Includes losses of $6 million (2014 – $60 million) on the sale of AFS bonds.
(2) See "Financial Performance – Impact of Fair Value Accounting" above.

Premiums and Deposits

Premiums and deposits were $22.2 billion for 2015 compared with $8.3 billion reported in 2014. These amounts primarily relate to Investment Division's external asset management business. (See "Investment Division" below).

Premiums and Deposits

For the years ended December 31, (C$ millions)	2015	2014	2013
Life Retrocession	**$ 2**	$ 2	$ 2
Property and Casualty Reinsurance	**88**	75	80
Institutional and other deposits	**22,150**	8,185	3,974
Total premiums and deposits	**$ 22,240**	$ 8,262	$ 4,056

Assets under Management

Assets under management of $71.6 billion as at December 31, 2015 (2014 – $46.6 billion) included assets managed by Manulife Asset Management on behalf of institutional clients of $71.2 billion (2014 – $41.6 billion) and the Company's own funds of $7.6 billion (2014 – $9.8 billion), partially offset by a $7.2 billion (2014 – $4.4 billion) total company adjustment related to the reclassification of derivative positions net of the cash received as collateral on derivative positions. The decrease in the Company's own funds primarily reflect the net impact of the maturity of senior and medium term notes and a redemption of preferred shares partially offset by the issuance of subordinated debt, and payments for the acquisition of Standard Life's Canadian-based operations, New York Life's Retirement Plan Services business and the exclusive distribution agreement with DBS.

Assets under Management

As at December 31, (C$ millions)	2015	2014	2013
General fund	**$ 565**	$ 5,242	$ 4,413
Segregated funds – elimination of amounts held by the Company	**(171)**	(202)	(175)
Institutional advisory accounts	**71,237**	41,573	32,486
Total assets under management	**$ 71,631**	$ 46,613	$ 36,724

Strategic Direction

With respect to our overall Company strategy, we have a matrix organization to ensure that we leverage our global scale and sharing of best practices. As such, we continue to add strength to our Group Functions as well as in the operating divisions in the areas of innovation, marketing and technology.

With respect to the businesses whose results are reported in the Corporate and Other results:

Our P&C Reinsurance business provides substantial retrocessional capacity for a very select clientele in the property and casualty reinsurance market. We continue to manage the risk exposures of this business in relation to the total Company balance sheet risk and volatility as well as the prevailing market pricing conditions.

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

Investment Division

Manulife's Investment Division manages the Company's general fund assets and, through Manulife Asset Management ("MAM"), provides comprehensive asset management and asset allocation solutions to institutional clients and investment funds, and investment management services to retail clients through Manulife and John Hancock product offerings.

We have expertise managing a broad range of investments including public and private bonds, public and private equities, commercial mortgages, real estate, power and infrastructure, timberland, farmland, and oil and gas. With a team of more than 3,300 employees, the Investment Division has a physical presence in key markets, including the United States, Canada, the United Kingdom, Hong Kong, Japan, and Singapore. In addition, MAM has a joint venture asset management business in China, Manulife TEDA Fund Management Company Ltd.

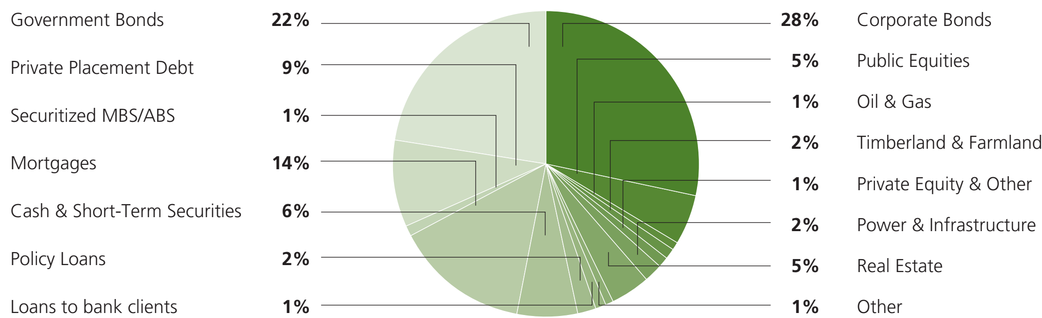
General Fund

Our investment philosophy for the General Fund is to invest in an asset mix that optimizes our risk adjusted returns and matches the characteristics of our underlying liabilities. We follow a bottom-up approach which combines our strong asset management skills with an in-depth understanding of the characteristics of each investment. We invest in a diversified mix of assets, including a variety of alternative long-duration asset classes. Our diversification strategy has historically produced superior risk adjusted returns while reducing overall risk. We use a disciplined approach across all asset classes and we do not chase yield in the riskier end of the fixed income market. This strategy has resulted in a well-diversified, high quality investment portfolio, which has historically delivered strong and steady investment-related experience through-the-cycle. Our risk management strategy is outlined in the "Risk Management" section below.

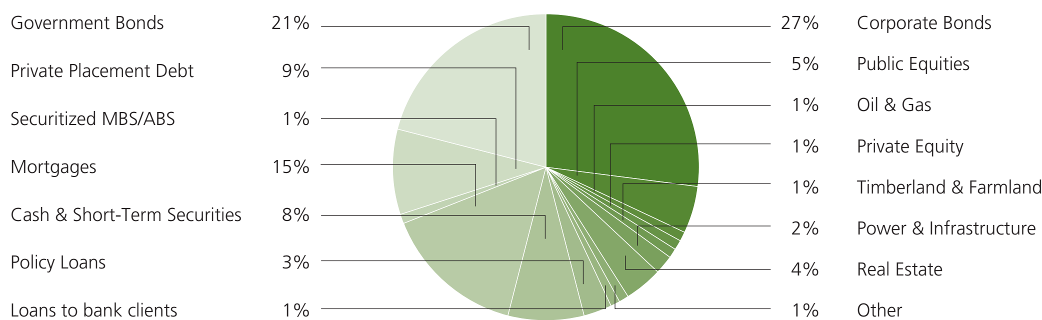
General Fund Assets

As at December 31, 2015, our General Fund invested assets totaled $309.3 billion compared with $269.3 billion at the end of 2014. The following charts show the asset class composition as at December 31, 2015 and December 31, 2014. The increase in invested assets included $19 billion from the acquisition of Standard Life, $35 billion from the impact of currency movement, partly offset by the US$14 billion reduction related to the Closed Block reinsurance transaction with New York Life.

2015



2014



Investment Income

For the year ended December 31, 2015 (C$ millions, unless otherwise stated)	2015 Income	2015 Yield[1]	2014 Income	2014 Yield[1]
Interest income	$ 10,114	3.40%	$ 8,959	3.70%
Dividend, rental and other income	1,893	0.60%	1,800	0.70%
Impairments	(633)	(0.20%)	(165)	(0.10%)
Other, including gains (losses) on sale of AFS debt securities	91	–	150	0.10%
Investment income before realized and unrealized gains on assets supporting insurance and investment contract liabilities and on macro equity hedges	$ 11,465		$ 10,744	
Realized and unrealized gains (losses) on assets supporting insurance and investment contract liabilities and on macro equity hedges				
Debt securities	$ (3,957)	(1.30%)	$ 8,935	3.60%
Public equities	(513)	(0.20%)	772	0.30%
Mortgages and private placements	373	0.10%	58	–
Alternative long-duration assets and other investments	1,335	0.40%	885	0.30%
Derivatives, including macro equity hedging program	(300)	(0.10%)	6,442	2.60%
	$ (3,062)		$ 17,092	
Total investment income	**$ 8,403**	**2.80%**	$ 27,836	11.80%

[1] Yields are based on IFRS income and are calculated using the geometric average of assets held at IFRS carrying value during the reporting period.

In 2015, the $8.4 billion of investment income (2014 – $27.8 billion) consisted of:

- $11.5 billion of investment income before net realized and unrealized gains (losses) on assets supporting insurance and investment contract liabilities and on macro equity hedges (2014 – $10.7 billion), and;
- $3.1 billion of net realized and unrealized losses on assets supporting insurance and investment contract liabilities and on macro equity hedges (2014 – gain of $17.1 billion).

The $0.7 billion increase in net investment income before the unrealized and realized gains was due to higher income of $1.1 billion primarily from foreign exchange impacts due to the strengthening of the U.S. dollar, partially offset by higher impairments of $0.5 billion on primarily oil and gas assets reflecting the stressed oil and gas markets. In 2015, we recorded $633 million in impairments and provisions (net of recoveries), driven mainly by impairments on oil and gas properties.

The large change in net unrealized and realized gains (losses) related to the changes in interest rates and equity markets. In 2015, the general increase in U.S. interest rates resulted in losses of $4.0 billion (2014 – gains of $8.9 billion) on debt securities. Declines in equity markets in 2015 resulted in losses of $0.5 billion (2014 – gains of $0.8 billion) on public equities supporting insurance and investment contract liabilities. Net losses of $0.3 billion on derivatives in 2015, including the macro equity hedging program, primarily related to the losses on currency swaps, treasury locks and equity contracts.

As the measurement of insurance and investment contract liabilities includes estimates regarding future expected investment income on assets supporting the insurance and investment contract liabilities, only the difference between the mark-to-market accounting on the measurement of both assets and liabilities impacts net income. Refer to "Financial Performance" section above.

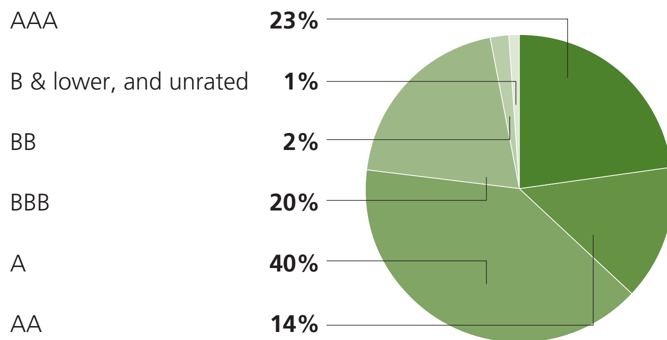
Debt Securities and Private Placement Debt

We manage our high quality fixed income portfolio to optimize yield and quality while ensuring that asset portfolios remain diversified by sector, industry, duration, issuer, and geography. As at December 31, 2015, our fixed income portfolio of $185.4 billion (2014 – $157.7 billion) was 97% investment grade and 77% was rated A or higher (2014 – 97% and 77%, respectively). Our private placement debt holdings provide diversification benefits (issuer, industry, and geography) and, because they often have stronger protective covenants and collateral than debt securities, they typically provide better credit protection and potentially higher recoveries in the event of default. Geographically, 29% is invested in Canada (2014 – 27%), 48% is invested in the U.S. (2014 – 51%), 15% is invested in Asia (2014 – 14%) and the remaining 8% is invested in Europe and other geographic areas (2014 – 8%).

Debt Securities and Private Placement Debt – by Credit Quality[1]

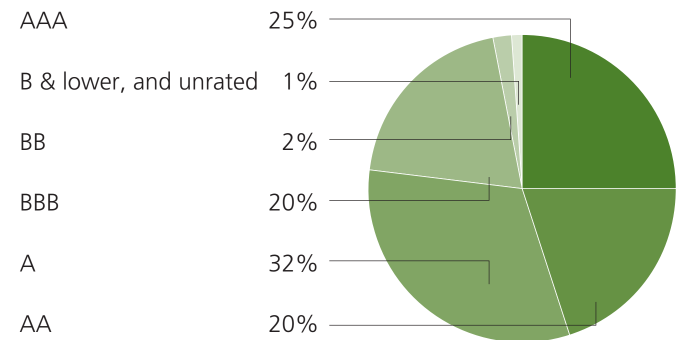
2015

$185.4B



2014

$157.7B



[1] Reflects credit quality ratings as assigned by Nationally Recognized Statistical Rating Organizations ("NRSRO") using the following priority sequence order: Standard & Poor's, Moody's, Dominion Bond Rating Service, Fitch, and Japan Credit Rating. For those assets where ratings by NRSRO are not available, disclosures are based upon internal ratings as described in the "Risk Management" and "Risk Factors" sections below.

As at December 31, Per cent of carrying value	2015 Debt securities	2015 Private placement debt	2015 Total	2014 Debt securities	2014 Private placement debt	2014 Total
Government and agency	**44**	**11**	**39**	43	10	38
Utilities	**14**	**49**	**19**	13	47	18
Financial	**14**	**7**	**13**	15	6	14
Energy	**7**	**7**	**7**	8	9	8
Consumer (non-cyclical)	**5**	**9**	**6**	5	9	6
Industrial	**6**	**8**	**6**	5	7	5
Basic materials	**2**	**3**	**2**	2	5	3
Consumer (cyclical)	**2**	**6**	**2**	2	6	2
Securitized (MBS/ABS)	**2**	**–**	**2**	3	–	2
Telecommunications	**2**	**–**	**2**	2	–	2
Technology	**1**	**–**	**1**	1	1	1
Media and internet and other	**1**	**–**	**1**	1	–	1
Total per cent	**100**	**100**	**100**	100	100	100
Total carrying value (C$ billions)	**$ 157.8**	**$ 27.6**	**$ 185.4**	$ 134.4	$ 23.3	$ 157.7

As at December 31, 2015, gross unrealized losses on our fixed income holdings were $3.0 billion or 2% of the amortized cost of these holdings (2014 – $0.6 billion or less than 1%). Of this amount, $55 million (2014 – $65 million) related to debt securities trading below 80% of amortized cost for more than 6 months. Securitized assets represented $18 million of the gross unrealized losses and none of the amounts trading below 80% of amortized cost for more than 6 months (2014 – $19 million and $4 million, respectively). After adjusting for debt securities held in participating policyholder and pass-through segments and the provisions for credit included in the insurance and investment contract liabilities, the potential impact to shareholders' pre-tax earnings for debt securities trading at less than 80% of amortized cost for greater than 6 months was approximately $54 million as at December 31, 2015 (2014 – $59 million).

Mortgages

As at December 31, 2015, mortgages represented 14% of invested assets (2014 – 15%) with 63% of the mortgage portfolio invested in Canada (2014 – 62%) and 37% in the U.S. (2014 – 38%). As shown below, the overall portfolio is also diversified by geographic region, property type, and borrower. Of the total mortgage portfolio, 20% is insured (2014 – 25%), primarily by the Canada Mortgage and Housing Corporation ("CMHC") – Canada's AAA rated government backed national housing agency, with 45% of residential mortgages insured (2014 – 49%) and 4% of commercial mortgages insured (2014 – 6%).

As at December 31, (C$ billions)	2015 Carrying value	2015 % of total	2014 Carrying value	2014 % of total
Commercial				
Retail	**$ 8.0**	**18**	$ 6.4	16
Office	**7.1**	**16**	6.2	16
Multi-family residential	**4.6**	**11**	3.9	10
Industrial	**2.8**	**7**	2.1	5
Other commercial	**2.8**	**6**	2.2	5
Other Mortgages	**25.3**	**58**	20.8	52
Manulife Bank single-family residential	**17.5**	**40**	17.6	45
Agricultural	**1.0**	**2**	1.1	3
Total mortgages	**$ 43.8**	**100**	$ 39.5	100

Our commercial mortgage loans are originated with a hold-for-investment philosophy. They have low loan-to-value ratios, high debt-service coverage ratios, and as at December 31, 2015 there are two Canadian loans in arrears for a combined $7.3 million. Geographically, of the total mortgage loans, 40% are in Canada and 60% are in the U.S. (2014 – 33% and 67%, respectively). We are diversified by property type and largely avoid risky market segments such as hotels, construction loans and second liens.

Non-CMHC Insured Commercial Mortgages[1]

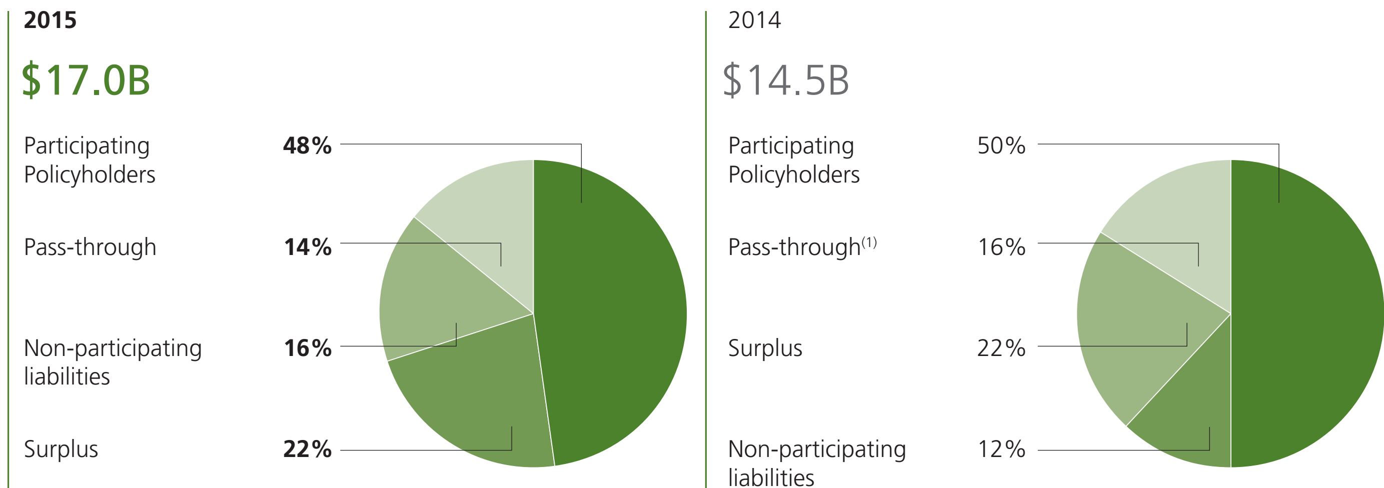
As at December 31, 2015	2015 Canada	2015 U.S.	2014 Canada	2014 U.S.
Loan-to-Value ratio[2]	**62%**	**57%**	60%	60%
Debt-Service Coverage ratio[2]	**1.56x**	**2.01x**	1.52x	1.87x
Average duration	**3.7 years**	**6.2 years**	3.8 years	5.8 years
Average loan size (C$ millions)	**$10.0**	**$16.1**	$6.6	$13.4
Loans in arrears[3]	**0.07%**	**0.00%**	0.00%	0.00%

[1] Excludes Manulife Bank commercial mortgage loans of $50 million (2014 – $35 million).
[2] Loan-to-Value and Debt-Service Coverage are based on re-underwritten cash flows.
[3] Arrears defined as over 90 days past due in Canada and over 60 days past due in the U.S.

Public Equities

As at December 31, 2015, public equity holdings of $17.0 billion represented 5% (2014 – $14.5 billion and 5%) of invested assets and, when excluding participating policyholder and pass-through segments, represented 2% (2014 – 2%) of invested assets. The portfolio is diversified by industry sector and issuer. Geographically, 33% (2014 – 34%) is held in Canada, 37% (2014 – 35%) is held in the U.S., and the remaining 30% (2014 – 31%) is held in Asia, Europe and other geographic areas.

Public Equities – by Segment



(1) Public equities denoted as pass-through are held by the Company to support the yield credited on equity-linked investment funds for Canadian life insurance products.

Alternative Long-Duration Assets ("ALDA")

Our alternative long-duration asset portfolio is comprised of a diverse range of asset classes with varying degrees of correlations. The portfolio typically consists of private assets representing investments in varied sectors of the economy which act as a natural hedge against future inflation and serve as an alternative source of asset supply to long-term corporate bonds. In addition to being a suitable match for our long-duration liabilities, these assets provide enhanced long-term yields and diversification relative to traditional fixed income markets. The vast majority of our alternative long-duration assets are managed in-house.

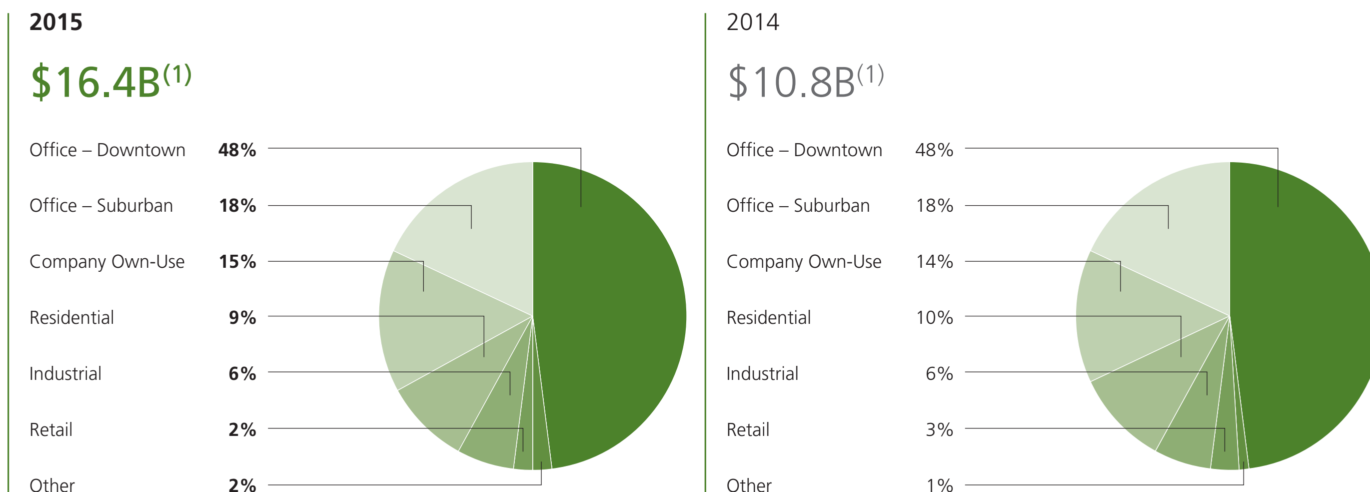
As at December 31, 2015, alternative long-duration assets of $31.6 billion represented 10% (2014 – $23.3 billion and 9%) of invested assets. The fair value of total ALDA was $32.7 billion at December 31, 2015 (2014 – $24.0 billion). The carrying value and corresponding fair value by sector and/or asset type as follows:

As at December 31,	2015		2014	
(C$ billions)	Carrying value	Fair value	Carrying value	Fair value
Real estate	**$ 15.3**	**$ 16.4**	$ 10.1	$ 10.8
Power and infrastructure	**5.3**	**5.3**	4.0	4.0
Private equity	**3.8**	**3.8**	2.8	2.8
Timberland	**3.6**	**3.6**	2.7	2.7
Oil and gas	**1.7**	**1.7**	2.2	2.1
Farmland	**1.5**	**1.5**	1.2	1.3
Other	**0.4**	**0.4**	0.3	0.3
Total ALDA	**$ 31.6**	**$ 32.7**	$ 23.3	$ 24.0

Real Estate

Our real estate portfolio is diversified by geographic region; of the total fair value of this portfolio, 63% is located in the U.S., 31% in Canada, and 6% in Asia as at December 31, 2015 (2014 – 62%, 35%, and 3%, respectively). This high quality portfolio has virtually no leverage and is primarily invested in 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 93% (2014 – 95%) and an average lease term of 6.2 years (2014 – 6.7 years). During 2015, we executed 6 acquisitions, representing $2.2 billion market value of commercial real estate assets (2014 – 4 acquisitions and $0.5 billion).

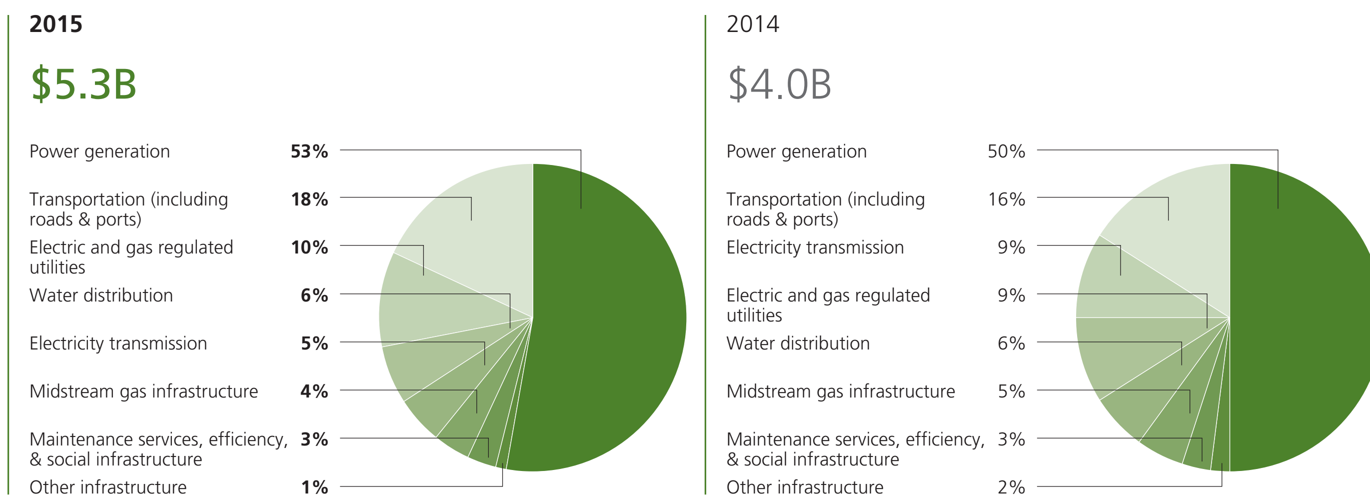
The segment composition of our real estate portfolio based on fair value is as follows:



(1) These figures represent the fair value of the real estate portfolio. The carrying value of the portfolio was $15.3 billion and $10.1 billion at December 31, 2015 and December 31, 2014, respectively.

Power & Infrastructure

We invest both directly and through funds in a variety of industry specific asset classes, listed below. The portfolio is well diversified with over 260 portfolio companies. The portfolio is predominately invested in the U.S. and Canada, but also in the United Kingdom, Europe and Australia. Our power and infrastructure holdings are as follows:



Timberland & Farmland

Our timberland and farmland assets are managed by a proprietary entity, Hancock Natural Resources Group ("HNRG"). In addition to being the world's largest timberland investment manager for institutional investors[18], with timberland properties in the U.S., New Zealand, Australia, Chile, Canada and Brazil, HNRG also manages farmland properties in the U.S., Australia and Canada. In 2011, HNRG established a renewable energy business unit focused on investments in the bio-energy sector. The General Fund's timberland portfolio comprised 19% of HNRG's total timberland assets under management ("AUM") (2014 – 19%). The farmland portfolio includes annual (row) crops, fruit crops, wine grapes, and nut crops. The General Fund's holdings comprised 42% of HNRG's total farmland AUM (2014 – 47%).

Private Equities

Our private equity portfolio of $3.8 billion (2014 – $2.8 billion) includes both directly held private equity and private equity funds. Both are diversified across vintage years and industry sectors.

Oil & Gas

This category is comprised of $0.8 billion (2014 – $1.4 billion) in our conventional Canadian oil and gas properties managed by our subsidiary, NAL Resources, and various other oil and gas private equity interests of $0.9 billion (2014 – $0.8 billion). Production mix for conventional oil and gas assets in 2015 was approximately 44% crude oil, 43% natural gas, and 13% natural gas liquids (2014 – 57%, 34%, and 9%, respectively). Private equity interests are a combination of both producing and mid-streaming assets.

In 2015, the carrying value of our oil and gas holdings declined by $0.5 billion as a result of impairment charges related to lower commodity prices, partially offset by the appreciation of the U.S. dollar compared with the Canadian dollar and the acquisition of some additional holdings. Excluding the impact of currency, the fair value declined by $0.6 billion. As noted in the "Financial Performance" section, we reported $876 million of post-tax investment-related experience losses related to the sharp decline in oil and gas prices. The pre-tax investment-related experience loss is greater in 2015 than the fair value decline as the investment-related experience compares actual returns to expected returns used in the valuation of policy liabilities. Refer to "Critical Accounting and Actuarial Assumptions" below.

Manulife Asset Management

Manulife Asset Management ("MAM") provides comprehensive asset management solutions to institutional clients and investment funds, and investment management services to retail clients through Manulife and John Hancock product offerings.

As at December 31, 2015, MAM had $417 billion of AUM compared with $321 billion at the end of 2014. The following charts show the movement in AUM over the year as well as assets by asset class.

2015 Manulife Asset Management AUM increased $96 billion from 2014 driven by currency translation gains on external clients AUM, asset transfers from the acquisition of Standard Life, significant institutional mandate wins and growth in general fund AUM.

AUM Movement

(C$ billions)	2015	2014
MAM External AUM, Beginning	**$ 277.6**	$ 242.8
Standard Life acquisition	**26.0**	–
Gross Institutional flows	**22.1**	8.2
Institutional redemptions	**(7.7)**	(3.4)
Net Institutional flows	**14.4**	4.8
Net Affiliate flows[(1)]	**0.8**	(0.4)
Asset transfers	**(2.8)**	0.8
Market impact	**0.9**	11.4
Currency impact	**44.7**	18.2
MAM External AUM, Ending	**361.6**	277.6
General Fund AUM (managed by MAM), Beginning	**43.4**	37.4
Net flows, Market and Currency impacts	**11.8**	6.0
General Fund AUM (managed by MAM), Ending	**55.2**	43.4
Total MAM AUM	**$ 416.8**	$ 321.0

(1) Affiliate flows and redemptions related to activities of the three operating divisions (US, Canada and Asia)

18 Based on the global timber investment management organization ranking in the *RISI International Timberland Ownership and Investment Database.*

Net Institutional and Affiliate Flows

In 2015, net institutional flows of $14.4 billion were primarily driven by sales from new and existing institutional clients in Canada, Asia and U.S. in various asset classes but mainly in fixed income strategies. Affiliate net flows of $0.8 billion were primarily driven by strong flows from mutual funds in U.S. and Canada, partially offset by net outflows from U.S. variable annuities and retirement products.

AUM Composition

As at December 31, (C$ billions)	2015	2014
Affiliate / Retail[1]:		
Fixed income	**$ 93.2**	$ 71.5
Balanced	**22.6**	15.8
Equity	**94.7**	77.7
Asset allocation[2]	**77.5**	70.8
Alternatives	**2.1**	0.2
	290.1	236.0
Institutional:		
Fixed income	**38.7**	15.2
Balanced	**2.3**	1.7
Equity	**14.3**	11.2
Asset allocation[2]	**0.1**	0.0
Alternatives	**16.1**	13.5
	71.5	41.6
MAM External AUM	**361.6**	277.6
General Fund		
Fixed income[3]	**36.6**	27.7
Equity[3]	**13.7**	11.9
Alternative long-duration assets	**4.9**	3.8
General Fund AUM (managed by MAM)	**55.2**	43.4
Total MAM AUM	**$ 416.8**	$ 321.0

[1] Includes 49% of assets managed by Manulife TEDA Fund Management Company Ltd.
[2] Internally-managed assets included in other asset categories to avoid double counting: $66.7 billion and $60.0 billion in 2015 and 2014, respectively in Affiliated / Retail, and $0.4 billion and $0.3 billion in 2015 and 2014, respectively in Institutional Advisory.
[3] Historical figures have been restated for classification differences.

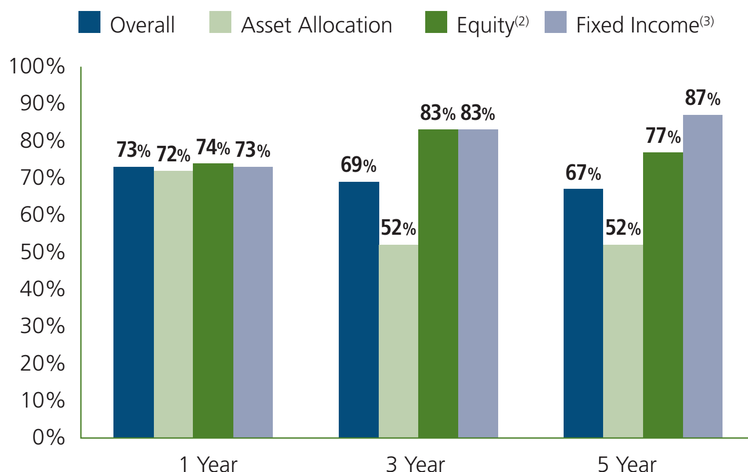
Total MAM External AUM by Client Geography

We operate from offices in 15 countries and territories, managing local and international investment products for our global client base.

As at December 31, (C$ billions)	2015	%	2014	%
U.S. region	**$ 220.4**	**61**	$ 189.0	68
Canada region	**87.2**	**24**	50.2	18
Asia region	**50.7**	**14**	36.0	13
Europe and other region	**3.3**	**1**	2.4	1
Total MAM External AUM	**$ 361.6**	**100**	$ 277.6	100

Investment Performance

% of AUM Outperforming Benchmarks(1)



As at December 31, 2015, overall investment performance has consistently exceeded our benchmarks on a 1, 3 and 5-year basis.

(1) Investment performance is based on actively managed MAM Public Markets account-based, asset-weighted performance versus their primary internal targets, which includes accounts managed by portfolio managers of MAM. Some retail accounts are evaluated net of fees versus their respective Morningstar peer group. All institutional accounts and all other retail accounts are evaluated gross of fees versus their respective index

(2) Includes balanced funds

(3) Includes money market funds

Long-term investment performance continued to be a differentiator for MAM, with the majority of public asset classes outperforming their benchmarks on a 1-, 3- and 5-year basis. At December 31, 2015, MAM had 95 Four- or Five-star Morningstar rated funds, an increase of 23 funds since December 31, 2014, excluding money market funds.

Strategic Direction

The demand for multi-asset class solutions, liability-driven investing ("LDI"), real assets, global and emerging market equities, and public and private fixed income persists as institutional and retail investors continue to seek higher risk-adjusted returns. MAM's strategic priorities are designed to continue to capitalize on this demand by closely aligning our global wealth and asset management business and leveraging our skills and expertise across our international operation to build long-lasting customer relationships. MAM was ranked as the 32nd largest asset manager globally in 2014.[19]

MAM's strategy is founded upon key differentiators: offering private and public multi-assets to holistically address client needs, providing alpha-focused active management in a boutique environment, and leveraging best-in-class global capabilities and expertise. This strategy is integral to Manulife's overall strategy of continuing to build and integrate our global wealth and asset management businesses, as well as expand our investment and/or sales offices into key markets, not restricting ourselves to geographies where we currently have, or expect to have, insurance operations. Wealth and Asset Management is a truly global business – both in demand and supply. Customers in any given location have the desire for globally-sourced product, and customers with our global product will benefit from on-the-ground perspectives generated by our investment professionals situated in diverse parts of the world, but globally networked and supervised for quality control.

In 2015, we continued our efforts to expand our distribution footprint beyond where we have historically had insurance operations, with MAM creating a Dublin-based UCITS fund structure to support expansion into the European market. We also recruited a Global Head of Distribution, based in the U.K. and responsible for sales and relationship management for MAM on a global basis.

See "Performance by Business Line" section below for additional information with respect to our globally diversified wealth and asset management franchise.

[19] Based on the institutional trade publication , Pension & Investments. Basis of measurement is AUM.

Performance by Business Line

Additional information for Wealth and Asset Management

Manulife has a globally diversified wealth and asset management ("WAM") franchise spanning mutual funds, group retirement and savings products, and institutional asset management capabilities across all major asset classes. We have achieved strong growth through expanding our broad-based extensive distribution platforms in the U.S., Canada, Asia, and now Europe, and leveraging our global asset management expertise. With investment professionals on the ground in 17 countries, our deep local knowledge, and expertise in sought after asset classes such as alternative long-duration assets, positions us well for continued success. In addition to mutual fund businesses in 11 markets, we have leading retirement platforms in Canada, the U.S. and Hong Kong, and a growing presence in Indonesia and Malaysia. We continue to invest in these businesses with the recent Standard Life and New York Life acquisitions and our pending acquisition of Standard Chartered's MPF and ORSO businesses in Hong Kong. WAM businesses are among our fastest growing earnings contributors.

We provide additional financial information by line of business, to supplement our existing primary disclosure based on geographic segmentation. This information is intended to facilitate assessment of the financial performance of our WAM businesses and allows for relevant comparisons to be made with global asset management peers. The supplemental information for WAM businesses includes an income statement, core earnings, core earnings before interest, taxes, depreciation and amortization ("core EBITDA"), net flows, gross flows and assets under management and administration ("AUMA")[20]. Core EBITDA was selected as a key performance indicator for WAM businesses, as EBITDA is widely used among asset management peers, and core earnings is a primary profitability metric for the Company overall.

Wealth and Asset Management highlights

For the years ended December 31, (C$ millions, unless otherwise stated)	2015	2014	2013
Core earnings[(1)]	**$ 639**	$ 502	$ 378
Core EBITDA[(2)]	**1,237**	980	733
Net flows	**34,387**	18,335	19,737
Gross flows	**114,686**	69,164	59,781
Assets under management ("AUM") (C$ billions)	**435**	315	259
Assets under management and administration ("AUMA")[(3)] (C$ billions)	**511**	315	259

(1) WAM core earnings by division are outlined in the section "Core earnings by line of business by division" below.
(2) Table below provides a reconciliation of Core EBITDA to Core earnings.
(3) Table below provides a continuity of AUMA.

Financial performance

In 2015, our global WAM businesses contributed $639 million to core earnings, an increase of 27% compared with 2014. Of the increase, $65 million related to the impact of currency movement, and $72 million related to higher fee income on higher average asset levels, including the impact of the recent acquisitions, partially offset by higher new business strain, primarily from higher gross flows in MAM and North America.

In 2015, core EBITDA for our global WAM businesses was $1,237 million, higher than core earnings by $598 million. In 2014, core EBITDA was $980 million, higher than core earnings by $478 million. The increase of $257 million in core EBITDA compared with 2014 is driven primarily by higher fee income from higher average asset levels in North America, reflecting solid net inflows in Canadian Group Retirement Savings and Mutual Funds and U.S. Retirement Plan Savings and JH Investments. The recent acquisition in Canada also contributed to the increased fee income. In Asia, strong net flows from TEDA, Hong Kong and Japan, partially offset by lower net flows in Indonesia, supported higher average assets driving higher fee income. Higher fee income was partially offset by higher investment expenses and sales commissions, reflecting the higher asset level and gross flows.

Core EBITDA

For the years ended December 31, (C$ millions)	2015	2014	2013
Core earnings	**$ 639**	$ 502	$ 378
Amortization of deferred acquisition costs and other depreciation	**327**	237	207
Amortization of deferred sales commissions	**106**	90	80
Core income tax expense	**165**	151	68
Core EBITDA	**$ 1,237**	$ 980	$ 733

[20] Core earnings, core EBITDA, net flows, gross flows and assets under management and administration are non-GAAP measures. See "Performance and Non-GAAP Measures" below.

AUMA

In 2015, AUMA for our wealth and asset management businesses increased from $315 billion to $511 billion. Approximately half of the increase ($109 billion) related to AUMA acquired, net flows accounted for $34 billion of the increase and the remaining $53 billion was related to markets and foreign exchange. The net flows were $34.4 billion, up 72% over 2014, despite challenging equity markets, driven by gross flows of $114.7 billion, up 46% over 2014. Acquisitions contributed $11.9 billion and $2.3 billion to gross and net flows, respectively. Full year 2014 gross and net flows were $69.2 billion and $18.3 billion, respectively.

AUMA

For the years ended December 31, (C$ billions)	2015	2014	2013
Balance January 1,	**$ 315**	$ 259	$ 204
Acquisitions	**109**	–	–
Net flows	**34**	18	20
Impact of markets and other	**53**	38	35
Balance December 31,	**$ 511**	$ 315	$ 259

Additional information by business line

The following tables provide additional information on our core earnings by WAM, Insurance and Other Wealth for each of the divisions. Other Wealth consists of variable and fixed annuities, single premium products sold in Asia, and Manulife Bank in Canada[21] and Insurance includes all individual and group insurance businesses.

Financial Performance

As noted above, in 2015 our global WAM businesses contributed $639 million to core earnings, an increase of 27% compared with 2014. Aligned with our focus on growing our global WAM business, WAM core earnings was 19% of total core earnings in 2015 compared with 17% in 2014.

Core earnings in our global insurance businesses in 2015 was $2,219 million, an increase of 19% compared with 2014. The increase was primarily a result of strong insurance sales in Asia, in-force growth and the strengthening of the U.S. dollar compared with the Canadian dollar.

Core earnings in our global other wealth businesses in 2015 was $1,262 million, an increase of 31% compared with 2014. The increase was primarily related to strong sales in Asia, the contribution of a recent acquisition in Canada, lower amortization of deferred acquisition costs in the U.S. and the strengthening of the U.S. dollar compared with the Canadian dollar.

Core earnings by line of business

For the years ended December 31, (C$ millions)	2015	2014	2013
Wealth and Asset Management	**$ 639**	$ 502	$ 378
Insurance	**2,219**	1,864	1,751
Other Wealth	**1,262**	965	1,207
Corporate and Other[(1)]	**(692)**	(443)	(719)
Total core earnings	**$ 3,428**	$ 2,888	$ 2,617

(1) Excludes Manulife Asset Management results that are included in WAM.

[21] Manulife Bank new loan volumes are no longer being reported as sales.

Core earnings by line of business by division

For the years ended December 31, (C$ millions)	2015	2014	2013
Wealth and Asset Management[1]			
Asia	**$ 161**	$ 126	$ 99
Canada	**140**	100	62
U.S.	**318**	263	217
Corporate and Other[2]	**20**	13	–
Total Wealth and Asset Management	**639**	502	378
Insurance			
Asia	**878**	667	533
Canada	**626**	471	478
U.S.	**715**	726	740
Total Insurance	**2,219**	1,864	1,751
Other Wealth[3]			
Asia	**266**	215	289
Canada			
Manulife Bank	**123**	123	117
Canada excluding Manulife Bank	**369**	233	248
Total Canada	**492**	356	365
U.S.	**504**	394	553
Total Other Wealth	**1,262**	965	1,207
Corporate and Other[4]	**(692)**	(443)	(719)
Total core earnings	**$ 3,428**	$ 2,888	$ 2,617

[1] Wealth and Asset Management is comprised of our fee-based global WAM businesses that do not contain material insurance risk including: mutual funds, group retirement and institutional asset management.
[2] Corporate and Other results are net of internal allocations to other divisions.
[3] Other Wealth includes variable and fixed annuities, single premium products sold in Asia and Manulife Bank.
[4] A portion of core earnings from Investment Division has been included in Wealth and Asset Management.

AUMA by line of business

Assets under management and administration as at December 31, 2015 were a record $935 billion, an increase of $244 billion, or 19% on a constant currency basis, compared with December 31, 2014. Excluding the net $118 billion from recent acquisitions and the Closed Block reinsurance transaction, the increase was 4%. We transferred $14.0 billion of invested assets to New York Life as part of the reinsurance ceded portion of the reinsurance transaction. These assets support 100% of the insurance contract liabilities. We also recorded a reinsurance receivable for the 60% of the block that was ceded and a reinsurance receivable for funds withheld for the 40% of the block that has been retained. The reinsurance receivables are not included in AUMA. The WAM portion of AUMA was $511 billion and increased $196 billion. The increase was driven by strong net inflows and contributions of $109 billion related to recent acquisitions.

As at December 31, (C$ millions)	2015	2014	2013
Wealth and Asset Management	**$ 510.7**	$ 314.5	$ 258.6
Insurance	**246.3**	213.8	178.2
Other Wealth	**177.8**	157.8	158.1
Corporate and Other	**0.4**	5.0	4.0
Total assets under management and administration	**$ 935.2**	$ 691.1	$ 598.9

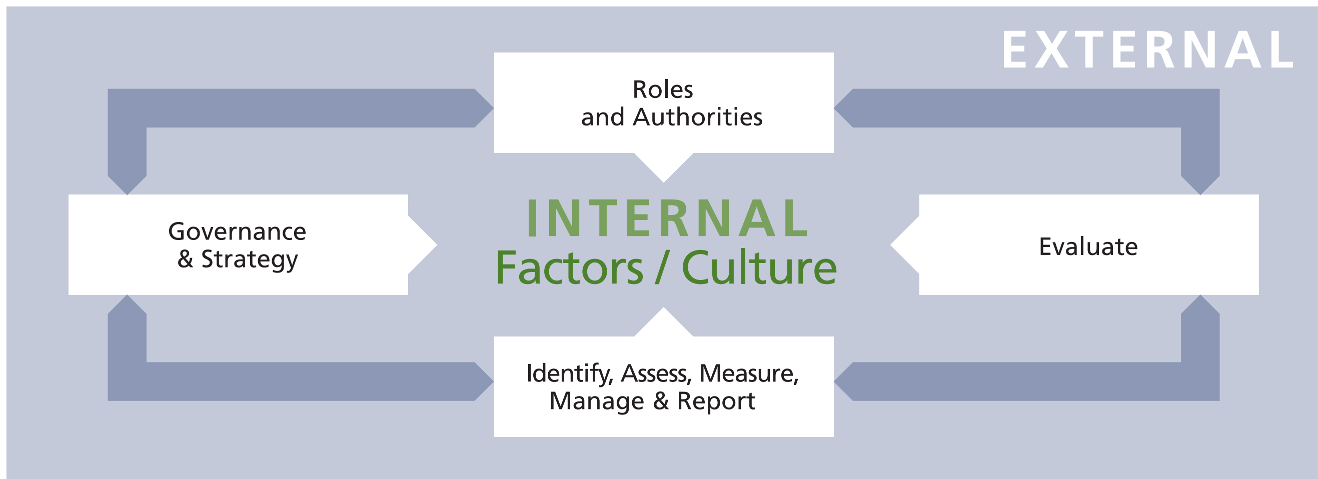
Risk Management

This section provides an overview of the Company's overall risk management approach and more specific strategies for our principal risks. A more detailed description of specific risks which may affect our results of operations or financial condition may be found in the "Risk Factors" section below.

Overview

All of the Company's activities involve elements of risk taking. The objective is to balance the Company's level of risk with its business, growth and profitability goals, in order to provide integrated customer solutions while achieving consistent and sustainable performance over the long-term that benefits the Company and its stakeholders.

Enterprise Risk Management ("ERM") Framework



Our ERM Framework provides a structured approach to implementing risk taking and risk management activities at an enterprise level supporting our long-term revenue, earnings and capital growth strategy. It is communicated through risk policies and standards which are intended to enable consistent design and execution of strategies across the organization. We have a common approach to managing all risks to which the Company is exposed, and a consistent evaluation of potential returns on contemplated business activities on a risk-adjusted basis. These policies and standards of practice cover:

- Assignment of accountability and delegation of authority for risk oversight and risk management.
- The types and levels of risk the Company seeks given its strategic plan and risk appetite.
- Risk identification, measurement, assessment and mitigation which enable effective management and monitoring of risk.
- Validation, back testing and independent oversight to confirm that the Company generated the risk profile it intended and the root cause analysis of any notable variation.

Our risk management practices are influenced and impacted by internal and external factors (such as economic conditions, political environments, technology and risk culture) which can significantly impact the levels and types of risks the Company might face in its pursuit to strategically optimize risk taking and risk management. Our ERM Framework incorporates relevant impacts and mitigating actions as appropriate.

A strong risk culture and a common approach to risk management are integral to Manulife's risk management practices. Management has the day-to-day responsibility to manage risk within risk appetite and has established risk management strategies and monitoring practices. This includes a "three lines of defence" governance model that segregates duties between risk taking activities, risk monitoring and oversight, and that establishes appropriate accountability for those who assume risk versus those who oversee risk.

The Company's first line of defence includes the Chief Executive Officer ("CEO") and Business Unit General Managers and/or functional unit heads. Businesses are ultimately accountable for their business results, the risks they assume to achieve those results, and for the day-to-day management of the risks and related controls.

The second line of defence is comprised of the Company's Chief Risk Officer ("CRO"), the Global Risk Management ("GRM") function, other global oversight functions and divisional chief risk officers and functions. Collectively, this group provides oversight of risk taking and risk mitigation activities across the enterprise. Risk oversight committees, through broad-based membership, also provide oversight of risk taking and risk mitigation activities.

The third line of defence is Internal Audit, which provides assurance that controls are effective and appropriate relative to the risk inherent in the business, and that risk mitigation programs and risk oversight functions are effective in managing risks.

Risk Culture

Manulife strives for a risk aware culture, where individuals and groups are encouraged, feel comfortable and are proactive in making transparent, balanced risk-return decisions that are in the long-term interests of the Company. Key areas of focus pertaining to risk culture include: aligning individual and Company objectives; identifying and escalating risks before they become significant issues; promoting a cooperative approach that enables appropriate risk taking; ensuring transparency in identifying, communicating and tracing risks; and systematically acknowledging and surfacing material risks.

Risk Governance

The Board of Directors oversees the Company's management of its principal risks. The Board also oversees the implementation of appropriate frameworks, processes and 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. It is supported by the Board Risk Committee which is responsible for assisting the Board in its oversight of the Company's management of its principal risks within risk appetite, the Board Audit Committee which 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, and the Management Resources and Compensation Committee which oversees the Company's global human resources strategy, policies, and programs.

The CEO is directly accountable to the Board of Directors for the results and operations of the Company and all risk taking activities and risk management practices required to achieve those results. The CEO is supported by the Company's 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.

GRM, 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. GRM seeks to ensure a consistent enterprise-wide assessment of risk, risk-based capital and risk-adjusted returns across all operations.

The ERC approves and oversees the execution of the Company's enterprise risk management program. The committee establishes and presents for approval to the Board the Company's risk appetite and enterprise-wide risk limits. The committee also monitors our overall risk profile, including key and emerging risks and risk management activities. As part of these activities, the ERC monitors material risk exposures, and endorses and reviews strategic risk management priorities. The ERC also reviews and assesses the impact of business strategies, opportunities and initiatives on our overall risk position. The ERC is supported by a number of oversight sub committees including: Credit Committee, Product Oversight Committee, Global Asset Liability Committee, Operational Risk Committee, and the Wealth and Asset Management Risk Committee.

Risk Appetite

Risk taking activities are managed within the Company's overall risk appetite, which defines the amount and types of risks the Company is willing to assume in pursuit of its objectives. It is comprised of three components: risk philosophy, risk appetite statements, and risk limits and tolerances.

When making decisions about risk taking and risk management, Manulife places priority on the following risk management objectives:

- To safeguard the commitments and expectations we have established with our shareholders, customers and creditors;
- To support the successful design and delivery of customer solutions;
- To prudently and effectively deploy the capital invested in the Company by our shareholders with appropriate risk/return profiles;
- To protect and/or enhance the Company's reputation and brand; and
- To maintain the Company's targeted financial strength rating.

At least annually, the Company establishes and/or reaffirms its risk appetite to ensure that risk appetite and the Company's strategy align. The risk appetite statements provide 'guideposts' on our appetite for identified risks, any conditions placed on associated risk taking and direction for where quantitative risk limits should be established. The Company's risk appetite statements are as follows:

- Manulife accepts a total level of risk that provides a very high level of confidence to meeting customer obligations while targeting an acceptable overall return to shareholders over time;
- The Company targets a credit rating amongst the strongest of its global peers;
- Manulife values innovation and encourages initiatives intended to strengthen the customers' experience and enhance competitive advantage;
- Capital market risks are acceptable when they are managed within specific risk limits and tolerances;
- The Company believes a balanced investment portfolio reduces overall risk and enhances returns; therefore it accepts credit and ALDA-related risks;
- The Company pursues insurance risks that add customer and shareholder value where there is competence to assess and monitor them, and for which appropriate compensation is received;
- Manulife accepts that operational risks are an inherent part of the business but will protect its business and customers' assets through cost-effective operational risk mitigation; and

- Manulife expects its officers and employees to act in accordance with the Company's values, ethics and standards; and to enhance its brand and reputation.

Risk tolerances and limits are established for risks within our risk classification framework that are inherent in our strategies in order to define the types and amount of risk the Company will assume. Risk tolerance levels are set for risks deemed to be most significant to the Company and are established in relation to economic capital, earnings at risk and regulatory capital required. The purpose of risk limits is to cascade the total Company risk appetite to a level that can be effectively managed. Manulife establishes standalone risk limits for risk categories to avoid excessive concentration in any individual risk category and manage the overall risk profile of the organization.

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. Divisions, business units and functional groups are responsible for identifying and assessing key and emerging risks on an ongoing basis. 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: 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 stress tests on earnings, regulatory capital ratios, economic capital, earnings-at-risk and liquidity that consider significant, but plausible events. 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 required 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

Under the direction of the CRO, GRM oversees a formal process for monitoring and reporting on all significant risks at the Company-wide level. Risk exposures are also discussed at various risk oversight committees, along with any exceptions or proposed remedial actions, 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 limits.

Our Chief Actuary presents the results of the Dynamic Capital Adequacy Test to the Board of Directors annually. Our Chief 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 Board Risk Committee annually.

Risk Control and Mitigation

Risk control activities are in place throughout the Company to seek to mitigate risks within established risk 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. Such controls are an integral part of day-to-day activity, business management and decision making.

GRM 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.

Emerging Risk

The identification and assessment of our external environment for emerging risks is an important aspect of our enterprise risk management framework, as these risks, although yet to materialize, could have the potential to have a material impact on our operations.

Our Emerging Risk Framework facilitates the ongoing identification, assessment and monitoring of emerging risks, and includes: maintaining a process that facilitates the ongoing discussion and evaluation of potential emerging risks with senior management and other functions; reviewing and validating emerging risks with the ERC; creating and executing on responses to each emerging risk based on prioritization; and monitoring and reporting on emerging risks on a regular basis.

General Macro-Economic Risk Factors

Our income and capital projections, and the determination of our policy liabilities, are based on, among other things, certain assumptions regarding expected returns from our public equity and ALDA investments. Actual returns are highly variable and can deviate significantly from our assumed returns. This can have a significant effect on our income and capital and, if the deviation leads to a change in our actuarial assumptions, can also have a significant effect on the valuation of our policy liabilities. In particular, the return from the oil and gas assets included in our ALDA portfolio fell far short of our return assumptions in 2015 given the current low oil and gas price environment.

In 2015, we reported investment-related experience charges of $530 million; $876 million related to the sharp decline in oil and gas prices offset by $346 million related to favourable experience in other asset classes and fixed-income reinvestment activities. In 2016, if oil and gas prices remain at current levels, we may not achieve $400 million of investment-related experience gains (the amount included in core earnings) and therefore, may not achieve our core earnings objective of $4 billion in 2016. We continue to believe that $400 million per year in investment-related experience is a reasonable estimate of our long-term through-the-cycle investment experience.[22]

Should oil and gas prices remain at current levels or continue to decline we expect, in addition to the direct impact on the value of our oil and gas assets, there may be negative impacts on our other investments (including our debt and real estate portfolio) which are difficult to estimate.

In addition, the U.S. Federal Reserve recently started raising rates, and rising interest rates could have a negative impact on the valuations of our real estate and other ALDA portfolio. The market value of our fixed income investments that are not backing liabilities will also be negatively affected by rising rates. Also, falling equity markets may require us to increase the amount of macro hedges to manage the overall equity exposure. The additional macro hedges would negatively impact us if markets were to subsequently rise. Falling equity markets may also cause us to revise the long-term return assumptions on public equities and some types of ALDA assets.

See also "Impact of Fair Value Accounting" above.

Core ROE was 9.2% in 2015, and given the deployments of capital to pursue long-term growth, along with the impact on equity of the strengthening U.S. dollar compared to the Canadian dollar, we no longer believe our Core ROE objective of 13% is achievable in 2016. We expect Core ROE to expand toward 13% or more over the medium term as we execute on our strategy and investment-related experience normalizes.[22]

The following sections describe the risk management strategies for each of our 6 principal risk categories: strategic risk, market risk, liquidity risk, credit risk, insurance risk and operational risk.

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.

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, Executive Committee, and the Executive Risk Committee;
- 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 executed through an enterprise-wide reputation risk policy that specifies the oversight responsibilities of the Board of Directors 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, and application of guiding principles in conducting all our business activities.

IFRS 7 Disclosures

The shaded text and tables in the following sections of this MD&A represent our disclosure on market and liquidity risk in accordance with IFRS 7, "Financial Instruments – Disclosures," and include a discussion on how we measure risk and our objectives, policies and methodologies for managing these risks. Therefore, the following shaded text and tables represent an integral part of our audited annual Consolidated Financial Statements for the years ended December 31, 2015 and December 31, 2014. The fact that certain text

[22] See "Caution regarding forward-looking statements" above.

and tables are considered an integral part of the Consolidated Financial Statements does not imply that the disclosures are of any greater importance than the sections not part of the disclosure. Accordingly, the "Risk Management" disclosure should be read in its entirety.

Market Risk

Market risk is the risk of loss resulting from market price volatility, interest rate change, credit and swap spread changes, and from adverse foreign currency rate movements. Market price volatility primarily relates to changes in prices of publicly traded equities and alternative long-duration assets.

Market Risk Management Strategy

Market risk is governed by the Global Asset Liability Committee which oversees the overall market and liquidity risk program. 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 limits.

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

Risk Management Strategy	Key Market Risk			
	Publicly Traded Equity Performance Risk	Interest Rate and Spread Risk	Alternative Long-Duration 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

To reduce publicly traded equity performance risk, we primarily use a variable annuity guarantee dynamic hedging strategy which is complemented by a general macro equity risk hedging strategy. Our strategies employed for variable annuity guarantee dynamic hedging and macro equity risk hedging expose the Company to additional risks. See "Risk Factors" below.

In general, to seek to reduce interest rate risk, we lengthen the duration of our fixed income investments in our liability and surplus segments by executing lengthening interest rate swaps.

Our foreign exchange risk management strategy is designed to hedge the sensitivity of our regulatory capital ratios to movements in foreign exchange rates. Our policy is to generally match the currency of our assets with the currency of the liabilities they support, and similarly, to generally match the currency of the assets in our shareholders' equity account to the currency of our required capital. Where assets and liabilities are not matched, we seek to stabilize our capital ratios through the use of forward contracts and currency swaps.

Product Design and Pricing Strategy

Our policies, standards and standards of practice with respect to product design and pricing are designed with the objective of aligning our product offerings with our risk-taking philosophy and risk appetite, and in particular, that incremental risk generated from new sales aligns with our strategic risk objectives and risk limits. 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 key features within our product offerings, including premiums and fee charges with a goal of meeting profit targets and staying within risk limits. Certain of our general fund adjustable benefit products have minimum rate guarantees. The rate guarantees for any particular policy are set at the time the policy is issued and governed by insurance regulation in each jurisdiction where the products are sold. The contractual provisions allow crediting rates to be re-set at pre-established intervals subject to the established minimum crediting rate guarantees. The Company may partially mitigate the interest rate exposure by setting new rates on new business and by adjusting rates on in-force business where permitted. In addition, the Company partially mitigates this interest rate risk through its asset liability management process, product design elements, and crediting rate strategies. New product initiatives, new reinsurance arrangements and material insurance underwriting initiatives must be reviewed and approved by the CRO or key individuals within risk management functions.

Hedging Strategies for Variable Annuity and Other Equity Risks

The Company's exposure to movement in public equity market values primarily arises from variable annuity guarantees and to a smaller extent from asset-based fees and general fund public equity holdings.

Dynamic hedging is the primary hedging strategy for variable annuity market risks. Dynamic hedging is employed for new variable annuity guarantees business when written or as soon as practical thereafter.

We seek to manage public equity risk arising from other sources (not dynamically hedged) through our macro equity risk hedging strategy. We seek to manage interest rate risk arising from variable annuity business not dynamically hedged within our asset liability management strategy.

Variable Annuity 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 fund performance (both public equity and bond funds) and interest rate movements. The objective of the variable annuity dynamic hedging strategy is to offset, as closely as possible, the change in the economic value of guarantees with the profit and loss from our hedge asset portfolio. The economic value of guarantees moves in close tandem, but not exactly, with our variable annuity guarantee policy liabilities, as it reflects best estimate liabilities and does not include any liability provisions for adverse deviations.

Our current variable annuity guarantee dynamic 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. Other derivative instruments (such as equity and interest rate options) are also utilized and we may consider the use of additional hedge instruments opportunistically in the future.

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;
- Credit spreads widen and actions are not taken to adjust accordingly;
- 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 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.

Macro Equity Risk Hedging Strategy

The objective of the macro equity risk hedging program is to maintain our overall earnings sensitivity to public equity market movements within our Board approved risk appetite limits. The macro equity risk hedging program is designed to hedge earnings sensitivity due to movements in public equity markets arising from all sources (outside of dynamically hedged exposures). Sources of equity market sensitivity addressed by the macro equity risk hedging program include and are not limited to:

- Residual equity and currency exposure from variable annuity guarantees not dynamically hedged;
- General fund equity holdings backing non-participating liabilities;
- Variable life insurance;
- Unhedged provisions for adverse deviation related to variable annuity guarantees dynamically hedged; and
- 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 ALDA investments opportunistically in the future.

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, ALDA performance and foreign exchange rate movements.

General fund product liabilities are segmented into groups with similar characteristics that are supported by specific asset segments. We seek to manage each segment 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.

Products which feature guaranteed liability cash flows (i.e. where the projected net flows are not materially dependent upon economic scenarios) are combined into a single asset segment by region, and managed to a target return investment strategy. The products backed by this asset segment include:

- Accumulation annuities (other than annuities with pass-through features), which are primarily short-to-medium-term obligations and offer interest rate guarantees for specified terms on single premiums. Withdrawals may or may not have market value adjustments.
- Payout annuities, which have no surrender options and include predictable and very long-dated obligations.
- Insurance products, with recurring premiums extending many years in the future, and which also include a significant component of very long-dated obligations.

We seek to manage the assets backing these long-dated benefits to achieve a target return sufficient to support the obligations over their lifetime, subject to established risk tolerances, by investing in a basket of diversified ALDA with the balance invested in fixed income. Utilizing ALDA to partially support these products is intended to enhance long-term investment returns and reduce aggregate risk through diversification. The size of the target ALDA portfolio is dependent upon the size and term of each segment's liability obligations. We seek to manage fixed income assets to a benchmark developed to minimize interest rate risk against the residual liabilities, and to achieve target returns/spreads required to preserve long-term interest rate investment assumptions used in liability pricing.

For insurance and annuity products where significant pass-through features exist, a total return strategy approach is used, generally combining fixed income and ALDA. ALDA may be included to enhance long-term investment returns and reduce aggregate risk through diversification. Target investment strategies are established using portfolio analysis techniques that seek to optimize long-term investment returns while considering the risks related to embedded product guarantees and policyholder withdrawal options, the impact of regulatory and economic capital requirements and management tolerances with respect to short-term income volatility and long-term tail risk exposure. Shorter duration liabilities such as fixed deferred annuities do not incorporate ALDA in their target asset mixes.

In our general fund, we seek to limit concentration risk associated with ALDA performance by investing in a diversified basket of assets including public and private equities, commercial real estate, infrastructure, timber, farmland real estate, and oil and gas assets. We further diversify risk by managing publicly traded equities and ALDA investments against established limits, including for industry type and corporate connection, commercial real estate type and geography, and timber and farmland 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, to generally match the currency of the assets in our shareholders' equity account to the currency of our required capital. Where assets and liabilities are not matched, we seek to stabilize our capital ratios through the use of forward contracts and currency swaps.

Risk exposure limits are 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.

Market Risk Sensitivities and Market Risk Exposure Measures

Variable Annuity and Segregated Fund Guarantees Sensitivities and Risk Exposure Measures

Guarantees on variable annuity 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 2016 to 2038.

We seek to mitigate a portion of the risks embedded in our retained (i.e. net of reinsurance) variable annuity and segregated fund guarantee business through the combination of our dynamic and macro hedging strategies (see "Publicly Traded Equity Performance Risk" below).

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

Variable annuity and segregated fund guarantees, net of reinsurance

	2015			2014		
As at December 31, (C$ millions)	Guarantee value	Fund value	Amount at risk[4],[5]	Guarantee value	Fund value	Amount at risk[4],[5]
Guaranteed minimum income benefit[1]	**$ 6,642**	**$ 4,909**	**$ 1,740**	$ 6,014	$ 4,846	$ 1,203
Guaranteed minimum withdrawal benefit	**73,232**	**65,090**	**9,231**	66,950	64,016	4,570
Guaranteed minimum accumulation benefit	**19,608**	**23,231**	**72**	14,514	18,670	23
Gross living benefits[2]	**99,482**	**93,230**	**11,043**	87,478	87,532	5,796
Gross death benefits[3]	**13,693**	**13,158**	**1,704**	12,178	11,036	1,312
Total gross of reinsurance and hedging	**113,175**	**106,388**	**12,747**	99,656	98,568	7,108
Living benefits reinsured	**5,795**	**4,312**	**1,486**	5,242	4,249	1,020
Death benefits reinsured	**3,874**	**3,501**	**682**	3,598	3,398	560
Total reinsured	**9,669**	**7,813**	**2,168**	8,840	7,647	1,580
Total, net of reinsurance	**$ 103,506**	**$ 98,575**	**$ 10,579**	$ 90,816	$ 90,921	$ 5,528

[1] Contracts with guaranteed long-term care benefits are included in this category.
[2] Where a policy includes both living and death benefits, the guarantee in excess of the living benefit is included in the death benefit category.
[3] Death benefits include stand-alone guarantees and guarantees in excess of living benefit guarantees where both death and living benefits are provided on a policy.
[4] 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 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 amount at risk is defined as the excess of the current annuitization income base over the current account value. For all guarantees, the amount at risk is floored at zero at the single contract level.
[5] The amount at risk net of reinsurance at December 31, 2015 was $10,579 million (December 31, 2014 – $5,528 million) of which: US$6,046 million (December 31, 2014 – US$3,616 million) was on our U.S. business, $1,564 million (December 31, 2014 – $912 million) was on our Canadian business, US$190 million (December 31, 2014 – US$99 million) was on our Japan business and US$277 million (December 31, 2014 – US$264 million) was related to Asia (other than Japan) and our run-off reinsurance business.

The policy liabilities established for variable annuity and segregated fund guarantees were $7,469 million at December 31, 2015 (December 31, 2014 – $4,862 million). For non-dynamically hedged business, policy liabilities increased from $684 million at December 31, 2014 to $840 million at December 31, 2015. For the dynamically hedged business, the policy liabilities increased from $4,178 million at December 31, 2014 to $6,629 million at December 31, 2015.

The increase in the total policy liabilities for variable annuity and segregated fund guarantees since December 31, 2014 is primarily due to the strengthening of the U.S. dollar relative to the Canadian dollar, unfavourable equity markets, and in the case of dynamically hedged business, is also due to the decrease in swap rates in Canada.

Investment categories for 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.

As at December 31, (C$ millions) Investment category	2015	2014
Equity funds	**$ 42,915**	$ 38,595
Balanced funds	**61,657**	57,778
Bond funds	**11,750**	10,674
Money market funds	**2,304**	1,957
Other fixed interest rate investments	**2,216**	1,770
Total	**$ 120,842**	$ 110,774

Caution Related to Sensitivities

In the sections that follow, we provide sensitivities and risk exposure measures for certain risks. These include sensitivities 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 activity and investment returns assumed in the determination of policy liabilities. 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, the 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 MCCSR ratio will be as indicated.

Publicly Traded Equity Performance Risk Sensitivities and Exposure Measures

As outlined above, the macro hedging strategy is designed to mitigate public equity risk arising from variable annuity guarantees not dynamically hedged and from other products and fees. In addition, 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 table below shows the potential impact on net income attributed to shareholders resulting from an immediate 10, 20 and 30% 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. If market values were to remain flat for an entire year, the potential impact would be roughly equivalent to an immediate decline in market values equal to the expected level of annual growth assumed in the valuation of policy liabilities. Further, if after market values dropped 10, 20 or 30% they continued to decline, remained flat, or grew more slowly than assumed in the valuation the potential impact on net income attributed to shareholders could be considerably more than shown. Refer to "Sensitivity of Earnings to Changes in Assumptions" for more information on the level of growth assumed and on the net income sensitivity to changes in these long-term assumptions. The potential impact is shown 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 guarantee 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.

This estimate assumes that the performance of the dynamic hedging program would not completely offset the gain/loss from the dynamically hedged variable annuity guarantee liabilities. It assumes that the hedge assets are based on the actual position at the period end, and that equity hedges in the dynamic program are rebalanced at 5% intervals. In addition, we assume that the macro hedge assets are rebalanced in line with market changes.

It is also important to note that these estimates are illustrative, and that the hedging program may underperform these estimates, particularly during periods of high realized volatility and/or periods where both interest rates and equity market movements are unfavourable.

Potential impact on net income attributed to shareholders arising from changes to public equity returns[1],[2],[3]

As at December 31, 2015 (C$ millions)	-30%	-20%	-10%	10%	20%	30%
Underlying sensitivity to net income attributed to shareholders[4]						
Variable annuity guarantees	**$ (5,180)**	**$ (3,140)**	**$ (1,410)**	**$ 1,080**	**$ 1,860**	**$ 2,420**
Asset based fees	**(470)**	**(310)**	**(160)**	**160**	**310**	**470**
General fund equity investments[5]	**(1,030)**	**(680)**	**(340)**	**330**	**670**	**1,020**
Total underlying sensitivity before hedging	**$ (6,680)**	**$ (4,130)**	**$ (1,910)**	**$ 1,570**	**$ 2,840**	**$ 3,910**
Impact of macro and dynamic hedge assets[6]	**$ 4,750**	**$ 2,920**	**$ 1,360**	**$ (1,240)**	**$ (2,250)**	**$ (3,090)**
Net potential impact on net income after impact of hedging	**$ (1,930)**	**$ (1,210)**	**$ (550)**	**$ 330**	**$ 590**	**$ 820**

As at December 31, 2014 (C$ millions)	-30%	-20%	-10%	10%	20%	30%
Underlying sensitivity to net income attributed to shareholders[4]						
Variable annuity guarantees	$ (4,480)	$ (2,570)	$ (1,100)	$ 740	$ 1,210	$ 1,510
Asset based fees	(360)	(240)	(120)	120	240	360
General fund equity investments[5]	(650)	(440)	(210)	220	450	680
Total underlying sensitivity before hedging	$ (5,490)	$ (3,250)	$ (1,430)	$ 1,080	$ 1,900	$ 2,550
Impact of macro and dynamic hedge assets[6]	$ 3,770	$ 2,150	$ 950	$ (850)	$ (1,460)	$ (1,940)
Net potential impact on net income after impact of hedging	$ (1,720)	$ (1,100)	$ (480)	$ 230	$ 440	$ 610

[1] See "Caution Related to Sensitivities" above.
[2] The tables above show the potential impact on net income attributed to shareholders resulting from an immediate 10, 20 and 30 % 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.
[3] Please refer to "Sensitivity of Earnings to Changes in Assumptions" for more information on the level of growth assumed and on the net income sensitivity to changes in these long-term assumptions.
[4] Defined as earnings sensitivity to a change in public equity markets including settlements on reinsurance contracts, but before the offset of hedge assets or other risk mitigants.
[5] 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 AFS public equities held in the Corporate and Other segment; or (iii) any gains or losses on public equity investments held in Manulife Bank. The participating policy funds are largely self-supporting and generate no material impact on net income attributed to shareholders as a result of changes in equity markets.
[6] Includes the impact of rebalancing equity hedges in the macro and dynamic hedging program. The impact of dynamic hedge rebalancing represents the impact of rebalancing equity hedges for dynamically hedged variable annuity guarantee best estimate liabilities at 5% intervals, but does not include any impact in respect of other sources of hedge ineffectiveness e.g., fund tracking, realized volatility and equity, interest rate correlations different from expected among other factors.

Changes in equity markets impact our available and required components of the MCCSR ratio. The following table shows the potential impact to MLI's MCCSR 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 MCCSR ratio arising from public equity returns different than the expected return for policy liability valuation[1],[2]

	Impact on MLI's MCCSR ratio					
Percentage points	-30%	-20%	-10%	10%	20%	30%
December 31, 2015	**(14)**	**(7)**	**(4)**	**1**	**3**	**7**
December 31, 2014	(20)	(10)	(4)	1	7	11

[1] See "Caution Related to Sensitivities" above. In addition, estimates exclude changes to the net actuarial gains/losses with respect to the Company's pension obligations as a result of changes in equity markets, as the impact on the quoted sensitivities is not considered to be material.
[2] The potential impact is shown assuming that the change in value of the hedge assets does not completely offset the change in the dynamically hedged variable annuity guarantee liabilities. The estimated amount that would not be completely offset relates to our practices of not hedging the provisions for adverse deviation and of rebalancing equity hedges for dynamically hedged variable annuity liabilities at 5% intervals.

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 strategies.

Notional value of shorted equity futures contracts

As at December 31, (C$ millions)	**2015**	2014
For variable annuity guarantee dynamic hedging strategy[1]	**$ 13,600**	$ 10,700
For macro equity risk hedging strategy	**5,600**	3,000
Total	**$ 19,200**	$ 13,700

[1] Reflects net short and long positions for exposures to similar indices.

The total equity futures notional amount increased by $5.5 billion during 2015 due to market movements, the acquisition of Standard Life, quarterly updates and some basis changes, as well as normal rebalancing to maintain our desired equity market risk position.

Interest Rate and Spread Risk Sensitivities and Exposure Measures

At December 31, 2015, we estimated the sensitivity of our net income attributed to shareholders to a 50 basis point parallel decline in interest rates to be a charge of $100 million, and to a 50 basis point increase in interest rates to be a benefit of $100 million.

The 50 basis point parallel change includes a change of 50 basis points 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, including embedded derivatives. For variable annuity guarantee liabilities that are dynamically hedged, it is assumed that interest rate hedges are rebalanced at 20 basis point intervals.

As the sensitivity to a 50 basis point change in interest rates includes any associated change in the applicable reinvestment scenarios, the impact of changes to interest rates for less than, or more than 50 basis points is unlikely to be linear. The reinvestment scenario changes tend to amplify the negative effects of a decrease in interest rates, and dampen the positive effects of interest rate increases. Furthermore, the actual impact on net income attributed to shareholders of non-parallel interest rate movements may differ from the estimated impact of parallel movements because our exposure to interest rate movements is not uniform across all durations.

The potential impact on net income attributed to shareholders does not allow for any future potential changes to the URR assumptions which are promulgated periodically by the Actuarial Standards Board ("ASB"), or other potential impacts of lower interest rate levels, for example, increased strain on the sale of new business or lower interest earned on our surplus assets. Interest rates are currently lower than they were when the current URR assumptions were promulgated, and therefore there may be a downward bias if the ASB were to update rates[23]. The impact also does not reflect potential management actions to realize gains or losses on AFS fixed income assets held in our surplus segment in order to partially offset changes in MLI's MCCSR ratio due to changes in interest rate levels. 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, 2015, the AFS fixed income assets held in the surplus segment were in a net after-tax unrealized gain position of $50 million (gross after-tax unrealized gains were $333 million and gross after-tax unrealized losses were $283 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 net income attributed to shareholders and MLI's MCCSR ratio of an immediate parallel change in interest rates relative to rates assumed in the valuation of policy liabilities[(1),(2),(3),(4),(5)]

	2015		2014	
As at December 31,	-50bp	+50bp	-50bp	+50bp
Net income attributed to shareholders (C$ millions)				
Excluding change in market value of AFS fixed income assets held in the surplus segment	**$ (100)**	**$ 100**	$ (100)	$ 100
From fair value changes in AFS fixed income assets held in surplus, if realized	**600**	**(600)**	500	(400)
MLI's MCCSR ratio (Percentage points)				
Before impact of change in market value of AFS fixed income assets held in the surplus segment[(5)]	**(6)**	**4**	(7)	5
From fair value changes in AFS fixed income assets held in surplus, if realized	**3**	**(3)**	3	(3)

(1) See "Caution Related to Sensitivities" above. In addition, estimates exclude changes to the net actuarial gains/losses with respect to the Company's pension obligations as a result of changes in interest rates, as the impact on the quoted sensitivities is not considered to be material.

(2) Includes guaranteed insurance and annuity products, including variable annuity contracts as well as adjustable benefit products where benefits are generally adjusted as interest rates and investment returns change, a portion of which have minimum credited rate guarantees. For adjustable benefit products subject to minimum rate guarantees, the sensitivities are based on the assumption that credited rates will be floored at the minimum.

(3) The amount of gain or loss that can be realized on AFS fixed income assets held in the surplus segment will depend on the aggregate amount of unrealized gain or loss.

(4) Sensitivities are based on projected asset and liability cash flows at the beginning of the quarter adjusted for the estimated impact of new business, investment markets and asset trading 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. Impact of realizing fair value changes in AFS fixed income is as of the end of the quarter.

(5) The impact on MLI's MCCSR ratio includes both the impact of lower earnings on available capital as well as the increase in required capital that results from a decline in interest rates. The potential increase in required capital accounted for almost all of the 6 points impact of a 50 basis point decline in interest rates on MLI's MCCSR ratio in the fourth quarter of 2015.

[23] See "Caution regarding forward-looking statements" above.

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[1],[2],[3],[4]

As at December 31, (C$ millions)	2015		2014	
	-50bp	+50bp	-50bp	+50bp
Corporate spreads	**$ (700)**	**$ 700**	$ (500)	$ 500

(1) See "Caution Related to Sensitivities" above.
(2) 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 off-balance sheet bond fund value arising from changes in credit spreads. The participating policy funds are largely self-supporting and generate no material impact on net income attributed to shareholders as a result of changes in corporate spreads.
(3) Sensitivities are based on projected asset and liability cash flows at the beginning of the fourth quarter adjusted for the estimated impact of new business, investment markets and asset trading 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.
(4) Corporate spreads are assumed to grade to the long-term average over 5 years.

As the sensitivity to a 50 basis point decline in corporate spreads includes the impact of a change in deterministic reinvestment scenarios where applicable, the impact of changes to corporate spreads for less than, or more than, the amounts indicated are unlikely to be linear.

The increased sensitivity to a 50 basis point change to corporate spreads from December 31, 2014 to December 31, 2015 is primarily due to the strengthening of the U.S. dollar relative to the Canadian dollar during the period which increased the sensitivity of our U.S. business as measured in Canadian dollars and investment-related activities.

Potential impact on net income attributed to shareholders arising from changes to swap spreads[1],[2],[3]

As at December 31, (C$ millions)	2015		2014	
	-20bp	+20bp	-20bp	+20bp
Swap spreads[2]	**$ 500**	**$ (500)**	$ 500	$ (500)

(1) See "Caution Related to Sensitivities" above.
(2) 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 off-balance sheet bond fund value arising from changes in credit spreads. The participating policy funds are largely self-supporting and generate no material impact on net income attributed to shareholders as a result of changes in swap spreads.
(3) Sensitivities are based on projected asset and liability cash flows at the beginning of the fourth quarter adjusted for the estimated impact of new business, investment markets and asset trading 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.

Alternative Long-Duration Asset Performance Risk Sensitivities and Exposure Measures

The following table shows the potential impact on net income attributed to shareholders resulting from an immediate 10% change in market values of ALDA followed by a return to the expected level of growth assumed in the valuation of policy liabilities. If market values were to remain flat for an entire year, the potential impact would be roughly equivalent to an immediate decline in market values equal to the expected level of annual growth assumed in the valuation of policy liabilities. Further, if after market values dropped 10% continued to decline, remained flat, or grew more slowly than assumed in the valuation of policy liabilities, the potential impact on net income attributed to shareholders could be considerably more than shown. Refer to "Sensitivity of Earnings to Changes in Assumptions" for more information on the level of growth assumed and on the net income sensitivity to changes in these long-term assumptions.

ALDA includes commercial real estate, timber and farmland real estate, oil and gas direct holdings, and private equities, some of which relate to oil and gas. At December 31, 2015, the fair value of our oil and gas related ALDA investments (direct holdings and private equities) was $1.7 billion.

Potential impact on net income attributed to shareholders arising from changes in ALDA returns[1],[2],[3],[4],[5]

As at December 31, (C$ millions)	**2015**		2014	
	-10%	10%	-10%	10%
Real estate, farmland and timber assets	**$ (1,200)**	**$ 1,200**	$ (1,000)	$ 1,000
Private equities and other alternative long-duration assets[6]	**(1,100)**	**1,100**	(1,000)	900
Alternative long-duration assets	**$ (2,300)**	**$ 2,300**	$ (2,000)	$ 1,900

[1] See "Caution Related to Sensitivities" above.
[2] This impact is calculated as at a point-in-time impact and does not include: (i) any potential impact on ALDA weightings; (ii) any gains or losses on ALDA held in the Corporate and Other segment; or (iii) any gains or losses on ALDA held in Manulife Bank.
[3] The participating policy funds are largely self-supporting and generate no material impact on net income attributed to shareholders as a result of changes in ALDA returns. For some classes of ALDA, where there is not an appropriate long-term benchmark available, the return assumptions used in valuation are not permitted by the Standards of Practice and CIA guidance to result in a lower reserve than an assumption based on a historical return benchmark for public equities in the same jurisdiction.
[4] Net income impact does not consider any impact of the market correction on assumed future return assumptions.
[5] Please refer to "Sensitivity of Earnings to Changes in Assumptions" for more information on the level of growth assumed and on the net income sensitivity to changes in these long-term assumptions.
[6] A 10% market decline in oil and gas holdings, direct and indirect, would result in an estimated $200 million reduction in net income attributed to shareholders.

The increased sensitivity from December 31, 2014 to December 31, 2015 is primarily due to the strengthening of the U.S. dollar relative to the Canadian dollar during the period which increased the sensitivity of our U.S. business as measured in Canadian dollars as well as the Standard Life acquisition.

Foreign Exchange Risk Sensitivities and Exposure Measures

The Company generally matches the currency of its assets with the currency of the insurance and investment contract liabilities they support, with the objective of mitigating risk of loss arising from currency exchange rate changes. As at December 31, 2015, the Company did not have a material unmatched currency exposure.

The following table shows the potential impact on core earnings of a 10% change in the Canadian dollar relative to our key operating currencies.

Potential impact on core earnings[1],[2]

As at December 31, 2015 (C$ millions)	**2015**		2014	
	+10% strengthening	-10% weakening	+10% strengthening	-10% weakening
10% change in the Canadian dollar relative to the U.S. dollar and the Hong Kong dollar	**$ (230)**	**$ 230**	$ (195)	$ 195
10% change in the Canadian dollar relative to the Japanese yen	**(50)**	**50**	(30)	30

[1] This item is a non-GAAP measure. See "Performance and Non-GAAP Measures" below.
[2] 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.

Liquidity 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 partially 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 $385.3 billion as at December 31, 2015 (2014 – $318.4 billion).

We seek to 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.

The following table outlines the maturity of the Company's significant financial liabilities.

Maturity of financial liabilities[1]

As at December 31, 2015	Less than 1 year	1 to 3 years	3 to 5 years	Over 5 years	Total
Long-term debt	$ 150	$ 415	$ 1,288	$ –	$ 1,853
Capital instruments	–	–	–	7,695	7,695
Derivatives	298	676	632	13,444	15,050
Deposits from Bank clients[2]	14,762	2,495	857	–	18,114
Lease obligations	162	214	131	549	1,056

[1] The amounts shown above are net of the related unamortized deferred issue costs.

[2] Carrying value and fair value of deposits from Bank clients as at December 31, 2015 was $18,114 million and $18,226 million, respectively (2014 – $18,384 million and $18,494 million, respectively). Fair value is determined by discounting contractual cash flows, using market interest rates currently offered for deposits with similar terms and conditions. All deposits from Bank clients were categorized in Level 2 of the fair value hierarchy (2014 – Level 2).

Liquidity Risk Exposure Measures

We seek to manage consolidated group operating and strategic liquidity levels against established minimums. We set minimum operating liquidity above the level of the highest one month's operating cash outflows projected over the next 12 months. 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 limit. 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 seeks to maintain sufficient liquidity to meet its standalone demands. Our strategic liquidity ratios are provided in the following table.

As at December 31, 2015 (C$ millions, unless otherwise stated)	**2015** Immediate Scenario	**2015** Ongoing Scenario	2014 Immediate Scenario	2014 Ongoing Scenario
Adjusted liquid assets	**$ 165,982**	**$ 169,063**	$ 141,385	$ 144,179
Adjusted policy liabilities	**36,026**	**44,640**	31,044	39,780
Liquidity ratio	**460%**	**379%**	455%	362%

Additionally, the market value of our derivative portfolio is periodically stress tested based on market shocks 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. Comprehensive liquidity stress testing measures, on an integrated basis, the impact of market shocks on derivative collateral and margin requirements, reserve requirements, reinsurance settlements, policyholder behaviour and the market value of eligible liquid assets. Stressed liquidity ratios are measured against established limits.

Manulife Bank has a standalone liquidity risk management policy framework. The framework includes stress testing, cash flow modeling, a funding plan and a contingency plan. The Bank has an established securitization infrastructure which enables the Bank to access a range of funding and liquidity sources. The Bank models extreme stress scenarios that demonstrate that the Bank has a sufficient pool of highly liquid money market securities and holdings of sovereign bonds, near-sovereign bonds and other liquid marketable securities, which when combined with the Bank's capacity to securitize residential mortgage assets provides sufficient liquidity to meet potential requirements under these stress scenarios.

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.

Credit Risk Management Strategy

Credit risk is governed by the Credit Risk Committee which oversees the overall credit risk management program. 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 public and private investment grade bonds and commercial mortgages. We have a program for selling Credit Default Swaps ("CDS") that employs a highly selective, diversified and conservative approach. CDS decisions follow the same underwriting standards as our cash bond portfolio and the addition of this asset class allows 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 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. Major credit decisions are approved by the Transaction and Portfolio Review Committee, a subcommittee of the Credit Risk Committee, and the largest decisions are approved by the CEO and, in certain cases, by 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 (generally 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. Reinsurance counterparty exposure is measured reflecting the level of ceded 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. Credit Risk Management 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.

Throughout recent periods of challenging credit conditions, our credit policies, procedures and investment strategies have remained fundamentally unchanged. We seek to actively manage credit exposure in our investment portfolio to reduce risk and minimize losses, and derivative counterparty exposure is managed proactively. Defaults and downgrade charges were generally in line with our historical average in 2015, however, we still expect volatility on a quarterly basis and losses could potentially rise above long-term expected levels.

Credit Risk Exposure Measures

As at December 31, 2015 and December 31, 2014, for every 50% that credit defaults over the next year exceed the rates provided for in policy liabilities, net income attributed to shareholders would be reduced by $57 million and $49 million in each year, respectively. Downgrades could also be higher than assumed in policy liabilities resulting in policy liability increases and a reduction in net income attributed to shareholders.

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

Net Impaired Assets and Loan Losses

As at December 31, 2015

(C$ millions, unless otherwise stated)	2015	2014
Net impaired fixed income assets	**$ 161**	$ 224
Net impaired fixed income assets as a % of total invested assets	**0.052%**	0.083%
Allowance for loan losses	**$ 101**	$ 109

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.

Insurance Risk Management Strategy

Insurance risk is governed by the Product Oversight Committee which oversees the overall insurance risk management program. The committee has established a broad framework for managing insurance risk under a set of policies, standards and guidelines, to ensure that our product offerings align with our risk taking philosophy and risk limits, 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 that sells products with insurance risks, we designate individual pricing officers who are accountable for all pricing activities, chief underwriters who are accountable for underwriting activities and chief claims risk managers who are accountable for claims activities. Both the pricing officer and the general manager of each business unit approve the design and pricing of each product, including key claims, policyholder behaviour, investment return and expense assumptions, in accordance with global policies and standards. Risk management functions provide additional oversight, review and approval of all product and pricing initiatives, as well as material underwriting initiatives. Actuarial functions provide oversight review and approval of policy liability valuation methods and assumptions. In addition, both risk and actuarial functions review and approve new reinsurance arrangements. We perform annual risk and compliance self-assessments of the product development, pricing, underwriting and claims 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 globally and insuring a wide range of unrelated risk events.

We seek to actively manage the Company's aggregate exposure to each of policyholder behaviour risk and claims risk against enterprise-wide economic capital and earnings at risk limits. Policyholder behaviour risk limits cover the combined risk arising from policy lapses and surrenders, withdrawals and other policyholder driven activity. The claims risk limits 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.

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.

Operational Risk Management Strategy

Our corporate governance practices, corporate values, and integrated enterprise-wide approach to managing risk set the foundation for mitigating operational risks. This base is further strengthened by internal controls and systems, compensation programs, and seeking to hire and 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 these compensation practices against peer companies.

We have an enterprise operational risk management framework that sets out the processes we use to identify, assess, manage, mitigate and report on significant operational risk exposures. Execution of our operational risk management strategy focuses on change management and working to achieve a cultural shift toward greater awareness and understanding of operational risk. We have an Operational Risk Committee, which is the main decision-making committee for all operational risk matters with oversight responsibility for operational risk strategy, management and governance. We have enterprise-wide risk management programs for specific operational risks that could materially impact our ability to do business or impact our reputation.

Legal and Regulatory Risk Management Strategy

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 allows significant issues to be escalated and proactively mitigated. Among these processes and business practices are: privacy (i.e. handling of personal and other confidential information), sales and marketing practices, sales compensation practices, asset management practices, fiduciary responsibilities, employment practices, underwriting and claims processing, product design, 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, Global Compliance and divisional compliance personnel periodically assess the effectiveness of the control environment. For further discussion of government regulation and legal proceedings, refer to "Government Regulation" in MFC's Annual Information Form dated February 18, 2016 and "Legal and Regulatory Proceedings" below.

Technology, Information Security and Business Continuity Risk Management Strategy

We have an enterprise-wide business continuity and disaster recovery program. This includes policies, plans and procedures that seek to minimize the impact of natural or man-made disasters, and is designed to ensure that key business functions can continue normal operations in the event of a major disruption. Each business unit is accountable for preparing and maintaining detailed business continuity plans and processes. 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. We maintain off-site backup facilities and failover capability designed to minimize downtime and accelerate system recovery.

Our Technology Risk Management Function provides strategy, direction, oversight and facilitates governance for all technology risk domain activities across Manulife. The scope of this Function includes: reducing information risk exposures by introducing a robust enterprise information risk management framework and supporting infrastructure for proactively identifying, managing, monitoring and reporting on critical information risk exposures; promoting transparency and informed decision-making by building and maintaining information risk profiles and risk dashboards for Global Information Services and Divisions aligned with enterprise and operational risk reporting; providing advisory services to Global Services and the Divisions around current and emerging technology risks and their impact to the Company's information risk profile; and reducing vendor information risk exposures by incorporating sound information risk management practices into sourcing, outsourcing and offshoring initiatives and programs.

The enterprise-wide information security program, which is overseen by the Chief Information Risk Officer, seeks to mitigate information security risks. This program establishes the information security framework for the Company, including governance, policies and standards, and appropriate controls to protect information and computer systems. We also have annual security awareness training sessions for all employees.

Many jurisdictions in which we operate are implementing more stringent privacy legislation. We have a global privacy program, which is overseen by the Chief Privacy Officer, that seeks to manage the risk of privacy breaches. This program includes policies and standards, ongoing monitoring of emerging privacy legislation, and a network of privacy officers. Processes have been established to provide guidance on handling personal information and for reporting privacy incidents and issues to appropriate management for response and resolution.

In addition, the Chief Information Risk Office, the Chief Privacy Officer, and their teams work closely on information security and privacy matters.

Human Resource Risk Management Strategy

We have a number of human resource policies, practices and programs in place that seek to manage the risks associated with attracting and retaining top talent, including recruiting programs at every level of the organization, training and development programs for our individual contributor and leadership segments globally, employee engagement surveys, and competitive compensation programs that are designed to attract, motivate and retain high-performing and high potential employees.

Model Risk Management Strategy

We have designated model risk management teams embedded in Divisions working closely with model owners and users that seek to manage model risk. 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 calculations and outputs.

Third-Party Risk Management Strategy

Our governance framework to address third-party risk includes appropriate policies (such as our Global Outsourcing Policy and Global Procurement Policy), standards and procedures, and monitoring of ongoing results and contractual compliance of third-party arrangements.

Project Risk Management Strategy

To seek to ensure that key projects are successfully implemented and monitored by management, we have a Global Project Management Centre of Expertise, which is responsible for establishing policies and standards for project management. Our policies, standards and practices are benchmarked against leading practices.

Environmental Risk Management Strategy

Our Environmental Risk 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. Our Environmental Risk Policy has been designed to monitor and manage environmental risk and to seek to achieve compliance with all applicable environmental laws and regulations for business units, affiliates and subsidiaries. Business unit environmental procedures, protocols and due diligence standards are in place to help identify, monitor and manage environmental issues in advance of acquisition of property, to help to mitigate environmental risks. Historical 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 help to 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.

Capital Management Framework

Manulife seeks to manage its capital with the objectives of:

- Operating with sufficient capital to be able to honour all commitments to its policyholders and creditors with a high degree of confidence;
- Retaining the ongoing confidence of regulators, policyholders, rating agencies, investors and other creditors in order to ensure access to capital markets; and
- Optimizing 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. The Policy is reviewed and approved by the Board of Directors annually and is integrated with the Company's risk and financial management frameworks. It establishes guidelines regarding the quantity and quality of capital, internal capital mobility, and proactive management of ongoing and future capital requirements.

Our capital management framework takes into account the requirements of the Company as a whole as well as the needs of each of our subsidiaries. Our capital adequacy assessment considers expectations of key external stakeholders such as regulators and rating agencies, results of sensitivity testing as well as a comparison to our peers. We set our internal capital targets above regulatory requirements, monitor against these internal targets and initiate actions appropriate to achieving our business objectives.

We also periodically assess the strength of our capital position under various stress scenarios. The annual Dynamic Capital Adequacy Testing ("DCAT") typically quantifies the financial impact of economic events arising from shocks in public equity and other markets, interest rates and credit, amongst others. Our 2015 DCAT results demonstrate that we would have sufficient assets, under the various adverse scenarios tested, to discharge our policy liabilities. This conclusion is also supported by a variety of other stress tests conducted by the Company.

We also use an Economic Capital ("EC") framework to assess the level of capital adequacy. This framework represents our internal view of the level of required capital and available capital. The EC framework is a key component of the Own Risk and Solvency Assessment ("ORSA") process, which ties together our risk management, strategic planning and capital management practices to confirm that our capital levels continue to be adequate from an economic perspective.

We integrate capital management 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.

In order to mitigate the impact of currency movements on the consolidated capital ratios, the currency mix of assets supporting capital is managed in relation to the Company's global capital requirements. As a result, both available and required capital increase (decrease) 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.

Capital and Funding Activities

On January 30, 2015, the Company completed its purchase of Standard Life for cash consideration of $4.0 billion and the Company's outstanding subscription receipts were automatically exchanged on a one-for-one basis for 105,647,334 MFC common shares with a stated value of approximately $2.2 billion. The existing subordinated debt of the acquired Standard Life Assurance Company became part of Manulife's consolidated capital at a stated value of $425 million.

In addition, during 2015 we raised $2.1 billion of capital and $2.6 billion of securities matured or were redeemed, including $2.25 billion of senior debt.

- We issued a total of $2.1 billion of MLI subordinated debentures during the year: $750 million (2.10%) on March 10, 2015, $350 million (2.389%) on June 1, 2015 and $1.0 billion (3.181%) on November 20, 2015.
- We redeemed $350 million (4.10%) of MFC preferred shares on June 19, 2015.
- In 2015, $1.45 billion of senior debt issued in Canadian dollars matured.
- In 2015, US$0.6 billion of senior debt issued in U.S. dollars matured.

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)	2015	2014	2013
Non-controlling interests	**$ 592**	$ 464	$ 376
Participating policyholders' equity	**187**	156	134
Preferred shares	**2,693**	2,693	2,693
Common shareholders' equity	**38,466**	30,613	25,830
Total equity[1]	**41,938**	33,926	29,033
Accumulated other comprehensive loss on cash flow hedges	**(264)**	(211)	(84)
Total equity excluding accumulated other comprehensive loss on cash flow hedges	**42,202**	34,137	29,117
Liabilities for preferred shares and qualifying capital instruments	**7,695**	5,426	4,385
Total capital	**$ 49,897**	$ 39,563	$ 33,502

(1) Total equity includes unrealized gains and losses on AFS debt securities and AFS equities, net of taxes. The unrealized gain or loss on AFS debt securities are excluded from the OSFI definition of regulatory capital. As at December 31, 2015, the unrealized loss on AFS debt securities, net of taxes, was $81 million (2014 – $405 million unrealized gain).

The "Total capital" referred to in this section does not include $1.9 billion (2014 – $3.9 billion, 2013 – $4.8 billion) of senior indebtedness issued by MFC because this form of financing does not meet OSFI's definition of regulatory capital at the MFC level. The Company has down-streamed the proceeds from this financing into operating entities in a form that qualifies as regulatory capital at the subsidiary level. Total capital in 2014 also does not include liabilities for subscription receipts issued in 2014 as part of the financing of the Standard Life transaction.

Total capital was $49.9 billion as at December 31, 2015 compared with $39.6 billion as at December 31, 2014, an increase of $10.3 billion. The increase included net income attributed to shareholders of $2.2 billion, favourable impacts of foreign currency rates of $5.3 billion, the Standard Life acquisition ($2.2 billion issuance of MFC common shares and assumption of $0.4 billion of outstanding Standard Life debt), and net capital issued of $1.75 billion (excludes $2.25 billion redemption of senior debt as it is not in the definition of capital), partially offset by cash dividends of $1.4 billion over the period.

Financial Leverage Ratio

Our financial leverage ratio was 23.8% at December 31, 2015 compared with 27.8% at the end of 2014. The improvement over the year reflected the strengthening of the U.S. dollar compared with the Canadian dollar, the conversion of subscription receipts into common equity following the closing of the Standard Life transaction, and an increase in retained earnings.

Common Shareholder Dividends

The declaration and payment of shareholder dividends and the amount thereof are at the discretion of the Board of Directors and depend upon the results of operations, financial condition, cash requirements and future prospects of the Company, taking into account regulatory restrictions on the payment of shareholder dividends as well as other factors deemed relevant by the Board of Directors.

On May 7, 2015, the Company announced an increase of 10%, or 1.5 cents per share, to the quarterly shareholders' dividend resulting in a quarterly dividend of 17 cents per share on the common shares of MFC.

On February 11, 2016, the Company announced that the Board of Directors approved an increase of 9% or 1.5 cents per share to the quarterly shareholders' dividend, resulting in a quarterly dividend of 18.5 cents per share on the common shares of MFC, payable on and after March 21, 2016.

The Company offers a Dividend Reinvestment Program ("DRIP") whereby shareholders may elect to automatically reinvest dividends in the form of MFC common shares instead of receiving cash. The offering of the program and its terms of execution are subject to the Board of Directors' discretion. In 2015, common shares in connection with DRIP were purchased on the open market with no applicable discount.

Regulatory Capital Position[24]

MFC monitors and manages its consolidated capital in compliance with the applicable OSFI guideline. Under this regime our consolidated available capital is measured against a required amount of risk capital determined in accordance with the guideline. MFC's capital position remains in excess of our internal targets.

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

Our MCCSR ratio for MLI was 223% at December 31, 2015, compared with 248% at the end of 2014, and is well in excess of OSFI's Supervisory Target ratio of 150% and Regulatory Minimum ratio of 120%. Reported earnings were offset by funding MFC shareholder dividends and funding costs, as well as increases in required capital. We consider MLI's MCCSR ratio to be strong in view of our materially reduced risk sensitivities and the lack of explicit capital credit for the hedging of our variable annuity liabilities.

24 The "Risk Factors" section of the MD&A outlines a number of regulatory capital risks.

The 2016 MCCSR guideline, which took effect on January 1, 2016, does not contain changes that would have material negative implications for our regulatory capital ratio. OSFI will be implementing a revised approach to the regulatory capital framework in Canada, excluding required capital for segregated fund guarantees, in 2018. OSFI has stated they believe, in aggregate, that the Canadian life insurance industry has adequate financial resources (total assets) for its current risks.

As at December 31, 2015, MLI's non-consolidated operations and subsidiaries all maintained capital levels in excess of local requirements.

Remittability of Capital

As part of its capital management, Manulife promotes internal capital mobility so that Manulife's parent company has access to funds to meet its obligations and to optimize the use of excess capital. Cash remittance is defined as the cash remitted or payable to the Group from operating subsidiaries and excess capital generated by stand-alone Canadian operations. It is one of the key performance indicators used by management to evaluate our financial flexibility.

The total company cash remittance in 2015 was $2.2 billion (2014 – $2.4 billion).

Credit Ratings

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

During 2015, S&P, Moody's and A.M. Best maintained their assigned ratings of MFC and its primary insurance operation companies.

On December 17, 2015, following the publication and application of its new rating methodology, DBRS assigned a new Financial Strength Rating of AA (low) to MLI, and confirmed its Issuer Rating and ratings of its debt and capital instruments. DBRS withdrew the Claims Paying Ability rating of MLI, as it was replaced by the newly assigned Financial Strength Rating. At the same time, DBRS assigned a new Issuer Rating of A to MFC and downgraded the ratings of MFC's debt and capital instruments by one-notch each.

On August 19, 2015, following the application of its newly updated insurance notching criteria, Fitch affirmed MFC's and its primary insurance related operating subsidiaries' ratings. At the same time, Fitch downgraded the ratings on MFC's preferred shares by one-notch to BBB- and upgraded the ratings on MLI's subordinated debt by one-notch to A.

The following table summarizes the financial strength and claims paying ability ratings of MLI and certain of its subsidiaries as at February 12, 2016.

Financial Strength Ratings

	S&P	Moody's	DBRS	Fitch	A.M. Best
The Manufacturers Life Insurance Company	**AA-**	**A1**	**AA(Low)**	**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**

As at February 12, 2016, S&P, Moody's, DBRS, Fitch, and A.M. Best had a stable outlook on these ratings.

Critical Accounting and Actuarial Policies

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, assessment of relationships with other entities for consolidation, 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, valuation and impairment of goodwill and intangible assets and the measurement and disclosure of contingent liabilities 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 (Insurance and Investment Contract Liabilities)

Policy liabilities for IFRS are valued in Canada under standards established by the Actuarial Standards Board. These standards are designed to ensure we establish an appropriate liability on the Consolidated Statements of Financial Position to cover future obligations to all our policyholders. 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 and premium persistency, operating expenses, certain taxes (other than income taxes and includes temporary tax timing and permanent tax rate differences on the cash flows available to satisfy policy obligations) 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. We make assumptions about future mortality improvements using historical 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 for the determination of policy liabilities net of reinsurance. Actual mortality experience is monitored against these assumptions separately for each business. The results are favourable where mortality rates are lower than assumed for life insurance and where mortality rates are higher than assumed for payout annuities. Overall 2015 experience was unfavourable (2014 – favourable) when compared with our assumptions. Changes to future expected mortality assumptions in the policy liabilities in 2015 resulted in an increase (2014 – decrease) in net 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 changes. 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 2015 experience was unfavourable (2014 – unfavourable) when compared with our assumptions. Changes to future expected morbidity assumptions in the policy liabilities in 2015 resulted in an increase (2014 – decrease) in net policy liabilities.

Property and Casualty
Our Property and Casualty Reinsurance business insures against losses from natural and human disasters and accidental events. Policy liabilities 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. Overall 2015 claims loss experience was in line with expectations (2014 – favourable) with respect to the provisions that were established.

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 2015 experience was unfavourable (2014 – unfavourable) when compared with our assumptions. Changes to future expected policy termination assumptions in the policy liabilities in 2015 resulted in an increase in net policy liabilities.

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 2015 were unfavourable (2014 – 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 2015, actual investment returns were unfavourable (2014 – favourable) when compared with our assumptions. The impact of investment experience, excluding segregated funds, was unfavourable (2014 – favourable) when compared with our assumptions primarily due to unfavourable oil and gas returns, the impact of changes in risk free interest rates and unfavourable private equity returns, partially offset by decreases in swap spreads, gains from asset trading, increases in corporate spreads, favourable real estate returns and favourable credit experience.

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. We seek to mitigate this risk through a dynamic hedging strategy. In 2015, for the business that is dynamically hedged, segregated fund guarantee experience on residual, non-dynamically hedged market risks was unfavourable (2014 – unfavourable). For the business that is not dynamically hedged, experience on segregated fund guarantees due to changes in the market value of assets under management was also unfavourable (2014 – unfavourable). This excludes the experience on the macro equity hedges.

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.

Margins for interest rate risk are included by testing a number of scenarios of future interest rates. The margin can be established by testing a limited number of scenarios, some of which are prescribed by Canadian Actuarial Standards of Practice, and determining the liability based on the worst outcome. Alternatively the margin can be set by testing many scenarios, which are developed according to actuarial guidance. Under this approach the liability would be the average of the outcomes above a percentile in the range prescribed by the Canadian Actuarial Standards of Practice.

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)	2015	2014
Best estimate actuarial liability	**$ 197,869**	$ 160,990
Provision for adverse deviation		
Insurance risks (mortality/morbidity)	**$ 15,087**	$ 12,234
Policyholder behaviour (lapse/surrender/premium persistency)	**4,204**	3,619
Expenses	**2,498**	1,981
Investment risks (non-credit)	**27,793**	22,430
Investment risks (credit)	**1,715**	1,315
Segregated funds guarantees	**2,565**	2,106
Total provision for adverse deviation ("PfAD")[1]	**53,862**	43,685
Segregated funds – additional margins	**10,656**	7,877
Total of PfAD and additional segregated fund margins	**$ 64,518**	$ 51,562

[1] Reported net actuarial liabilities (excluding the $6,354 million reinsurance asset related to the Company's in-force participating life insurance closed block that is retained on a funds withheld basis as part of the NYL transaction) as at December 31, 2015 of $251,731 million (2014 – $204,675 million) are composed of $197,869 million (2014 – $160,990 million) of best estimate actuarial liability and $53,862 million (2014 – $43,685 million) of PfAD.

The change in the PfAD from period to period is impacted by changes in liability and asset composition, by currency and interest rate movements and by material changes in valuation assumptions. The overall increase in PfAD for insurance risks and policyholder behaviour was primarily due to the appreciation of the U.S. dollar relative to the Canadian dollar and the acquisition of Standard Life. The overall increase in PfAD for non-credit investment risks was primarily due to the appreciation of the U.S. dollar relative to the Canadian dollar, the acquisition of Standard Life and our annual review of actuarial methods and assumptions. The overall increase in the segregated funds additional margins was primarily due to the acquisition of Standard Life and the appreciation of the U.S. dollar 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 net income attributed to shareholders. The sensitivity of net income attributed to shareholders 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 assumptions 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.

Potential impact on net income attributed to shareholders arising from changes to non-economic assumptions[1]

As at December 31, (C$ millions)	Decrease in net income attributed to shareholders 2015	2014
Policy related assumptions		
2% adverse change in future mortality rates[2],[4]		
Products where an increase in rates increases insurance contract liabilities	**$ (400)**	$ (300)
Products where a decrease in rates increases insurance contract liabilities	**(500)**	(400)
5% adverse change in future morbidity rates[3],[4]	**(3,000)**	(2,400)
10% adverse change in future termination rates[4]	**(2,000)**	(1,500)
5% increase in future expense levels	**(400)**	(400)

[1] The participating policy funds are largely self-supporting and generate no material impact on net income attributed to shareholders as a result of changes in non-economic assumptions. Experience gains or losses would generally result in changes to future dividends, with no direct impact to shareholders.

[2] 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.

[3] 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.

[4] 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.

The increase in morbidity sensitivity between December 31, 2014 and December 31, 2015 is primarily due to the strengthening of the U.S. dollar compared to the Canadian dollar during the period which increased the sensitivity of our U.S business as measured in Canadian dollars. Most of our morbidity sensitivity arises from our U.S. dollar denominated liabilities. The increase in lapse sensitivity between December 31, 2014 and December 31, 2015 is largely due to the strengthening of the U.S. dollar compared to the Canadian dollar during the period which increased the sensitivity of our U.S. business as measured in Canadian dollars and the Standard Life acquisition.

Potential impact on net income attributed to shareholders arising from changes to asset related assumptions supporting actuarial liabilities

As at (C$ millions)	Increase (decrease) in after-tax income: December 31, 2015 Increase	December 31, 2015 Decrease	December 31,2014 Increase	December 31,2014 Decrease
Asset related assumptions updated periodically in valuation basis changes				
100 basis point change in future annual returns for public equities[1]	**$ 600**	**$ (600)**	$ 300	$ (300)
100 basis point change in future annual returns for ALDA[2]	**3,000**	**(3,400)**	2,500	(3,100)
100 basis point change in equity volatility assumption for stochastic segregated fund modelling[3]	**(300)**	**300**	(200)	200

[1] The sensitivity to public equity returns above 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 a $200 million increase (December 31, 2014 – $100 million increase). For a 100 basis point decrease in expected growth rates, the impact from segregated fund guarantee reserves is a $200 million decrease (December 31, 2014 – $100 million decrease). Expected long-term annual market growth assumptions for public equities pre-dividends for key markets are based on long-term historical observed experience and compliance with actuarial standards. The pre-dividend growth rates for returns in the major markets used in the stochastic valuation models for valuing segregated fund guarantees are 7.6% per annum in Canada, 7.6% per annum in the U.S. and 5.2% per annum in Japan. Growth assumptions for European equity funds are market-specific and vary between 5.8% and 7.85%.

[2] ALDA include commercial real estate, timber and farmland real estate, direct oil and gas properties, and private equities, some of which relate to oil and gas. Expected long-term return assumptions are set in accordance with the Standards of Practice for the valuation of insurance contract liabilities and guidance published by the CIA. The guidance requires that the investment return assumption for these assets should not be higher than the historical long-term average returns of an appropriate broad based index. Where such experience is not available, investment return assumptions should not result in a lower reserve than an assumption based on a historical return benchmark for public equities in the same jurisdiction. Annual return assumptions for ALDA include market growth rates and annual income such as rent, production proceeds, dividends, etc.

[3] Volatility assumptions for public equities are based on long-term historical observed experience and compliance with actuarial standards. The resulting volatility assumptions are 17.15% per annum in Canada and 17.15% per annum in the U.S. for large cap public equities, and 19% per annum in Japan. For European equity funds, the volatility varies between 16.25% and 18.4%.

The increase in sensitivity to a change in future annual public equity returns from December 31, 2014 to December 31, 2015 is primarily due to the Standard Life acquisition and the strengthening of the U.S. dollar relative to the Canadian dollar during the period which increased the sensitivity of our U.S. business as measured in Canadian dollars. The increase in sensitivity to a change in future annual ALDA returns from December 31, 2014 to December 31, 2015 is primarily due to the strengthening of the U.S. dollar relative to the Canadian dollar during the period and the Standard Life, partially offset by the impact of the increase in risk free rates in the U.S. during the period, increasing the rate at which funds can be reinvested.

Review of Actuarial Methods and Assumptions

A comprehensive review of actuarial methods and assumptions is performed annually. The review is designed to reduce the Company's exposure to uncertainty by ensuring assumptions for both asset related and liability related risks remain appropriate. This is accomplished by monitoring experience and selecting assumptions which represent a current best estimate view of expected future experience, and margins that are appropriate for the risks assumed. While the assumptions selected represent the Company's current best estimates and assessment of risk, the ongoing monitoring of experience and changes in the economic environment are likely to result in future changes to the valuation assumptions, which could be material.

The 2015 full year review of actuarial methods and assumptions resulted in an increase in insurance and investment contract liabilities of $558 million, net of reinsurance, and a decrease in net income attributed to shareholders of $451 million.

For the year ended December 31, 2015 (C$ millions)	Change in gross insurance and investment contract liabilities	Change in insurance and investment contract liabilities net of reinsurance	Change in net income attributed to shareholders
Assumptions:			
Mortality and morbidity updates	**$ (191)**	**$ (146)**	**$ 168**
Lapses and policyholder behaviour	**953**	**571**	**(446)**
Other updates	**(584)**	**133**	**(173)**
Net impact	**178**	**558**	**(451)**

Updates to mortality and morbidity

Assumptions were updated across several business units to reflect recent experience. In Japan, a reduction to the margin for adverse deviations applied to the best estimate morbidity assumptions for certain medical insurance products resulted in a $237 million increase in net income attributed to shareholders. The reduction in this margin is a result of emerging experience being aligned with expectations leading to a decrease in the level of conservatism required for this assumption.

Other mortality and morbidity updates led to a $69 million decrease in net income attributed to shareholders. This included a refinement to the modelling of mortality improvement on a portion of the Canadian retail insurance business that led to an increase to net income attributed to shareholders. This was more than offset by a review of the Company mortality assumption for some of the JH Annuities business and a number of other updates across several business units.

Updates to lapses and policyholder behaviour

Lapse rates were updated across several business units to reflect recent experience. Lapse rates for JH universal life and variable universal life products were updated which led to a net $235 million decrease in net income attributed to shareholders. Lapse rates for the low cost universal life products were reduced which led to a decrease in net income attributed to shareholders; this was partially offset by a reduction in lapse rates for the variable universal life products which led to an increase in net income attributed to shareholders.

Other updates to lapse and policyholder behavior assumptions were made across several product lines including term and whole life insurance products in Japan, which led to a $211 million decrease in net income attributed to shareholders.

Other updates

The Company implemented a refinement to the modelling of asset and liability cash flows associated with inflation linked benefit options in the long-term care business, which led to a $264 million increase in net income attributed to shareholders.

The Company implemented a refinement to the projection of the term policy conversion options in Canadian retail insurance which led to a $200 million decrease in net income attributed to shareholders.

Other model refinements related to the projection of both asset and liability cash flows across several business units led to a $237 million decrease in net income attributed to shareholders. This included several items such as refinements to the modelling of reinsurance contracts in North America, updates to the future investment expense assumptions, updates to the future ALDA investment return assumptions and updates to certain future expense assumptions in JH Insurance.

Change in net insurance contract liabilities

The change in net insurance contract liabilities can be attributed to several sources: new business, acquisitions, in-force movement and currency impact. Changes in net 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 net insurance contract liabilities by business segment are shown below:

2015 Net Insurance Contract Liability Movement Analysis

For the year ended December 31, 2015	Asia Division	Canadian Division	U.S Division	Corporate and Other	Total
Balance, January 1	**$33,662**	**$54,488**	**$123,189**	**$(351)**	**$210,988**
Acquisitions[1]	**–**	**16,411**	**(13,375)**	**–**	**3,036**
New business[2]	**1,044**	**104**	**1,057**	**–**	**2,205**
In-force movement	**5,173**	**9**	**382**	**135**	**5,699**
Changes in methods and assumptions	**46**	**452**	**279**	**(219)**	**558**
Currency impact	**6,061**	**9**	**23,145**	**(68)**	**29,147**
Balance, December 31	**$45,986**	**$71,473**	**$134,677**	**$(503)**	**$251,633**

[1] In 2015, the Company acquired Standard Life and NYL assumed the Company's in-force participating life insurance closed block through net 60% reinsurance agreements. The U.S. division acquisition amount of $(13,375 million) consists of $(5,785 million) premium ceded and $(7,590 million) reinsurance asset. See note 3 of the financial statements.

[2] In 2015, the $642 million increase reported as the change in insurance contract liabilities and change in reinsurance assets on the Consolidated Statements of Income primarily consists of changes due to normal in-force movement, new policies and changes in methods and assumptions, including the $(7,590 million) change in reinsurance asset related to the NYL reinsurance. These four items net to an increase of $873 million, of which $666 million is included in the income statement increase in insurance contract liabilities and change in reinsurance assets, and $207 million is included in net claims and benefits. The Consolidated Statements of Income change in insurance contract liabilities also includes the change in embedded derivatives associated with insurance contracts.

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, are 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 net in-force movement over the year was an increase of $5,699 million, reflecting expected growth in insurance contract liabilities in all three divisions. This was largely offset in the U.S. and Canada by changes in interest rates and the resulting impact on the fair value of assets which back those policy liabilities.

The increase of $558 million from changes in methods and assumptions resulted in a decrease in pre-tax earnings.

Of the $7,905 million net increase in insurance contract liabilities related to new business and in-force movement, $7,674 million was an increase in actuarial liabilities. The remaining amount was an increase of $231 million in other insurance contract liabilities.

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

2014 Insurance Contract Liability Movement Analysis

For the year ended December 31, 2014	Asia Division	Canadian Division	U.S. Division	Corporate and Other	Total
Balance, January 1	$ 27,447	$ 49,103	$ 99,342	$ (93)	$ 175,799
New business[1]	134	(43)	716	–	807
In-force movement	5,329	5,610	12,905	(256)	23,588
Changes in methods and assumptions	(85)	(188)	511	20	258
Currency impact	837	6	9,715	(22)	10,536
Balance, December 31	$ 33,662	$ 54,488	$ 123,189	$ (351)	$ 210,988

[1] In 2014 the $24,691 million increase reported as the change in insurance contract liabilities and change in reinsurance assets on the Consolidated Statements of Income primarily consists of changes due to normal in-force movement, new policies and changes in methods and assumptions. These three items in the net insurance contract liabilities column of this table net to a increase of $24,653 million, of which $24,426 million is included in the income statement increase in insurance contract liabilities and change in reinsurance assets, and $227 million is included in net claims and benefits. The Consolidated Statements of Income change in insurance contract liabilities also includes the change in embedded derivatives associated with insurance contracts.

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, are 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 net in-force movement over the year was an increase of $23,588 million. A material part of the in-force movement increase was due to the decrease in interest rates and the resulting impact on the fair value of assets which back those policy liabilities.

The increase of $258 million from changes in methods and assumptions resulted in a decrease in pre-tax earnings.

Of the $24,395 million net increase in insurance contract liabilities related to new business and in-force movement, $24,186 million was an increase in actuarial liabilities. The remaining amount was an increase of $209 million in other insurance contract liabilities.

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

Consolidation

The Company is required to consolidate the financial position and results of entities it controls. Control exists when the Company:

- has the power to govern the financial and operating policies of the entity;
- is exposed to a significant portion of the entity's variable returns; and
- is able to use its power to influence variable returns from the entity.

The Company uses the same principles to assess control over any entity it is involved with. In evaluating control, potential factors assessed include the effects of:

- substantive potential voting rights that are currently exercisable or convertible;
- contractual management relationships with the entity;
- rights and obligations resulting from policyholders to manage investments on their behalf; and
- the effect of any legal or contractual restraints on the Company from using its power to affect its variable returns from the entity.

An assessment of control is based on arrangements in place and the assessed risk exposures at inception. Initial evaluations are reconsidered at a later date if:

- the Company acquires additional interests in the entity or its interests in an entity are diluted;
- the contractual arrangements of the entity are amended such that the Company's involvement with the entity changes; or
- the Company's ability to use its power to affect its variable returns from the entity changes.

Subsidiaries are consolidated from the date on which control is obtained by 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 to the 2015 Consolidated Financial Statements for a description of the methods used in determining fair values. 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 including discounted cash flow methodologies, matrix pricing, consensus pricing services, 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, volatilities 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 assets, or the price ultimately realized for these assets, depends upon the demand and liquidity in the market and increases the use of judgment in determining the estimated fair value of certain assets.

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 net income attributed to shareholders. Securities are reviewed on a regular basis and any fair value decrement is transferred out of Accumulated Other Comprehensive Income ("AOCI") and recorded in net income attributed to shareholders when it is deemed probable that the Company will not be able to 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 2015 Consolidated Financial Statements.

Derivative Financial Instruments

The Company uses derivative financial instruments ("derivatives") including swaps, forwards and futures agreements, and options to help manage current and anticipated exposures to changes in interest rates, foreign exchange rates, commodity prices and equity market prices, and to replicate permissible investments. Refer to note 5 to the 2015 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. 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. If it was determined that hedge accounting designations were not appropriately applied, reported net income attributed to shareholders could be materially affected.

Employee Future Benefits

The Company maintains pension plans, both defined contribution and defined benefit, and other post-employment plans for eligible employees and agents. These plans include broad-based pension plans for employees that are typically funded, as well as supplemental non-registered (non-qualified) pension plans for executives, retiree welfare plans and disability welfare plans that are typically not funded. The largest of these, the defined benefit pension and retiree welfare plans in the U.S. and Canada, including the closed defined benefit plans of Standard Life, are the material plans that are discussed herein and are the subject of the disclosures in note 16 to the 2015 Consolidated Financial Statements.

Due to the long-term nature of defined benefit pension and retiree welfare plans, the calculation of the defined benefit obligation and net benefit cost depends on various assumptions such as discount rates, salary increase rates, cash balance interest crediting rates, health care cost trend rates and rates of mortality. These assumptions are determined by management and are reviewed annually. Changes in assumptions and differences between actual and expected experience give rise to actuarial gains and losses that affect the amount of the defined benefit obligation and other comprehensive income ("OCI"). During 2015, the actual experience resulted in a gain of $39 million (2014 – loss of $62 million) for the defined benefit pension plans and a gain of $5 million (2014 – loss of $5 million) for the retiree welfare plans. These gains were fully recognized in OCI in 2015. The key assumptions, as well as the sensitivity of the defined benefit obligation to these assumptions, are presented in note 16 to the 2015 Consolidated Financial Statements.

Contributions to the broad-based defined benefit pension plans are made in accordance with the regulations in the countries in which the plans are offered. During 2015, the Company contributed $46 million (2014 – $17 million) to these plans. As at December 31, 2015, the difference between the fair value of assets and the defined benefit obligation for these plans was a surplus of $133 million (2014 – $156 million). For 2016, the contributions to the plans are expected to be approximately $31 million.

The Company's supplemental pension plans for executives are not funded; benefits under these plans are paid as they become due. During 2015, the Company paid benefits of $73 million (2014 – $60 million) under these plans. As at December 31, 2015, the defined benefit obligation amounted to $834 million (2014 – $803 million).

The Company's retiree welfare plans are partially funded, although there are no regulations or laws governing or requiring the funding of these plans. As at December 31, 2015, the difference between the fair value of plan assets and the defined benefit obligation was a deficit of $78 million (2014 – $110 million).

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 tax asset or liability results from temporary differences between carrying values of the assets and liabilities and their respective tax basis. 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 carry forward periods under the tax law in the applicable tax jurisdiction. A deferred tax asset is recognized to the extent that future realization of the tax benefit is probable. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the tax benefit will be realized. Factors in management's determination include, among other things, the following:

- future taxable income exclusive of reversing temporary differences and carry forwards;
- future reversals of existing taxable temporary differences;
- taxable income in prior carryback years; and
- 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 the amount of deferred tax assets to recognize change significantly, or when receipt of new information indicates the need for adjustment in the recognition of deferred tax assets. 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 had established provisions for disallowance of the tax treatment and for interest on past due taxes. On August 5, 2013, the U.S. Tax Court issued an opinion effectively ruling in the government's favour in the litigation between John Hancock and the Internal Revenue Service involving the tax treatment of leveraged leases. The Company was fully reserved for this result, and the case had no material impact on the Company's 2015 financial results.

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. The tests performed in 2015 demonstrated that there was no impairment of goodwill or intangible assets with indefinite lives. Changes in discount rates and cash flow projections used in the determination of embedded values or reductions in market-based earnings multiples may result in impairment charges in the future, which could be material.

Impairment charges could occur in the future as a result of changes in economic conditions. The goodwill testing for 2016 will be updated based on the conditions that exist in 2016 and may result in impairment charges, which could be material.

Future Accounting and Reporting Changes

There are a number of new 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 2015 and subsequently. Summaries of each of the most recently issued key accounting standards are presented below.

(a) Changes in accounting policy

(i) Amendments to IAS 19 "Employee Benefits"

Effective January 1, 2015, the Company adopted the amendments to IAS 19 "Employee Benefits" issued by the IASB in November 2013. The amendments clarify the accounting for contributions by employees or third parties to defined benefit plans. Adoption of these amendments did not have a significant impact on the Company's Consolidated Financial Statements.

(ii) Annual Improvements 2010-2012 and 2011-2013 Cycles

Effective January 1, 2015, the Company adopted the amendments issued under the 2010-2012 and 2011-2013 Cycles of the Annual Improvements project issued by the IASB in December 2013. The IASB issued various minor amendments to different standards, with some amendments to be applied prospectively and others to be applied retrospectively. Adoption of these amendments did not have significant impact on the Company's Consolidated Financial Statements.

(b) Future accounting and reporting changes

(i) Amendments to IAS 16 "Property, Plant and Equipment" and IAS 38 "Intangible Assets"

Amendments to IAS 16 "Property, Plant and Equipment" and IAS 38 "Intangible Assets" were issued in May 2014 and are effective for years beginning on or after January 1, 2016, to be applied prospectively. The amendments clarify that the depreciation or amortization of assets accounted for under these two standards should reflect a pattern of consumption of the assets rather than reflect economic benefits expected to be generated from the assets. Adoption of these amendments is not expected to have a significant impact on the Company's Consolidated Financial Statements.

(ii) Amendments to IAS 41 "Agriculture" and IAS 16 "Property, Plant and Equipment"

Amendments to IAS 41 "Agriculture" and IAS 16 "Property, Plant and Equipment" were issued in June 2014 and are effective for years beginning on or after January 1, 2016, to be applied retrospectively. These amendments require that "bearer plants" (that is, plants used in the production of agricultural produce and not intended to be sold as a living plant except for incidental scrap sales) should be considered as property, plant and equipment in the scope of IAS 16 and should be measured either at cost or revalued amount with changes recognized in OCI. Currently these plants are in the scope of IAS 41 and are measured at fair value less cost to sell. These amendments only apply to the accounting requirements of a bearer plant and not agricultural land properties. Adoption of these amendments is not expected to have a significant impact on the Company's Consolidated Financial Statements.

(iii) Amendments to IFRS 10 "Consolidated Financial Statements" and IAS 28 "Investments in Associates and Joint Ventures"

Amendments to IFRS 10 "Consolidated Financial Statements" and IAS 28 "Investments in Associates and Joint Ventures" were issued in September 2014. The effective dates for the amendments have been postponed indefinitely. The amendments require that upon loss of control of a subsidiary during its transfer to an associate or joint venture, full gain recognition on the transfer is appropriate only if the subsidiary meets the definition of a business in IFRS 3 Business Combinations. Otherwise, gain recognition is appropriate only to the extent of third party ownership of the associate or joint venture. Adoption of these amendments is not expected to have significant impact on the Company's Consolidated Financial Statements.

Additional amendments to IFRS 10 "Consolidated Financial Statements" and IAS 28 "Investments in Associates and Joint Ventures" were issued in December 2014 and are effective for years beginning on or after January 1, 2016, to be applied retrospectively. The amendments clarify the requirements when applying the investment entities consolidation exception. Adoption of these amendments is not expected to have a significant impact on the Company's Consolidated Financial Statements.

(iv) IFRS 15 "Revenue from Contracts with Customers"

IFRS 15 "Revenue from Contracts with Customers" was issued in May 2014 and is effective for years beginning on or after January 1, 2018, to be applied retrospectively or on a modified retrospective basis. IFRS 15 clarifies revenue recognition principles, provides a robust framework for recognizing revenue and cash flows arising from contracts with customers and enhances qualitative and quantitative disclosure requirements. IFRS 15 does not apply to insurance contracts, financial instruments and lease contracts. Accordingly, the adoption of IFRS 15 may impact the revenue recognition related to the Company's asset management and service contracts and may result in additional financial statement disclosure. The Company is assessing the impact of this standard.

(v) IFRS 9 "Financial Instruments"

IFRS 9 "Financial Instruments" was issued in November 2009 and amended in October 2010, November 2013 and July 2014, and is effective for years beginning on or after January 1, 2018, to be applied retrospectively, or on a modified retrospective basis. It is intended to replace IAS 39 "Financial Instruments: Recognition and Measurement".

The project has been divided into three phases: classification and measurement, impairment of financial assets, and hedge accounting. IFRS 9's current classification and measurement methodology 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, for a financial liability designated as at fair value through profit or loss, revisions have been made in the accounting for changes in fair value attributable to changes in the credit risk of that liability. Gains or losses caused by changes in an entity's own credit risk on such liabilities are no longer recognized in profit or loss but instead are reflected in OCI.

Revisions to hedge accounting were issued in November 2013 as part of the overall IFRS 9 project. The amendment introduces a new hedge accounting model, together with corresponding disclosures about risk management activity for those applying hedge accounting. The new model represents a substantial overhaul of hedge accounting that will enable entities to better reflect their risk management activities in their financial statements.

Revisions issued in July 2014 replace the existing incurred loss model used for measuring the allowance for credit losses with an expected loss model. Changes were also made to the existing classification and measurement model designed primarily to address specific application issues raised by early adopters of the standard. They also address the income statement accounting mismatches and short-term volatility issues which have been identified as a result of the insurance contracts project.

The Company is assessing the impact of these amendments, including the proposed amendments to IFRS 4 "Insurance Contracts" outlined below.

(vi) Proposed Amendments to IFRS 4 "Insurance Contracts"

In December, 2015, the IASB issued proposed amendments to IFRS 4 which address concerns about the different effective dates of IFRS 9 and the new insurance contracts standard that will replace IFRS 4. The amendments propose an optional temporary exemption from applying IFRS 9 "Financial Instruments" that would be available to companies whose predominant activity is to issue insurance contracts. The amendments would permit deferral of adopting IFRS 9 until annual periods beginning on or after January 1, 2021 or until the new insurance contract standard becomes effective if at an earlier date. The amendments also propose an option for entities issuing insurance contracts within the scope of IFRS 4 to apply the "overlay approach" to the presentation of qualifying financial assets, removing from net income and presenting instead in OCI, the impact of measuring FVTPL financial assets at fair value through profit or loss under IFRS 9 when they would not have been so measured under IAS 39. The Company is assessing the impact of these proposed amendments.

(vii) Amendments to IAS 12 "Income Taxes"

Amendments to IAS 12 "Income Taxes" were issued in January 2016 and are effective for years beginning on or after January 1, 2017, to be applied retrospectively. The amendments clarify recognition of deferred tax assets relating to unrealized losses on debt instruments measured at fair value. A deductible temporary difference arises when the carrying amount of the debt instrument measured at fair value is less than the cost for tax purposes, irrespective of whether the debt instrument is held for sale or held to maturity. The recognition of the deferred tax asset that arises from this deductible temporary difference is considered in combination with other deferred taxes applying local tax law restrictions where applicable. In addition, when estimating future taxable profits, consideration can be given to recovering more than the asset's carrying amount where probable. The Company will continue to monitor the impact of this adoption on its Consolidated Financial Statements.

(viii) IFRS 16 "Leases"

IFRS 16 "Leases" was issued in January 2016 and is effective for years beginning on or after January 1, 2019, to be applied retrospectively or on a modified retrospective basis. It is intended to replace IAS 17 "Leases" and IFRIC 4 "Determining whether an arrangement contains a lease". IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract, the customer ("lessee") and the supplier ("lessor"). The standard brings most leases on-balance sheet for lessees under a single model, eliminating the previous classifications of operating and finance leases. The only exemption to this treatment is for lease contracts with duration of less than one year. The on-balance sheet treatment will result in the grossing up of the balance sheet due to a right-of-use asset being recognized with an offsetting liability. Lessor accounting under the standard remains largely unchanged with previous classifications of operating and finance leases being maintained. The Company is assessing the impact of this standard.

Differences between IFRS and Hong Kong Financial Reporting Standards

The consolidated financial statements of Manulife 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, 2015, the Company has sufficient assets to meet the minimum solvency requirements under both Hong Kong regulatory requirements and IFRS.

Risk Factors

Our insurance, wealth and asset management and other financial services businesses subject Manulife to a broad range of risks. Management has identified the following risks and uncertainties to which our businesses, operations and financial condition are subject. The risks and uncertainties described below are not the only ones facing us. Additional risks not presently known to us or that we currently deem immaterial could also impair our businesses, operations and financial condition. If any of such risks should occur, the trading price of our securities, including common shares, preferred shares and debt securities, could decline, and you may lose all or part of your investment.

Strategic Risk Factors

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.

We may not be successful in executing our business strategies or these strategies may not achieve our objectives.

- Refer to "Risk Management, Strategic Risks" above.
- The economic environment could be volatile and our regulatory environment will continue to evolve, potentially with higher capital requirements which could 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 applicable regulatory regimes. 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.
- Macro-economic factors may result in our inability to achieve business strategies and plans. Of note, economic factors such as flat or declining equity markets, equity market volatility, or a period of prolonged low interest rates could impact our ability to achieve business objectives. Other factors, such as management actions taken to bolster capital and manage the Company's risk profile, including new or amended reinsurance agreements, and additional actions that the Company may take to help manage near-term regulatory capital ratios or help mitigate equity market and interest rate exposures, could adversely impact our longer term earnings potential.

Our insurance businesses are heavily regulated, and changes in regulation may reduce our profitability and limit our growth.

- Our insurance operations are subject to a wide variety of insurance and other laws and regulations. Insurance and securities regulators in Canada, the United States and Asia regularly re-examine existing laws and regulations applicable to insurance companies, investment advisors, brokers-dealers and their products. Compliance with applicable laws and regulations is time consuming and personnel-intensive, and changes in these laws and regulations or in the interpretation or enforcement thereof, may materially increase our direct and indirect compliance costs and other expenses of doing business, thus having a material adverse effect on our results of operations and financial condition.
- In addition, financial authorities and regulators in many countries have been reviewing their capital requirements and implementing, or are considering implementing, changes aimed at strengthening risk management and capitalization of financial institutions. Future regulatory capital, actuarial and accounting changes, including changes with a retroactive impact, could have a material adverse effect on the Company's consolidated financial condition, results of operations and regulatory capital both on transition and going forward.
- In Canada, MFC and its principal operating subsidiary, MLI, are governed by the Insurance Companies Act (Canada)("ICA"). The ICA is administered, and the activities of the Company are supervised, by the Office of the Superintendent of Financial Institutions ("OSFI"). MLI is also subject to regulation and supervision under the insurance laws of each of the provinces and territories of Canada. Regulatory oversight is vested in various governmental agencies having broad administrative power with respect to, among other things, dividend payments, capital adequacy and risk-based capital requirements, asset and reserve valuation requirements, permitted investments and the sale and marketing of insurance contracts. These regulations are intended to protect policyholders and beneficiaries rather than investors and may adversely impact shareholder value.
- In Canada, OSFI has been considering several initiatives that could materially impact capital requirements. The outcome of these initiatives could have a material adverse impact on the Company or on its position relative to that of other Canadian and international financial institutions with which Manulife competes for business and capital.
- Some recent examples of regulatory and professional standard developments which could impact our net income attributed to shareholders and/or capital position are provided below.
  - The International Accounting Standards Board ("IASB") issued exposure drafts of new accounting standards for insurance contracts in June 2013. For further discussion on the IASB exposure draft, refer to the risk factor entitled "International Financial Reporting Standards will have a material impact on our financial results".
  - OSFI has updated its regulatory guidance and disclosures, effective January 1, 2016, to include non-operating insurance companies acting as holding companies, such as MFC. OSFI will be implementing a revised approach to the regulatory capital framework in Canada, excluding required capital for segregated fund guarantees. The development of a new required capital framework for segregated fund guarantees is progressing separately and will have a later implementation date. In addition, OSFI continues to develop a methodology for evaluating stand-alone capital adequacy for Canadian operating life insurance companies, such as MLI.

- The National Association of Insurance Commissioners ("NAIC") has been reviewing reserving and capital methodologies as well as the overall risk management framework. These reviews will affect U.S. life insurers, including John Hancock, and could lead to increased reserving and/or capital requirements for our business in the United States.
- In 2013, the International Association of Insurance Supervisors ("IAIS") committed to the completion of several capital initiatives that would apply to select global insurance groups to reflect their systemic importance to the international financial system, including Basic Capital Requirements introduced in 2015, and the Higher Loss Absorbency requirements to be implemented in 2019. The most relevant for the Company is the IAIS plan to adopt a global Insurance Capital Standard in 2019 that will apply to all large internationally active insurance groups. It is not yet known how the proposals will affect capital requirements and the competitive position of the Company.

- The Actuarial Standards Board promulgates Mortality improvement rates and the Ultimate Reinvestment Rate ("URR") referenced in the Canadian Institute of Actuaries ("CIA") Standards of Practice for the valuation of insurance contract liabilities. These promulgations will be updated periodically. In the event that a new promulgation is published, it will apply to the determination of actuarial liabilities and may lead to an increase in actuarial liabilities and a reduction in net income attributed to shareholders.
- The Company determines investment return assumptions for alternative long-duration assets in accordance with the Standards of Practice for the valuation of insurance contract liabilities and guidance published by the CIA. The guidance requires that the investment return assumption for these assets should not be higher than the historical long-term average returns of an appropriate broad-based index. Where such experience is not available, the investment return assumption for these assets should not result in a lower reserve than an assumption based on a historical return benchmark for public equities in the same jurisdiction. As a result, the impact of changes in the historical returns for public equity benchmarks may result in an update to our investment return assumptions.
- In the United States, state insurance laws regulate most aspects of our business, and our U.S. insurance subsidiaries are regulated by the insurance departments of the states in which they are domiciled and the states in which they are licensed. State laws grant insurance regulatory authorities broad administrative powers with respect to, among other things: licensing companies and agents to transact business; calculating the value of assets to determine compliance with statutory requirements; mandating certain insurance benefits; regulating certain premium rates; reviewing and approving policy forms; regulating unfair trade and claims practices, including through the imposition of restrictions on marketing and sales practices, distribution arrangements and payment of inducements; regulating advertising; protecting privacy; establishing statutory capital and reserve requirements and solvency standards; fixing maximum interest rates on insurance policy loans and minimum rates for guaranteed crediting rates on life insurance policies and annuity contracts; approving changes in control of insurance companies; restricting the payment of dividends and other transactions between affiliates; and regulating the types, amounts and valuation of investments. Changes in any such laws and regulations, or in the interpretation or enforcement thereof by regulators, could significantly affect our business, results of operations and financial condition.
- The Company currently has reinsurance agreements. Regulators in the U.S. and elsewhere continue to review and examine the use of reinsurance in general. In particular, the New York State Department of Financial Services has expressed concerns about captive reinsurance arrangements with off-shore affiliates or so-called "shadow insurance". Class action lawsuits have been commenced in the United States against certain life insurance companies, with the plaintiffs claiming the defendants misrepresented their reserves and financial condition as a result of the reinsurance of risks to affiliates. The Company continues to monitor developments in this area and we cannot predict what, if any, changes may result from this scrutiny. Changes to the regulatory treatment of affiliate and third-party reinsurance arrangements could potentially have an adverse effect on the liquidity and capital position of some of our subsidiaries and result in increased collateral requirements.
- Currently, the U.S. federal government does not directly regulate the business of insurance. However, federal legislation and administrative policies in several areas can significantly and adversely affect state regulated insurance companies. These areas include financial services regulation, securities regulation, pension regulation, privacy, tort reform legislation and taxation. In addition, under the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank"), the U.S. Board of Governors of the Federal Reserve has supervisory powers over non-bank financial companies that are determined to be systemically important, including certain insurance companies. For further discussion on Dodd-Frank, refer to the risk factor entitled "Dodd-Frank could adversely impact our results of operations and our liquidity".
- Insurance guaranty associations in Canada and the United States have the right to assess insurance companies doing business in their jurisdiction for funds to help pay the obligations of insolvent insurance companies to policyholders and claimants. Because the amount and timing of an assessment is beyond our control, the liabilities that we have currently established for these potential liabilities may not be adequate.
- While many of the laws and regulations to which we are subject 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.
- From time to time, regulators raise issues during examinations or audits of Manulife that could have a material adverse impact on us. We cannot predict whether or when regulatory actions may be taken that could adversely affect our operations. For further discussion of government regulation and legal proceedings refer to "Government Regulation" in MFC's Annual Information Form dated February 18, 2016 and "Legal and Regulatory Proceedings" below. Refer to the risk factor "Our non-North American operations face political, legal, operational and other risks that could negatively affect those operations or our results of operations and financial condition" for further discussion on the impact to our operations.

Dodd-Frank could adversely impact our results of operations and our liquidity.

- Dodd-Frank establishes a framework for regulation of over-the-counter ("OTC") derivatives which affects activities of the Company that use derivatives for various purposes, including hedging equity market, interest rate and foreign currency exposures. Regulations promulgated by the U.S. Commodities Futures Trading Commission and the U.S. Securities and Exchange Commission ("SEC") under Dodd-Frank require certain types of OTC derivative transactions to be executed through a centralized exchange or regulated facility and be cleared through a regulated clearinghouse. These rules impose additional costs and additional regulation on the Company.
- Derivative transactions executed through exchanges or regulated facilities attract incremental collateral requirements in the form of initial margin, and require variation margin to be cash settled on a daily basis which increases liquidity risk for the Company. The increase in margin requirements (relative to bilateral agreements) combined with a more restricted list of securities that qualify as eligible collateral requires us to hold larger positions in cash and treasuries, which could reduce net income attributed to shareholders. Conversely, transactions executed through exchanges help to mitigate 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 help reduce our exposure to the counterparties' default.
- In-force OTC derivative transactions are grandfathered and will migrate to being cleared through exchanges over time, or the Company may elect to accelerate the migration. As such, this may not become a significant risk for Manulife until a large portion of our derivatives have transitioned to clearinghouses (expected in the 2019 to 2022 timeframe) and market conditions adverse to liquidity (material increases in interest rates and/or equity markets) have been experienced.
- Other jurisdictions in which Manulife operates in are expected to enact similar regulations within the next few years for cleared transactions as well as new upfront collateral and more restrictive collateral (relative to the current OTC market) to cover changes in derivative values for non-cleared transactions. We cannot predict the effect of the legislation on our hedging costs, our hedging strategy or its implementation, or whether Dodd-Frank and similar regulations in other jurisdictions will lead to an increase or decrease in or change in composition of the risks we seek to hedge.

International Financial Reporting Standards will have a material impact on our financial results.

- The IASB has announced that it expects to issue a new accounting standard for insurance contracts in 2016, with an effective date of no earlier than 2020. Based on the complexity of the standard, our expectation is that the effective date will be no earlier than 2021. Until this standard is completed and becomes effective, IFRS does not currently prescribe an insurance contract measurement model and therefore, as permitted by IFRS 4 "Insurance Contracts", insurance contract liabilities continue to be measured using CALM. Under CALM, the measurement of actuarial 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.
- This new standard will build upon an exposure draft of a new accounting standard for insurance contracts that the IASB issued in June 2013. The comment period on that exposure draft ended on October 25, 2013. We, along with other international companies in the industry, provided feedback on the significant issues we identified in relation to that exposure draft. In addition, the Company, and several other international companies in the industry, performed comprehensive field testing of the proposal within the exposure draft response period. The results of these field tests supported the concerns raised with the IASB.
- As drafted in 2013, the standard would create material volatility in our financial results and capital position and could result in a lower discount rate used for the determination of actuarial liabilities thereby increasing our actuarial liabilities and reducing our net income attributed to shareholders. The Company's capital position and income for accounting purposes would be highly correlated to prevailing market conditions, resulting in unwarranted volatility that will make it difficult for investors, regulators, and other authorities to distinguish between the performance of the underlying business and short-term market-related volatility. This could also result in life insurers exiting the long-duration contracts business and reducing exposure to alternative long-duration assets, ultimately reducing the stability and long-term nature of the insurance business.
- Additionally, other jurisdictions may not adopt the standard as issued or on the same timeline as published by the IASB, and there is a possibility that Canada will be the first to adopt the standard. Adopting the standard in Canada before it is adopted elsewhere could increase our cost of capital compared to global competitors and the banking sector in Canada.
- The regulatory capital framework in Canada is aligned with IFRS. It is not known if changes would be made to the regulatory capital framework to adjust for any unwarranted volatility and the impact of any potential initial increase in reported insurance liabilities and reduction in accounting capital.
- Any mismatch between the underlying economics of our business and the new accounting standard could have significant unintended negative consequences on our business model which would potentially affect our customers, shareholders and the capital markets.

Changes in tax laws, tax regulations, or interpretations of such laws or regulations could make some of our products less attractive to consumers, could increase our corporate taxes or cause us to change our provision for income taxes which could have a material adverse effect on our business, results of operations and financial condition.

- Many of the products that the Company sells benefit from one or more forms of preferred tax treatment under current income tax regimes. For example, the Company sells life insurance policies that benefit from the deferral or elimination of taxation on earnings accrued under the policy, as well as permanent exclusion of certain death benefits that may be paid to policyholders' beneficiaries. We also sell annuity contracts that allow the policyholders to defer the recognition of taxable income earned within the contract. Other products that the Company sells also enjoy similar, as well as other, types of tax advantages. The Company also benefits from certain tax benefits, including but not limited to tax-exempt interest, dividends-received deductions, tax credits (such as foreign tax credits), and favourable tax rates and/or income measurement rules for tax purposes.

- There is risk that tax legislation could be enacted that would lessen or eliminate some or all of the tax advantages currently benefiting the Company or its policyholders. This could occur in the context of deficit reduction or other tax reforms. The effects of any such changes could result in materially lower product sales, lapses of policies currently held, and/or our incurrence of materially higher corporate taxes, any of which could have a material adverse effect on our business, results of operations and financial condition.
- Additionally, the Company may be required to change its provision for income taxes or carrying amount of deferred tax assets or liabilities if the characterization of certain items is successfully challenged by taxing authorities or if future transactions or events, which could include changes in tax laws, tax regulations or interpretations of such laws or regulations, occur. Any such changes could significantly affect the amounts reported in the consolidated financial statements in the year these changes occur.

Access to capital may be negatively impacted by market conditions.

- Disruptions, uncertainty or volatility in the financial markets may limit our access to capital required to operate our business. Such market conditions may limit our ability to satisfy regulatory capital requirements, to access the capital necessary to grow our business and meet our refinancing requirements. Under extreme conditions, we may be forced, among other things, to delay raising capital, issue different types of capital than we would otherwise, less effectively deploy such capital, issue shorter term securities than we prefer, or issue securities that bear an unattractive cost of capital which could decrease our profitability, dilute our existing shareholders, and significantly reduce our financial flexibility.

We may experience future downgrades in our financial strength or credit ratings, which may materially adversely impact our financial condition and results of operations.

- Credit rating agencies publish financial strength ratings on life insurance companies that are indicators of an insurance company's ability to meet contract holder and policyholder obligations. Credit rating agencies also assign credit ratings, which are indicators of an issuer's ability to meet the terms of its obligations in a timely manner, and are important factors in a company's overall funding profile and ability to access external capital.
- Ratings are important factors in establishing the competitive position of insurance companies, maintaining public confidence in products being offered, and determining the cost of capital. A ratings downgrade, or the potential for such a downgrade could, among other things: increase our cost of capital and limit our access to the capital markets; cause some of our existing liabilities to be subject to acceleration, additional collateral support, changes in terms, or result in additional financial obligations; result in the termination of our relationships with broker-dealers, banks, agents, wholesalers and other distributors of our products and services; materially increase the number of surrenders, for all or a portion of the net cash values, by the owners of policies, contracts and general account guaranteed interest contracts ("GICs") we have issued, and materially increase the number of withdrawals by policyholders of cash values from their policies; and reduce new sales, particularly with respect to general account GICs purchased by pension plans and other institutions. Any of these consequences could adversely affect our results of operations and financial condition.
- Credit rating agencies remain concerned with: our capital and net earnings volatility associated with fair-value accounting; net exposures to equity markets and lower interest rates; challenges associated with managing in-force long term care, universal life with secondary guarantees and variable annuity products in the U.S. Some credit rating agencies also view, albeit to a lesser extent in more recent periods, our financial leverage and earnings coverage metrics as not meeting expectations. There can be no guarantee that downgrades will not occur.
- It is possible that there will be changes in the benchmarks for capital, liquidity, earnings and other factors used by these credit rating agencies that are important to a ratings assignment at a particular rating level. Any such changes could have a negative impact on our ratings, which could adversely impact our results of operations, financial condition and access to capital markets.

Competitive factors may adversely affect our market share and profitability.

- The insurance, wealth and asset management industries are highly competitive. Our competitors include other insurers, securities firms, investment advisors, mutual funds, banks and other financial institutions. Our competitors compete with us for customers, access to distribution channels such as brokers and independent agents, and for employees. In some cases, competitors may be subject to less onerous regulatory requirements, have lower operating costs or have the ability to absorb greater risk while maintaining their financial strength ratings, thereby allowing them to price their products more competitively or offer features that make their products more attractive. These competitive pressures could result in increased pricing pressures on a number of our products and services and may harm our ability to maintain or increase our profitability. Because of the highly competitive nature of the financial services industry, there can be no assurance that we will continue to effectively compete with our industry rivals and competitive pressure may have a material adverse effect on our business, results of operations and financial condition.

We may experience difficulty in marketing and distributing products through our current and future distribution channels.

- We distribute our insurance and wealth management products through a variety of distribution channels, including brokers, independent agents, broker-dealers, banks, wholesalers, affinity partners, other third-party organizations and our own sales force in Asia. We generate a significant portion of our business through individual third party arrangements. We periodically negotiate provisions and renewals of these relationships, and there can be no assurance that such terms will remain acceptable to us or relevant third parties. An interruption in our continuing relationship with certain of these third parties could significantly affect our ability to market our products and could have a material adverse effect on our business, results of operations and financial condition.

Industry trends could adversely affect the profitability of our businesses.

- Our business segments continue to be influenced by a variety of trends that affect our business and the financial services industry in general. The impact of the volatility and instability of the financial markets on our business is difficult to predict. The Company's business plans, financial condition and results of operations have been in the recent past and may in the future be negatively impacted or affected.

We may face unforeseen liabilities or asset impairments arising from possible acquisitions and dispositions of businesses or difficulties integrating acquired businesses.

- We have engaged in acquisitions and dispositions of businesses in the past, and expect to continue to do so in the future as we may deem appropriate. There could be unforeseen liabilities or asset impairments, including goodwill impairments that arise in connection with the businesses that we may sell, have acquired, or may acquire in the future. In addition, there may be liabilities or asset impairments that we fail, or are unable, to discover in the course of performing due diligence investigations on acquisition targets. Furthermore, the use of our own funds as consideration in any acquisition would consume capital resources that would no longer be available for other corporate purposes.

- Our ability to achieve some or all of the benefits we anticipate from any acquisitions of businesses will depend in large part upon our ability to successfully integrate the businesses in an efficient and effective manner including with respect to the acquisition of Standard Life and the retirement plan services business of New York Life. We may not be able to integrate the businesses smoothly or successfully, and the process may take longer than expected. The integration of operations may require the dedication of significant management resources, which may distract management's attention from our day-to-day business. Acquisitions of operations outside of North America, especially any acquisition in a jurisdiction in which we do not currently operate, may be particularly challenging or costly to integrate. If we are unable to successfully integrate the operations of any acquired businesses, we may be unable to realize the benefits we expect to achieve as a result of the acquisitions and the results of operations may be less than expected.

If our businesses do not perform well, or if the outlook for our businesses is significantly lower than historical trends, we may be required to recognize an impairment of goodwill or intangible assets or to establish a valuation allowance against our deferred tax assets, which could have a material adverse effect on our results of operations and financial condition.

- Goodwill represents the excess of the amounts we paid to acquire subsidiaries and other businesses over the fair value of their net identifiable assets at the date of acquisition. Intangible assets represent assets that are separately identifiable at the time of an acquisition and provide future benefits such as the John Hancock brand.
- Goodwill and intangible assets with indefinite lives are tested at least annually for impairment. Goodwill is tested at the cash generating unit ("CGU") or group of CGUs level, representing the smallest group of assets that is capable of generating largely independent cash flows. The Company completed its 2015 goodwill and intangible asset tests in the fourth quarter of 2015, and as a result, management concluded that there was no impairment of goodwill or intangible assets with indefinite lives. Going forward, as a result of the impact of economic conditions and changes in product mix and the granular level of goodwill testing under IFRS, additional impairment charges could occur in the future.
- At December 31, 2015, under IFRS we had $5,685 million of goodwill and $3,699 million of intangible assets.
- If market conditions deteriorate in the future and, in particular, if MFC's common share price is low relative to book value per share, if the Company's actions to limit risk associated with its products or investments cause a significant change in any one CGU's recoverable amount, or if the outlook for a CGU's results deteriorate, the Company may need to reassess the value of goodwill and/or intangible assets which could result in impairments during 2016 or subsequent periods. Such impairments could have a material adverse effect on our results of operations and financial condition.
- Deferred income tax balances represent the expected future tax effects of the differences between the book and tax basis of assets and liabilities, loss carryforwards and tax credits. Deferred tax assets are recorded when the Company expects to claim deductions on tax returns in the future for expenses that have already been recorded in the financial statements.
- The availability of those deductions is dependent on future taxable income against which the deductions can be made. Deferred tax assets are assessed periodically by management to determine if they are realizable. Factors in management's determination include the performance of the business including the ability to generate gains from a variety of sources and tax planning strategies. If based on information available at the time of the assessment, it is determined that the deferred tax asset will not be realized, then the deferred tax asset is reduced to the extent that it is no longer probable that the tax benefit will be realized. At December 31, 2015, we had $4,067 million of deferred tax assets.

We may not be able to protect our intellectual property and may be subject to infringement claims.

- We rely on a combination of contractual rights and copyright, trademark, patent and trade secret laws to establish and protect our intellectual property. In particular we have invested considerable resources in promoting the brand names "Manulife" and "John Hancock" and expect to continue to do so. Although we use a broad range of measures to protect our intellectual property rights, third parties may infringe or misappropriate our intellectual property. We may have to litigate to enforce and protect our copyrights, trademarks, patents, trade secrets and know-how or to determine their scope, validity or enforceability, which represents a diversion of resources that may be significant in amount and may not prove successful. The loss of intellectual property protection or the inability to secure or enforce the protection of our intellectual property assets could have a material adverse effect on our business and our ability to compete.

- We also may be subject to costly litigation in the event that another party alleges our operations or activities infringe upon its intellectual property rights. Third parties may have, or may eventually be issued, patents that could be infringed by our products, methods, processes or services. Any party that holds such a patent could make a claim of infringement against us. We may also be subject to claims by third parties for breach of copyright, trademark, trade secret or license usage rights. Any such claims and any resulting litigation could result in significant liability for damages. If we were found to have infringed a third-party patent or other intellectual property rights, we could incur substantial liability, and in some circumstances could be enjoined from providing certain products or services to our customers or utilizing and benefiting from certain methods, processes, copyrights, trademarks, trade secrets or licenses, or alternatively could be required to enter into costly licensing arrangements with third parties, all of which could have a material adverse effect on our business, results of operations and financial condition.

Applicable laws may discourage takeovers and business combinations that common shareholders of MFC might consider in their best interests.

- The ICA contains restrictions on the purchase or other acquisition, issue, transfer and voting of the shares of an insurance company. In addition, under applicable U.S. insurance laws and regulations in states where certain of our insurance company subsidiaries are domiciled, no person may acquire control of MFC without obtaining prior approval of those states' insurance regulatory authorities. These restrictions may delay, defer, prevent, or render more difficult a takeover attempt that common shareholders of MFC might consider in their best interests. For instance, they may prevent shareholders of MFC from receiving the benefit from any premium to the market price of MFC's common shares offered by a bidder in a takeover context. Even in the absence of a takeover attempt, the existence of these provisions may adversely affect the prevailing market price of MFC's common shares if they are viewed as discouraging takeover attempts in the future.

Entities within the MFC Group are interconnected which may make separation difficult.

- MFC operates in local markets through subsidiaries and branches of subsidiaries. These local operations are financially and operationally interconnected to lessen expenses, share and reduce risk, and efficiently utilize financial resources. In general, external capital required for companies in the Manulife group has been raised at the MFC or MLI level and then transferred to other entities as equity or debt capital as appropriate. Other linkages include the use of loans, guarantees, capital maintenance agreements, derivatives, shared services and reinsurance. Accordingly, the risks undertaken by a subsidiary may be transferred to or shared by affiliates through financial and operational linkages. Some of the consequences of this are:
    - Financial difficulties at a subsidiary may not be isolated and could cause material adverse effects on affiliates and the group as a whole.
    - Linkages may make it difficult to dispose of or separate a subsidiary within the group by way of a spin-off or similar transaction and the disposition or separation of a subsidiary may not fully eliminate the liability of the Company and its remaining subsidiaries for shared risks. For example, some analysts and shareholders have asked whether a sale or spin-off of all or part of the U.S. Division would avoid what is considered to be onerous Canadian regulatory oversight. Without analyzing the long-term strategic implications of such a transaction which may be negative, such a transaction would be very difficult to accomplish as a result of a number of factors, including, (i) MFC and its remaining subsidiaries would continue to have a significant amount of residual risk under guarantees and reinsurance arrangements that could not be terminated; (ii) internal capital mobility and efficiency could be considerably limited; (iii) significant potential tax consequences; (iv) highly uncertain accounting and regulatory outcomes; (v) a requirement for significant capital injections; and (vi) increased sensitivity of net income attributed to shareholders and capital of MFC and its remaining subsidiaries to market declines.

Market Risk Factors

Our most significant source of publicly traded equity risk arises from variable annuity and segregated funds with guarantees, where the guarantees are linked to the performance of the underlying funds.

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.

Guaranteed benefits are contingent and 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 net income attributed to shareholders 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, sustained flat or declining 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.

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.

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, which may increase policy liabilities and reduce net income attributed

to shareholders. 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. Furthermore, 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 for key markets are based on long-term historical observed experience. In the stochastic valuations of our segregated fund guarantee business, those rates inclusive of dividends are 9.6% per annum in Canada, 9.6% per annum in the U.S., 6.2% per annum in Japan and vary between 7.8% and 9.85% for European equity funds. The calibration of the economic scenario generators that are used to value segregated fund guarantee business complies with current Canadian Institute of Actuaries Standards of Practice for the valuation of these products. Implicit margins, determined through stochastic valuation processes, lower net yields used to establish policy liabilities. Assumptions used for public equities backing liabilities are also developed based on historical experience but are constrained by different Canadian Institute of Actuaries Standards of Practice and differ slightly from those used in stochastic valuation. Alternative asset return assumptions vary based on asset class but are largely consistent, after application of valuation margins and differences in taxation, with returns assumed for public equities.

We experience interest rate and spread risk within the general fund primarily due to the uncertainty of future returns on investments.

- 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. The 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 invested or 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. In addition, changes in interest rates could change the reinvestment scenarios used in the calculation of our actuarial liabilities. The reinvestment scenario changes tend to amplify the negative effects of a decrease in interest rates, and dampen the positive effects of interest rate increases. 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 attributed to shareholders. In addition, decreases in corporate bond spreads or increases in swap spreads will result in an increase in policy liabilities and a reduction in net income attributed to shareholders, while an increase in corporate bond spreads or 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.

We experience ALDA performance risk when actual returns are lower than expected returns.

- ALDA performance risk arises from general fund investments in commercial real estate, timber properties, farmland properties, infrastructure, 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. ALDA 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. A reduction in the outlook for expected future returns for ALDA, which could result from a fundamental change in future expected economic growth, would increase policy liabilities and reduce net income attributed to shareholders. Further, if returns on certain external asset benchmarks used to determine permissible assumed returns under the Canadian Institute of Actuaries Standards of Practice are lower than expected, the Company's policy liabilities will increase, reducing net income attributed to shareholders.
- The value of oil and gas assets has been negatively impacted by the decline in energy prices and could be further negatively affected by additional declines in energy prices as well as by a number of other factors including, but not limited to, production declines, adverse operating results, the impact of weather conditions on seasonal demand, our ability to execute on capital programs, incorrect assessments of the value of acquisitions, uncertainties associated with estimating oil and natural gas reserves, and difficult economic conditions. Changes in government regulation of the oil and gas industry, including environmental regulation and changes in the royalty rates resulting from provincial royalty reviews, could also adversely affect the value of our oil and gas investments. The negative impact of changes in these factors can take time to be fully reflected in the valuations of these investments, especially if the change is large and rapid. It can take time for market participants to adjust their forecasts and better understand the potential medium to long term impact of the changes. As a result, valuation changes in any given period may reflect the delayed impact of events that occurred in prior periods.
- Difficult economic conditions could result in higher vacancy, lower rental rates and lower demand for real estate investments, all of which would negatively impact the value of our real estate investments. Difficult economic conditions could also prevent companies in which we have made private equity investments from achieving their business plans and could cause the value of these investments to fall, or even cause the companies to fail entirely. The timing and amount of investment income from private equity investments is difficult to predict, and investment income from these investments can vary from quarter to quarter.

We experience foreign exchange risk as a substantial portion of our business is transacted in currencies other than Canadian dollars.

- 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 relative to these currencies, net income attributed to shareholders 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 net income attributed to shareholders and shareholders' equity and would potentially increase our regulatory capital ratios. See "Impact of Foreign Exchange Rates" above.

The Company's hedging strategies will not fully reduce the market risks related to the product guarantees and fees being hedged, hedging costs may increase and the hedging strategies expose the Company to additional risks.

- The Company's market risk hedging strategies include a variable annuity guarantee dynamic hedging strategy and a macro equity risk hedging strategy. The variable annuity dynamic hedging strategy is designed to hedge the sensitivity of variable annuity guarantee policy liabilities to fund performance (both public equity and bond funds) and interest rate movements. The macro equity risk hedging strategy is designed to hedge a portion of our earnings sensitivity to public equity market movements arising from variable annuity guarantees not dynamically hedged, directly held exposures, and from other products and fees. Some of the limitations and risks associated with each strategy are described below.
- Our hedging strategies rely 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 subject to the risk of increased funding and collateral demands which may become significant as equity markets increase.
- 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 strategies are highly dependent on complex systems and mathematical models that are subject to error and 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 strategies there may be additional, unidentified risks that may negatively impact our business and future financial results. In addition, rising equity markets and interest rates that would otherwise result in profits on variable annuities will be offset by losses from our hedging positions. Refer to the risk factor "If a counterparty fails to fulfill its obligations we may be exposed to risks we had sought to mitigate" for further information pertaining to counterparty risks.
- 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 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 MCCSR 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.

Changes in market interest rates may impact our net income attributed to shareholders and capital ratios.

- A prolonged low interest rate environment may result in charges related to lower fixed income reinvestment assumptions and an increase in new business strain until products are repositioned for the lower rate environment. Other potential consequences of low interest rates include:
  - Low interest rates could negatively impact sales.
  - Lower risk-free rates tend to increase the cost of hedging, and as a result the offering of guarantees could become uneconomic.
  - The reinvestment 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.
  - Lower interest rates could lead to lower mean bond parameters used for the stochastic valuation of segregated fund guarantees, resulting in higher policy liabilities.
  - Lower interest rates would also reduce expected earnings on in-force policies, which would reduce core earnings, lower net income attributed to shareholders and may increase new business strain until products are repositioned for the lower rate environment.

- A prolonged low interest environment may also result in the Actuarial Standard Board lowering the promulgated Ultimate Reinvestment Rate ("URR") and require us to increase our provisions.
- 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 interest rates increase.
- Fixed income reinvestment rates other than the 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 Sensitivities and Exposure Measures" above.

AFS investments are recorded at fair value, but losses arising on those investments may not have been recorded in income.

- Some of our investments are classified as AFS. AFS debt securities are recorded at fair value, but unrealized gains and losses are recorded in a separate component of equity and are not charged to net income attributed to shareholders. Unrealized gains are recorded in net income attributed to shareholders when the related asset is sold. Unrealized losses are recorded in net income attributed to shareholders either when the related asset is sold or when the related asset is considered impaired and the impairment is not considered to be temporary. Should market levels decline, impairments may be judged to be other than temporary and part or all of any unrealized losses may be charged against future income as a result. As at December 31, 2015, $345 million of net unrealized gains were recorded in accumulated other comprehensive income (loss) on AFS securities compared to $794 million of net unrealized gains as at December 31, 2014.

Our valuation of certain financial instruments may include methodologies, estimations and assumptions which are subjective in nature. Changes to investment valuations may arise in the future which materially adversely affect our results of operations and financial condition.

- The fair value for certain of our investments that are not actively traded is determined using models and other valuation techniques. These values therefore incorporate considerable judgment and involve making estimates including those related to the timing and amounts of expected future cash flows and the credit standing of the issuer or counterparty. The use of different methodologies and assumptions may have a material effect on the estimated fair value amounts.
- Significant market disruption could result in rapidly widening credit spreads and illiquidity, volatile markets and for some instruments significantly reduced trading activity. It has been, and may continue to be difficult to value certain of our securities if trading is less active and/or market data is harder to observe. Consequently, valuations may include inputs and assumptions that are less observable or require greater estimation thereby resulting in values which may differ materially from the value at which the investments may be ultimately sold. Further, rapidly changing credit and equity market conditions could materially impact the valuation of securities as reported within our consolidated financial statements and the period-to-period changes in value could vary significantly. Decreases in value that become recognizable in future periods could have a material adverse effect on our results of operations and financial condition.

Liquidity Risk Factors

Manulife 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 a change 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.

Adverse capital and credit market conditions may significantly affect our liquidity risk.

- Reduced asset liquidity may restrict our ability to sell certain types of assets for cash without taking significant losses. If providers of credit preserve their capital, our access to borrowing from banks and others or access to other types of credit such as letters of credit, may be reduced. If investors have a negative perception of our creditworthiness, this may reduce access to wholesale borrowing in the debt capital markets, or increase borrowing costs. Should large and unexpected cash outflows occur, exceeding our worst case stress testing, we may be forced to sell assets at a loss or raise additional funds at significant cost in order to meet our liquidity needs.
- We are dependent on cash flow from operations, a pool of highly liquid money market securities and holdings of sovereign bonds, near-sovereign bonds and other liquid marketable securities to provide liquidity. We need liquidity to meet our payment obligations including those related to insurance and annuity benefits, cashable liabilities, our operating expenses, interest on our debt, dividends on our equity capital, and to replace maturing and certain callable liabilities.
- Liquid assets are also required to pledge as collateral to support activities such as the use of derivatives for hedging purposes and to cover cash settlement associated with exchange-traded derivatives that are settled with exchanges. The implementation of Dodd-Frank in the United States increased the amount of derivatives executed through centralized exchanges and cleared through regulated clearinghouses and therefore increased related liquidity risk. Other jurisdictions in which we operate could enact similar regulations within the next few years for cleared transactions as well as new upfront collateral and more restrictive collateral (relative to the current OTC market) to cover changes in derivative values for non-cleared transactions. The principal sources of our liquidity are cash and our assets that are readily convertible into cash, including insurance and annuity premiums, fee income earned

on AUM, money market securities, and cash flow from our investment portfolio. The issuance of long-term debt, common and preferred shares and other capital securities may also increase our available liquid assets or be required to replace certain maturing or callable liabilities.

- In the event we seek additional financing, the availability and terms of such financing will depend on a variety of factors including market conditions, the availability of credit to the financial services industry, our credit ratings and credit capacity, as well as the possibility that customers, lenders or investors could develop a negative perception of our long-term or short-term financial prospects if we incur large financial losses or if the level of our business activity decreases further due to a significant market downturn.

We are exposed to re-pricing risk on letters of credit.

- 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 re-pricing risk and under adverse conditions increases in costs may 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. 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. As at December 31, 2015, letters of credit for which third parties are beneficiary, in the amount of $109 million, were outstanding. There were no assets pledged against these outstanding letters of credit as at December 31, 2015.

Our obligations to pledge collateral or make payments related to declines in value of specified assets may adversely affect our liquidity.

- In the normal course of business, we are obligated to pledge assets to comply with jurisdictional regulatory and other requirements including collateral pledged in relation to derivative contracts and assets held as collateral for repurchase funding agreements. The amount of collateral we may be required to post under these agreements, and the amount of payments we are required to make to our counterparties, may increase under certain circumstances, including a sustained or continued decline in the value of our derivative contracts. Such additional collateral requirements and payments could have an adverse effect on our liquidity. As at December 31, 2015, total pledged assets were $6,071 million, compared to $4,449 million in 2014, due to an increase in the Canadian dollar value of derivative collateral requirements. Assets pledged as collateral are available to support specific obligations and not to support our general liquidity needs.

Our banking subsidiary relies on confidence sensitive deposits and this increases our liquidity risk.

- Manulife Bank is a wholly-owned subsidiary of our Canadian life insurance operating company, MLI. The Bank is principally funded by retail deposits. A real or perceived problem with the Bank or its parent companies could result in a loss of confidence in the Bank's ability to meet its obligations, which in turn may trigger a significant withdrawal of deposit funds. A substantial portion of the Bank's deposits are demand deposits that can be withdrawn at any time, while the majority of the Bank's assets are first residential mortgages in the form of home equity lines of credit, which represent long-term funding obligations. If deposit run-off speeds exceed our extreme stress test assumptions the Bank may be forced to sell assets at a loss to third parties or the Bank may request support from MLI.

As a holding company, MFC depends on the ability of its subsidiaries to transfer funds to it to meet MFC's obligations and pay dividends.

- MFC is a holding company and relies on dividends and interest payments from our insurance and other subsidiaries as the principal source of cash flow to meet MFC's obligations and pay dividends. As a result, MFC's cash flows and ability to service its obligations are dependent upon the earnings of its subsidiaries and the distribution of those earnings and other funds by its subsidiaries to MFC. Substantially all of MFC's business is currently conducted through its subsidiaries. In addition, OSFI is considering capital requirements for MLI on a stand-alone basis that could further restrict dividends and other distributions to MFC.
- The ability of our holding company to fund its cash requirements depends upon it receiving dividends, distributions and other payments from our operating subsidiaries. The ability of MFC's insurance subsidiaries to pay dividends to MFC in the future will depend on their earnings and regulatory restrictions. These subsidiaries are subject to a variety of insurance and other laws and regulations that vary by jurisdiction and are intended to protect policyholders and beneficiaries in that jurisdiction first and foremost, rather than investors. These subsidiaries are generally required to maintain solvency and capital standards as set by their local regulators and may also be subject to other regulatory restrictions, all of which may limit the ability of subsidiary companies to pay dividends or make distributions to MFC. Such limits could have a material adverse effect on MFC's liquidity, including its ability to pay dividends to shareholders and service its debt.
- The potential changes to regulatory capital and actuarial and accounting standards could also limit the ability of the insurance subsidiaries to pay dividends or make distributions and could have a material adverse effect on MFC's liquidity and on internal capital mobility, including on MFC's ability to pay dividends to shareholders 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, or to pursue actions that would support capital needs but adversely impact our subsequent earnings potential. In addition, the timing and outcome of these initiatives could have a significantly adverse impact on our competitive position relative to that of other Canadian and international financial institutions with which we compete for business and capital.
- The payment of dividends to MFC by MLI is subject to restrictions set out in the ICA. The ICA prohibits the declaration or payment of any dividend on shares of an insurance company if there are reasonable grounds for believing: (i) the company does not have

adequate capital and adequate and appropriate forms of liquidity; or (ii) the declaration or the payment of the dividend would cause the company to be in contravention of any regulation made under the ICA respecting the maintenance of adequate capital and adequate and appropriate forms of liquidity, or of any direction made to the company by the Superintendent. All of our U.S. and Asian operating life insurance companies are subsidiaries of MLI.

- Certain of MFC's U.S. insurance subsidiaries also are subject to insurance laws in Michigan, New York, Massachusetts, and Vermont, the jurisdictions in which these subsidiaries are domiciled, which impose general limitations on the payment of dividends and other upstream distributions by these subsidiaries to MLI.
- Our Asian insurance subsidiaries are also subject to restrictions in the jurisdictions in which these subsidiaries are domiciled which could affect their ability to pay dividends to MLI in certain circumstances.
- The Company seeks to maintain capital in its insurance subsidiaries in excess of the minimum required in all jurisdictions in which the Company does business. The minimum requirements in each jurisdiction may increase due to regulatory changes and we may decide to maintain additional capital in our operating subsidiaries to fund expected growth of the business or to deal with changes in the risk profile of such subsidiaries. Any such increases in the level of capital may reduce the ability of the operating companies to pay dividends and have a material adverse effect on MFC's liquidity.

The declaration and payment of dividends and the amount thereof is subject to change.

- The holders of common shares are entitled to receive dividends as and when declared by the Board of Directors of MFC, subject to the preference of the holders of Class A Shares, Class 1 Shares, Class B Shares (collectively, the "Preferred Shares") and any other shares ranking senior to the common shares with respect to priority in payment of dividends. The declaration and payment of dividends and the amount thereof is subject to the discretion of the Board of Directors of MFC and is dependent upon the results of operations, financial condition, cash requirements and future prospects of, and regulatory restrictions on the payment of dividends by MFC and other factors deemed relevant by the Board of Directors of MFC. Although MFC has historically declared quarterly cash dividends on the common shares, MFC is not required to do so and the Board of Directors of MFC may reduce, defer or eliminate MFC's common share dividend in the future.
- The foregoing risk disclosure in respect of the declaration and payment of dividends on the common shares applies equally in respect of the declaration and payment of dividends on the Preferred Shares, notwithstanding that the Preferred Shares have a fixed rate of dividend.
- See "Government Regulation" and "Dividends" in MFC's Annual Information Form dated February 18, 2016 for a summary of additional statutory and contractual restrictions concerning the declaration of dividends by MFC.

Credit Risk Factors

Worsening regional and global 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.

Our invested assets primarily include investment-grade bonds, private placements, commercial mortgages, asset-backed securities, and consumer loans. These assets are generally carried at fair value, but changes in value that arise from a credit-related impairment are recorded as a charge against income. The return assumptions incorporated in actuarial liabilities include an expected level of future asset impairments. There is a risk that actual impairments will exceed the assumed level of impairments in the future and earnings could be adversely impacted.

Defaults and downgrade charges on our invested assets were generally below our historical average in 2015, however, we still expect volatility on a quarterly basis and losses could potentially rise above long-term expected levels. Net impaired fixed income assets were $161 million, representing 0.05% of total general fund invested assets as at December 31, 2015, compared to $224 million, representing 0.08% of total general fund invested assets as at December 31, 2014.

If a counterparty fails to fulfill its obligations we may be exposed to risks we had sought to mitigate.

- The Company uses derivative financial instruments to mitigate exposures to foreign currency, interest rate and other market risks arising from on-balance sheet financial instruments, guarantees related to variable annuity products, selected anticipated transactions and certain other guarantees. The Company may be exposed to counterparty risk if a counterparty fails to pay amounts owed to us or otherwise perform its obligations to us. Counterparty risk increases during economic downturns because the probability of default increases for most counterparties. If any of these counterparties default, we may not be able to recover the amounts due from that counterparty. As at December 31, 2015, the largest single counterparty exposure without taking into account the impact of master netting agreements or the benefit of collateral held, was $4,155 million (2014 – $3,436 million). The net exposure to this counterparty, after taking into account master netting agreements and the fair value of collateral held, was nil (2014 – $5 million). As at December 31, 2015, the total maximum credit exposure related to derivatives across all counterparties, without taking into account the impact of master netting agreements and the benefit of collateral held, was $25,332 million (2014 – $20,126 million) compared with $68 million after taking into account master netting agreements and the benefit of fair value of collateral held (2014 – $277 million). The exposure to any counterparty would grow if, upon the counterparty's default, markets moved such that our derivatives with that counterparty gain in value. Until we are able to replace that derivative with another counterparty, the gain on the derivatives subsequent to the counterparty's default would not be backed by collateral.

- The Company reinsures a portion of the business we enter into; however, we remain legally liable for contracts that we had reinsured. In the event that any of our reinsurance providers were unable or unwilling to fulfill their contractual obligations related to the liabilities we cede to them, we would need to increase actuarial reserves, adversely impacting our net income attributed to shareholders and capital position. In addition, the Company has over time sold certain blocks of business to third-party purchasers using reinsurance. To the extent that the reinsured contracts are not subsequently novated to the purchasers, we remain legally liable to the insureds. Should the purchasers be unable or unwilling to fulfill their contractual obligations under the reinsurance agreement, we would need to increase policy liabilities resulting in a charge to net income attributed to shareholders. To reduce credit risk, the Company may require purchasers to provide collateral for their reinsurance liabilities.
- We participate in a securities lending program whereby blocks of securities are loaned to third parties, primarily major brokerage firms and commercial banks. Collateral, which exceeds the market value of the loaned securities, is retained by the Company until the underlying security has been returned. If any of our securities lending counterparties default and the value of the collateral is insufficient, we would incur losses. As at December 31, 2015, the Company had loaned securities (which are included in invested assets) valued at approximately $648 million, compared to $1,004 million at December 31, 2014.

The determination of allowances and impairments on our investments is subjective and changes could materially impact our results of operations or financial position.

- The determination of allowances and impairments is based upon a periodic evaluation of known and inherent risks associated with the respective security. Management considers a wide range of factors about the security and uses its best judgment in evaluating the cause of the decline, in estimating the appropriate value for the security and in assessing the prospects for near-term recovery. Inherent in management's evaluation of the security are assumptions and estimates about the operations of the issuer and its future earnings potential. Considerations in the impairment evaluation process include, but are not limited to: (i) the severity of the impairment; (ii) the length of time and the extent to which the market value of a security has been below its carrying value; (iii) the financial condition of the issuer; (iv) the potential for impairments in an entire industry sector or sub-sector; (v) the potential for impairments in certain economically depressed geographic locations; (vi) the potential for impairments of securities where the issuer, series of issuers or industry has suffered a catastrophic type of loss or has exhausted natural resources; (vii) our ability and intent to hold the security for a period of time sufficient to allow for the recovery of its value to an amount equal to or greater than cost or amortized cost; (viii) unfavorable changes in forecasted cash flows on mortgage-backed and asset-backed securities; and (ix) other subjective factors, including concentrations and information obtained from regulators and rating agencies.
- Such evaluations and assessments are revised as conditions change and new information becomes available. We update our evaluations regularly and reflect changes in allowances and impairments as such evaluations warrant. The evaluations are inherently subjective, and incorporate only those risk factors known to us at the time the evaluation is made. There can be no assurance that management has accurately assessed the level of impairments that have occurred. Additional impairments will likely need to be taken or allowances provided for in the future as conditions evolve. Historical trends may not be indicative of future impairments or allowances.

Insurance 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 generally based on both Company and industry experience, and assumptions for future policyholder behaviour and expenses are generally based on Company experience. Assumptions for future policyholder behaviour include assumptions related to the retention rates for insurance and wealth products. Assumptions for expenses include assumptions related to future maintenance expense levels and volume of the business.

Losses may result should actual experience be materially different than that assumed in the valuation of policy liabilities.

- 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 attributed to shareholders. Such assumptions require significant professional judgment, and actual experience may be materially different than the assumptions we make.

We may be unable to obtain necessary price increases on our in-force long-term care business, or may face delays in implementation.

- 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 and reduce net income attributed to shareholders.

Medical advances and legislation related to genetic testing could adversely impact our underwriting abilities.

- Current or future legislation in jurisdictions where Manulife operates may restrict its right to underwrite based on access to genetic test results. Without the obligation of disclosure, the asymmetry of information shared between applicant and insurer could increase anti-selection in both new business and in-force policyholder behaviour. The impact of restricting insurers' access to this information and the associated problems of anti-selection becomes more acute where genetic technology leads to advancements in diagnosis of life threatening conditions that are not matched by improvements in treatment. We cannot predict the potential financial impact that this would have on the Company or the industry as a whole. In addition, there may be further unforeseen implications as genetic testing continues to evolve and becomes more established in mainstream medical practice.

Life and health insurance claims may be impacted by the unusual onset of disease or illness, natural disasters, large-scale man-made disasters and acts of terrorism.

- The cost of health insurance benefits may also be impacted by unforeseen trends in the incidence, termination and severity rates of claims. 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, anti-selective lapse behaviour, underwriting process failures, or other factors.

External market conditions determine the availability, terms and cost of the reinsurance protection for new business.

- We purchase reinsurance protection on certain risks underwritten by our various business segments. Typically, reinsurance agreements are intended to bind the reinsurer for the term of the business reinsured at a fixed price but circumstances may call for increases to be agreed upon. Accordingly, we may incur additional costs for reinsurance or may not be able to obtain sufficient reinsurance on acceptable terms. This could result in accounting charges and the assumption of more risk on business already reinsured and could adversely affect our ability to write future business or result in the assumption of more risk with respect to those policies we issue.

Operational 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 breaches, human resource management failures, processing errors, modelling errors, 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 our reputation. Operational risk is also embedded in all the practices we use to manage other risks; therefore, if not managed effectively, operational risk can impact our ability to manage other key risks such as credit risk, market risk, liquidity risk and insurance risk.

Adverse publicity, litigation or regulatory action resulting from our business practices or actions by our employees, representatives and/or business partners, could erode our corporate image and damage our franchise value and/or create losses.

- Manulife's reputation is one of its most valuable assets. Harm to a company's reputation is often a consequence of risk control failure, whether associated with complex financial transactions or relatively routine operational activities. Manulife's reputation could also be harmed by the actions of third parties with whom we do business. Our representatives include affiliated broker-dealers, agents, wholesalers and independent distributors, such as broker-dealers and banks, whose services and representations our customers rely on. Business partners include, among others, third parties to whom we outsource certain functions and that we rely on to fulfill various obligations.
- If any of these representatives or business partners fails to adequately perform their responsibilities, or monitor its own risk, these failures could affect our business reputation and operations. While we seek to maintain adequate internal risk management policies and procedures and protect against performance failures, events may occur that could cause us to lose customers or suffer legal or regulatory sanctions, which could have a material adverse effect on our reputation, our business, and our results of operations. For further discussion of government regulation and legal proceedings refer to "Government Regulation" in MFC's Annual Information Form dated February 18, 2016 and "Legal and Regulatory Proceedings" below.

If we are not able to attract, motivate and retain agency leaders and individual agents, our competitive position, growth and profitability will suffer.

- We must attract and retain sales representatives to sell our products. Strong competition exists among financial services companies for efficient and effective sales representatives. We compete with other financial services companies for sales representatives primarily on the basis of our financial position, brand, support services and compensation and product features. Any of these factors could change either because we change the Company or our products, or because our competitors change theirs and we are unable or unwilling to adapt. If we are unable to attract and retain sufficient sales representatives to sell our products, our ability to compete and revenues from new sales would suffer, which could have a material adverse effect on our business, results of operations and financial condition.

If we are unable to complete key projects on time, on budget, and capture planned benefits, our business strategies and plans, and operations may be impaired.

- We must successfully deliver a number of key projects in order to implement our business strategies and plans. If we are unable to complete these projects in accordance with planned schedules, and to capture projected benefits, there could be a material adverse effect on our business and financial condition.

The inter-connectedness of our operations and risk management strategies could expose us to risk if all factors are not appropriately considered and communicated.

- Our business operations, including strategies and operations related to risk management, asset liability management and liquidity management, are interconnected and increasingly complex. Changes in one area may have a secondary impact in another area of our operations. For example, risk management actions, such as the increased use of interest rate swaps, could have implications for the Company's Investment Division or its Treasury function, as this strategy could result in the need to post additional amounts of collateral. Failure to appropriately consider these inter-relationships, or effectively communicate changes in strategies or activities across our operations, could have a negative impact on the strategic objectives or operations of another group. Further, failure to consider these inter-relationships in our modeling and financial and strategic decision making processes could have a negative impact on our operations.

Our risk management policies, procedures and strategies may leave us exposed to unidentified or unanticipated risks, which could negatively affect our business, results of operations and financial condition.

- We have devoted significant resources to develop our risk management policies, procedures and strategies and expect to continue to do so in the future. Nonetheless, our policies, procedures and strategies may not be comprehensive. Many of our methods for measuring and managing risk and exposures are based upon the use of observed historical market behaviour or statistics based on historical models. As a result, these methods may not fully predict future exposures, which can be significantly greater than our historical measures indicate. Other risk management methods depend upon the evaluation of information regarding markets, clients, catastrophe occurrence or other matters publicly available or otherwise accessible to us. This information may not always be accurate, complete, up-to-date or properly evaluated.

We are subject to tax audits, tax litigation or similar proceedings, and as a result we may owe additional taxes, interest and penalties in amounts that may be material.

- We are subject to income and other taxes in the jurisdictions in which we do business. In determining our provisions for income taxes and our accounting for tax-related matters in general, we are required to exercise judgment. We regularly make estimates where the ultimate tax determination is uncertain. There can be no assurance that the final determination of any tax audit, appeal of the decision of a taxing authority, tax litigation or similar proceedings will not be materially different from that reflected in our historical financial statements. The assessment of additional taxes, interest and penalties could be materially adverse to our current and future results of operations and financial condition.

Our non-North American operations face political, legal, operational and other risks that could negatively affect those operations or our results of operations and financial condition.

- A substantial portion of our revenue and net income attributed to shareholders is derived from our operations outside of North America, primarily in key Asian markets. Some of these key geographical markets are developing and are rapidly growing countries and markets that present unique risks that we do not face, or are negligible, in our operations in Canada or the United States. Our operations outside of North America face the risk of discriminatory regulation, political and economic instability, market volatility and significant inflation, limited protection for, or increased costs to protect intellectual property rights, inability to protect and/or enforce contractual or legal rights, nationalization or expropriation of assets, price controls and exchange controls or other restrictions that prevent us from transferring funds from these operations out of the countries in which they operate or converting local currencies we hold into Canadian or U.S. dollars. Failure to manage these risks could have a significant negative impact on our operations and profitability.
- We are currently planning to expand our global operations in markets where we operate and potentially in new markets. This may require considerable management time, as well as start-up expenses for market development before any significant revenues and earnings are generated. Operations in new foreign markets may achieve low margins or may be unprofitable, and expansion in existing markets may be affected by local economic and market conditions.

We are regularly involved in litigation

- We are regularly involved in litigation, both as a plaintiff or defendant. These cases could result in an unfavourable resolution, and could have a material adverse effect on our results of operations and financial condition.

A technology failure, cyber-attack, information security or privacy breach of ours or of a third party could significantly disrupt our business, impede our ability to conduct business and adversely impact our business, results of operations, financial condition, and reputation.

- Technology is used in virtually all aspects of our business and operations and part of our strategy is to expand our digital customer interfaces. Our technology infrastructure, information services and applications are governed and managed according to standards for operational integrity, resiliency, data integrity, confidentiality and information security policies, standards and controls. Disruption due to system failure, denial of service attacks, security breaches, privacy breaches, human 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, subject us to regulatory sanctions and legal claims, lead to a loss of customers and revenues or otherwise adversely affect us from a financial, operational and reputational perspective.

- It is possible that the Company may not be able to anticipate or to implement effective preventive measures against all security breaches, especially because the techniques used change frequently, generally increase in sophistication, often are not recognized until launched, and because security attacks can originate from a wide variety of sources, including organized crime, hackers, terrorists, activists, and other external parties, including parties sponsored by hostile foreign governments. Those parties may also attempt to fraudulently induce employees, customers, third-party service providers or other users of the Company's systems to disclose sensitive information in order to gain access to the Company's data or that of its customers or clients. We, our customers, regulators and other third parties have been subject to, and are likely to continue to be the target of, cyber-attacks, including computer viruses, malicious or destructive code, phishing attacks, denial of service or information or other security incidents, that could result in the unauthorized release, gathering, monitoring, misuse, loss or destruction of personal, confidential, proprietary and other information of the Company, our employees, our customers or of third parties, or otherwise materially disrupt our or our customers' or other third parties' network access or business operations. The Company maintains cyber risk insurance, but this insurance may not cover all costs associated with the consequences of personal, confidential or proprietary information being compromised.
- In particular, our computer networks are subject to the risk of so-called Advanced Persistent Threats ("APT"). An APT attack is a type of sophisticated malware attack that has become more pervasive and frequent within the financial services sector. An APT attack is a network attack in which an unauthorized person or persons attempt(s) to gain undetected access to a network. The intention of an APT attack is to steal data rather than to cause other damage to the network or organization. APT attacks target organizations in sectors with high-value information, such as national defense, manufacturing and the financial industry. The Company has an Information Risk Management Program, which includes information and cyber security defenses, to protect our networks and systems from attacks, however there can be no assurance that these counter measures will be successful in protecting our networks against APT attacks. An APT attack that results in access to our network could adversely impact us from a financial, operational and reputational perspective.
- DDoS (Distributed Denial of Service) attacks are increasing in frequency and severity, and are gaining recognition as a top method of business disruption. They leverage the massive, distributed, and stolen computing power from infected computers to flood target webservers with traffic. The goal of a DDoS attack is to disrupt the online operations of the target organization by consuming all available network bandwidth and server resources, causing reputational damage. DDoS attacks are now common occurrences, with some research labs reporting thousands of attacks per day.
- Information security breaches could occur and may result in inappropriate or unauthorized disclosure or use of personal and confidential information, which could adversely impact us from a financial, operational and reputational perspective.
- Privacy breaches could occur and may result in the unauthorized disclosure or use of personal and confidential information, which could adversely impact us from a financial, operational and reputational perspective.

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 compete with other insurance companies and financial institutions for qualified executives, employees and agents. We must attract and retain top talent to maintain our competitive advantage. Failure to attract and retain the best people could adversely impact our business.

Model risk may arise from the inappropriate use or interpretation of models or their output, or the use of deficient models, data or assumptions.

- We are relying on some highly complex models for pricing, valuation and risk measurement, and for input to decision making. Consequently, the risk of inappropriate use or interpretation of our models or their output, or the use of deficient models, could have a material adverse effect on our business.
- We have embarked on a multi-year initiative to enhance our valuation models and processes across the organization. We do not expect this initiative to result in significant reserve adjustments. However, as we systematically review our models, there could be updates to our assumptions and methodologies that result in reserve changes.

Environmental risk may arise related to our commercial mortgage loan portfolio and owned property or from our business operations.

- Environmental risk may originate from investment properties that are subject to natural or man-made environmental risk. Real estate assets may be owned, leased and/or managed, as well as mortgaged by Manulife and we might enter into the chain of liability due to foreclosure ownership when in default.
- Liability under environmental protection laws resulting from our commercial mortgage loan portfolio and owned property (including commercial real estate, oil and gas, timberland and farmland properties) may adversely impact our reputation, results of operations and financial condition. Under applicable laws, contamination of a property with hazardous materials or substances may give rise to a lien on the property to secure recovery of the costs of cleanup. In some instances, this lien has priority over the lien of an existing mortgage encumbering the property. The environmental risk may result from on-site or off-site (adjacent) due to migration of regulated pollutants or contaminates with financial or reputational environmental risk and liability consequences by virtue of strict liability. 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.
- Additionally, as lender, we may incur environmental liability (including without limitation liability for clean-up, remediation and damages incurred by third parties) similar to that of an owner or operator of the property, if we or our agents exercise sufficient

control over the operations at the property. We may also have liability as the owner and/or operator of real estate for environmental conditions or contamination that exist or occur on the property, or affecting other property.
- In addition, failure to adequately prepare for the potential impacts of climate change may have a negative impact on our financial position or our ability to operate. Potential impacts may be direct or indirect and may include business losses or disruption resulting from extreme weather conditions; the impact of changes in legal or regulatory framework made to address climate change; or increased mortality or morbidity resulting from environmental damage or climate change.

Additional Risk Factors That May Affect Future Results

- Other factors that may affect future results include changes in government trade policy, monetary policy or fiscal policy; political conditions and developments in or affecting the countries in which we operate; technological changes; public infrastructure disruptions; 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.

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, 2015, 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, 2015.

MFC's Audit Committee has reviewed this MD&A and the 2015 Consolidated Financial Statements and MFC's Board of Directors approved these reports prior to their release.

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, 2015 based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") 2013 framework in Internal Control – Integrated Framework. Based on this assessment, management believes that, as of December 31, 2015, 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, 2015 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, 2015. Their report expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting as of December 31, 2015.

Changes in Internal Control over Financial Reporting

No changes were made in our internal control over financial reporting during the year ended December 31, 2015 that have significantly affected, or are reasonably likely to significantly affect, our internal control over financial reporting, except as noted below.

The Company has completed its assessment of the changes in the control environment due to the acquisition of Standard Life and incorporated it in the Company's assessment of the design effectiveness of disclosure controls and procedures and internal controls 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 financial statements. Non-GAAP measures include: Core Earnings (Loss); Core ROE; Diluted Core Earnings per Common Share; Core Earnings Before Income Taxes, Depreciation and Amortization ("Core EBITDA"); Constant Currency Basis; EPS; Mutual Funds Assets under Management; Assets under Administration; Premiums and Deposits; Assets under Management and Administration; Assets under Management; Capital; Embedded Value; Sales; Gross Flows and Net Flows. Non-GAAP financial measures are not defined terms under GAAP and, therefore, 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.

Core earnings (loss) is a non-GAAP measure which we use to better understand the long-term earnings capacity and valuation of the business. Core earnings excludes the direct impact of changes in equity markets and interest rates as well as a number of other items, outlined below, that are considered material and exceptional in nature. While this metric is relevant to how we manage our business and offers a consistent methodology, it is not insulated from macro-economic factors which can have a significant impact.

Any other future changes to the core earnings definition referred to below, will be disclosed.

Items that are included in core earnings are:

1. Expected earnings on in-force policies, including expected release of provisions for adverse deviation, fee income, margins on group business and spread business such as Manulife Bank and asset fund management.
2. Macro hedging costs based on expected market returns.
3. New business strain.
4. Policyholder experience gains or losses.
5. Acquisition and operating expenses compared with expense assumptions used in the measurement of policy liabilities.
6. Up to $400 million ($200 million prior to 2015) of favourable investment-related experience reported in a single year, which are referred to as "core investment gains". This means up to $100 million in the first quarter, up to $200 million on a year-to-date basis in the second quarter, up to $300 million on a year-to-date basis in the third quarter and up to $400 million on a full year basis in the fourth quarter. Any investment-related experience losses reported in a quarter will be offset against the net year-to-date investment-related experience gains with the difference being included in core earnings subject to a maximum of the year-to-date core investment gains and a minimum of zero. To the extent any investment-related experience losses cannot be fully offset in a quarter they will be carried forward to be offset against investment-related experience gains in subsequent quarters in the same year, for purposes of determining core investment gains.
7. Earnings on surplus other than mark-to-market items. Gains on available-for-sale ("AFS") equities and seed money investments are included in core earnings.
8. Routine or non-material legal settlements.
9. All other items not specifically excluded.
10. Tax on the above items.
11. All tax related items except the impact of enacted or substantially enacted income tax rate changes.

Items excluded from core earnings are:

1. The direct impact of equity markets and interest rates and variable annuity guarantee liabilities, consisting of:
   - The earnings impact of the difference between the net increase (decrease) in variable annuity liabilities that are dynamically hedged and the performance of the related hedge assets. Our variable annuity dynamic hedging strategy is not designed to completely offset the sensitivity of insurance and investment contract liabilities to all risks or measurements associated with the guarantees embedded in these products for a number of reasons, including; provisions for adverse deviation, fund performance, the portion of the interest rate risk that is not dynamically hedged, realized equity and interest rate volatilities and changes to policyholder behaviour.
   - Gains (charges) on variable annuity guarantee liabilities not dynamically hedged.
   - Gains (charges) on general fund equity investments supporting policy liabilities and on fee income.
   - Gains (charges) on macro equity hedges relative to expected costs. The expected cost of macro hedges is calculated using the equity assumptions used in the valuation of insurance and investment contract liabilities.
   - Gains (charges) on higher (lower) fixed income reinvestment rates assumed in the valuation of insurance and investment contract liabilities, including the impact on the fixed income URR.
   - Gains (charges) on sale of AFS bonds and open derivatives not in hedging relationships in the Corporate and Other segment.

2. Net favourable investment-related experience in excess of $400 million ($200 million prior to 2015) per annum or net unfavourable investment-related experience on a year-to-date basis. Investment-related experience relates to fixed income trading, alternative long-duration asset returns, credit experience and asset mix changes. This favourable and unfavourable investment-related experience is a combination of reported investment experience as well as the impact of investing activities on the measurement of our policy liabilities.

3. Mark-to-market gains or losses on assets held in the Corporate and Other segment other than gains on AFS equities and seed money investments in new segregated or mutual funds.
4. Changes in actuarial methods and assumptions, excluding URR.
5. The impact on the measurement of policy liabilities of changes in product features or new reinsurance transactions, if material.
6. Goodwill impairment charges.
7. Gains or losses on disposition of a business.
8. Material one-time only adjustments, including highly unusual/extraordinary and material legal settlements or other items that are material and exceptional in nature.
9. Tax on the above items.
10. Impact of enacted or substantially enacted income tax rate changes.

Core return on common shareholders' equity ("Core ROE") is a non-GAAP profitability measure that presents core earnings available to common shareholders as a percentage of the capital deployed to earn the core earnings. The Company calculates Core ROE using average common shareholders' equity.

Diluted core earnings per common share is core earnings available to common shareholders expressed per diluted weighted average common share outstanding.

The Company also uses financial performance measures that are prepared on a **constant currency basis**, which are non-GAAP measures that exclude the impact of currency fluctuations (from local currency to Canadian dollars at a total company level and from local currency to U.S. dollars in Asia). 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 2015.

Mutual Funds' assets under management ("MF AUM") is a non-GAAP measure of the size of the Company's Canadian mutual fund business. It represents the assets managed by the Company, on behalf of mutual fund clients, on a discretionary basis for which the Company earns investment management fees.

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 Statements of Income and investment contract deposits, (ii) segregated fund deposits, excluding seed money, ("deposits from policyholders"), (iii) mutual fund deposits, (iv) deposits into institutional advisory accounts, (v) premium equivalents for "administration services only" group benefit contracts ("ASO premium equivalents"), (vi) premiums in the Canadian Group Benefits reinsurance ceded agreement, and (vii) other deposits in other managed funds.

Premiums and deposits

(C$ millions)	Quarterly Results 4Q 2015	Quarterly Results 4Q 2014	Full Year Results 2015	Full Year Results 2014
Net premium income and investment contract deposits	**$ 6,740**	$ 4,932	**$ 24,125**	$ 17,952
Deposits from policyholders	**7,740**	5,784	**30,495**	22,695
Mutual fund deposits	**18,361**	10,576	**66,104**	41,483
Institutional advisory account deposits	**5,972**	2,276	**22,148**	8,148
ASO premium equivalents	**833**	773	**3,325**	3,048
Group Benefits ceded premiums	**1,051**	1,023	**4,296**	4,130
Other fund deposits	**140**	132	**510**	475
Total premiums and deposits	**40,837**	25,496	**151,003**	97,931
Currency impact	**–**	3,213	**4,240**	14,312
Constant currency premiums and deposits	**$ 40,837**	$ 28,709	**$ 155,243**	$ 112,243

Assets under management and administration ("AUMA") is a non-GAAP measure of the size of the Company. It is comprised of the non-GAAP measures assets under management ("AUM"), which includes both assets of general account and external client assets for which we provide investment management services, and assets under administration ("AUA"), which includes assets for which we provide administrative services only. Assets under management and administration is a common industry metric for WAM businesses.

Assets under management and administration

As at December 31, (C$ millions)	2015	2014
Total invested assets	**$ 309,267**	$ 269,310
Segregated funds net assets	**313,249**	256,532
Assets under management per financial statements	**622,516**	525,842
Mutual funds	**160,020**	119,593
Institutional advisory accounts (excluding segregated funds)	**68,940**	38,864
Other funds	**7,552**	6,830
Total assets under management	**859,028**	691,129
Other assets under administration	**76,148**	–
Currency impact	**–**	93,581
Constant currency assets under management and administration	**$ 935,176**	$ 784,710

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 accumulated other comprehensive income ("AOCI") on cash flow hedges; and (ii) liabilities for preferred shares and capital instruments.

Capital

As at December 31, (C$ millions)	2015	2014
Total equity	**$ 41,938**	$ 33,926
Add AOCI loss on cash flow hedges	**264**	211
Add liabilities for preferred shares and capital instruments	**7,695**	5,426
Total capital	**$ 49,897**	$ 39,563

Core EBITDA is a non-GAAP measure which Manulife uses to better understand the long-term earnings capacity and valuation of the business on a more comparable basis to how global asset managers are measured. Core EBITDA presents core earnings before the impact of interest, taxes, depreciation, and amortization. Core EBITDA was selected as a key performance indicator for WAM businesses, as EBITDA is widely used among asset management peers, and core earnings is a primary profitability metric for the Company overall.

Wealth and Asset Management

For the years ended December 31, (C$ millions, unaudited)	2015	2014
Core EBITDA	**$ 1,237**	$ 980
Amortization of deferred acquisition costs and other depreciation	**327**	237
Amortization of deferred sales commissions	**106**	90
Core earnings before income taxes	**804**	653
Core income tax (expense) recovery	**(165)**	(151)
Core earnings	**$ 639**	$ 502

Embedded value ("EV") is a measure of the present value of shareholders' interests in the expected future distributable earnings on in-force business reflected in the Consolidated Statement of Financial Position of Manulife, excluding any value associated with future new business. The adjusted net worth is the IFRS shareholders' equity adjusted for goodwill and intangibles, fair value of surplus assets, third party debt, and pension liabilities, and local statutory balance sheet, regulatory reserve, and capital for Manulife's Asian business. The value of in-force business in Canada and the U.S. is the present value of expected future IFRS earnings on in-force business less the present value of the cost of holding capital to support the in-force business under the MCCSR framework. The value of in-force business in Asia reflects local statutory earnings and capital requirements. The value of in-force excludes businesses without material insurance risks, such as Manulife's WAM businesses and Manulife Bank. EV is calculated as the sum of the adjusted net worth and the value of in-force business.

New business value ("NBV") is the change in embedded value as a result of sales in the reporting period. NBV is calculated as the present value of shareholders' interests in expected future distributable earnings, after the cost of capital, on actual new business sold in the period using assumptions that are consistent with the assumptions used in the calculation of embedded value. NBV excludes businesses with immaterial insurance risks, such as Manulife's wealth and asset management businesses and Manulife Bank. NBV is a useful metric to evaluate the value created by the Company's new business franchise.

New business value margin is calculated as NBV divided by annualized premium equivalents ("APE") excluding non-controlling interests. APE is calculated as 100% of annualized first year premiums for recurring premium products, and as 10% of single premiums for single premium products. Both NBV and APE used in the NBV margin calculation are after non-controlling interests and exclude wealth and asset management businesses and Manulife Bank. The NBV margin is a useful metric to help understand the profitability of our new business.

Sales are measured according to product type:
For individual insurance, sales include 100% of new annualized premiums and 10% 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. Single premium is the lump sum premium from the sale of a single premium product, e.g. travel insurance. Sales are reported gross before the impact of reinsurance.

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.

Other Wealth sales include all new deposits into variable and fixed annuity contracts and certain single premium products in Asia. As we discontinued sales of new Variable Annuity contracts in the U.S. in 1Q13, subsequent deposits into existing U.S. Variable Annuity contracts are not reported as sales.

Bank new lending volumes include bank loans and mortgages authorized in the period.

Gross flows is a new business measure for Manulife's WAM businesses and includes all deposits into the Company's mutual funds, college savings 529 plans, group pension/retirement savings products, private wealth and institutional asset management products. Gross flows are a common industry metric for WAM businesses as it provides a measure of how successful the businesses are at attracting assets.

Net flows is presented for our WAM businesses and includes gross flows less redemptions for our mutual funds, college savings 529 plans, group pension/retirement savings products, private wealth and institutional asset management products. Net flows are a common industry metric for WAM businesses as it provides a measure of how successful the businesses are at attracting and retaining assets.

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, 2015, the Company's contractual obligations and commitments are as follows:

Payments due by period (C$ millions)	Total	Less than 1 year	1 to 3 years	3 to 5 years	After 5 years
Long-term debt[1]	$ 2,251	$ 258	$ 610	$ 1,383	$ –
Liabilities for capital instruments[1]	15,043	295	573	529	13,646
Investment commitments	5,680	1,915	2,133	867	765
Operating leases	1,056	162	214	131	549
Insurance contract liabilities[2]	706,145	9,967	13,077	18,825	664,276
Investment contract liabilities[1]	5,903	324	608	570	4,401
Deposits from Bank clients	18,114	14,762	2,495	857	–
Other	3,021	487	469	1,216	849
Total contractual obligations	**$ 757,213**	**$ 28,170**	**$ 20,179**	**$ 24,378**	**$ 684,486**

(1) The contractual payments include principal, interest and distributions. The contractual payments reflect the amounts payable from January 1, 2016 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, 2015 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.

(2) 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.

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.

Two class actions against the Company have been certified and are pending in Quebec (on behalf of Quebec residents only) and Ontario (on behalf of investors in Canada, other than Quebec). The actions in Ontario and Quebec 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 decisions to grant leave and certification have been of a procedural nature only and there has been no determination on the merits of either claim to date. 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 2016 management objectives[25] do not constitute guidance and are based on certain key planning assumptions, including: current accounting and regulatory capital standards; no acquisitions; equity market and interest rate assumptions consistent with our long-term assumptions, and favourable investment experience included in core earnings.

[25] See "Caution regarding forward-looking statements" above.

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 or otherwise stated, unaudited)	Dec 31, 2015	Sept 30, 2015	Jun 30, 2015	Mar 31, 2015	Dec 31, 2014	Sept 30, 2014	Jun 30, 2014	Mar 31, 2014
Revenue								
Premium income								
Life and health insurance	**$ 5,331**	$ 5,092	$ 4,708	$ 4,589	$ 4,305	$ 4,072	$ 3,786	$ 3,696
Annuities and pensions	**1,381**	1,141	869	814	528	556	430	440
Premiums ceded, net of ceded commission and additional consideration relating to Closed Block reinsurance transaction	**–**	(7,996)	–	–	–	–	–	–
Net premium income	**6,712**	(1,763)	5,577	5,403	4,833	4,628	4,216	4,136
Investment income	**2,899**	2,708	3,216	2,642	2,664	2,602	2,809	2,669
Realized and unrealized gains (losses) on assets supporting insurance and investment contract liabilities[1]	**(1,916)**	3,672	(10,161)	5,343	6,182	1,561	4,093	5,256
Other revenue	**2,694**	2,487	2,491	2,426	2,301	2,207	2,108	2,123
Total revenue	**$ 10,389**	$ 7,104	$ 1,123	$ 15,814	$ 15,980	$ 10,998	$ 13,226	$ 14,184
Income (loss) before income taxes	**$ 136**	$ 988	$ 650	$ 844	$ 724	$ 1,392	$ 1,211	$ 937
Income tax (expense) recovery	**76**	(316)	28	(116)	(17)	(287)	(234)	(133)
Net income	**$ 212**	$ 672	$ 678	$ 728	$ 707	$ 1,105	$ 977	$ 804
Net income attributed to shareholders	**$ 246**	$ 622	$ 600	$ 723	$ 640	$ 1,100	$ 943	$ 818
Reconciliation of core earnings to net income attributed to shareholders								
Total core earnings[2]	**$ 859**	$ 870	$ 902	$ 797	$ 713	$ 755	$ 701	$ 719
Other items to reconcile net income attributed to shareholders to core earnings								
Investment-related experience in excess of amounts included in core earnings	**(361)**	(169)	77	(77)	(403)	320	217	225
Direct impact of equity markets, interest rates and variable annuity guarantee liabilities	**(29)**	232	(309)	13	377	70	55	(90)
Impact of major reinsurance transactions, in-force product changes and recapture of reinsurance treaties	**(52)**	–	–	12	–	24	–	–
Net impact of acquisitions and divestitures	**(39)**	(26)	(54)	(30)	12	–	–	–
Change in actuarial methods and assumptions	**(97)**	(285)	(47)	(22)	(59)	(69)	(30)	(40)
Tax items and restructuring charge related to organizational design	**(35)**	–	31	30	–	–	–	4
Net income attributed to shareholders	**$ 246**	$ 622	$ 600	$ 723	$ 640	$ 1,100	$ 943	$ 818
Basic earnings per common share	**$ 0.11**	$ 0.30	$ 0.29	$ 0.36	$ 0.33	$ 0.58	$ 0.49	$ 0.42
Diluted earnings per common share	**$ 0.11**	$ 0.30	$ 0.29	$ 0.36	$ 0.33	$ 0.57	$ 0.49	$ 0.42
Segregated funds deposits	**$ 8,324**	$ 8,401	$ 7,790	$ 8,270	$ 6,240	$ 5,509	$ 5,587	$ 6,776
Total assets (in billions)	**$ 705**	$ 683	$ 659	$ 689	$ 579	$ 555	$ 536	$ 539
Weighted average common shares (in millions)	**1,972**	1,971	1,971	1,936	1,864	1,859	1,854	1,849
Diluted weighted average common shares (in millions)	**1,977**	1,977	1,992	1,959	1,887	1,883	1,878	1,874
Dividends per common share	**$ 0.170**	$ 0.170	$ 0.170	$ 0.155	$ 0.155	$ 0.155	$ 0.13	$ 0.13
CDN$ to US$1 – Statement of Financial Position	**1.3841**	1.3394	1.2473	1.2682	1.1601	1.1208	1.0676	1.1053
CDN$ to US$1 – Statement of Income	**1.3360**	1.3089	1.2297	1.2399	1.1356	1.0890	1.0905	1.1031

[1] 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 gains (losses) on the assets is largely offset in the change in insurance and investment contract liabilities.
[2] Core earnings is a non-GAAP measure. See "Performance and Non-GAAP Measures" above.

Selected Annual Financial Information

As at and for the years ended December 31, (C$ millions, except per share amounts)	2015	2014	2013
Revenue			
Asia Division	**$ 14,078**	$ 11,958	$ 8,898
Canadian Division	**10,073**	13,773	6,060
U.S. Division	**10,058**	28,733	5,739
Corporate and Other	**221**	(76)	(2,058)
Total revenue	**$ 34,430**	$ 54,388	$ 18,639
Total assets	**$ 704,643**	$ 579,406	$ 513,628
Long-term financial liabilities			
Long-term debt	**$ 1,853**	$ 3,885	$ 4,775
Liabilities for preferred shares and capital instruments	**7,695**	5,426	4,385
Total financial liabilities	**$ 9,548**	$ 9,311	$ 9,160
Dividend per common share	**$ 0.665**	$ 0.57	$ 0.52
Cash dividend per Class A Share, Series 1[1]	**0.5125**	1.025	1.025
Cash dividend per Class A Share, Series 2	**1.1625**	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[2]	**–**	0.825	1.65
Cash dividend per Class 1 Share, Series 1[3]	**–**	1.05	1.40
Cash dividend per Class 1 Share, Series 3	**1.05**	1.05	1.05
Cash dividend per Class 1 Share, Series 5	**1.10**	1.10	1.10
Cash dividend per Class 1 Share, Series 7	**1.15**	1.15	1.15
Cash dividend per Class 1 Share, Series 9	**1.10**	1.10	1.10
Cash dividend per Class 1 Share, Series 11	**1.00**	1.00	1.03767
Cash dividend per Class 1 Share, Series 13	**0.95**	0.95	0.47175
Cash dividend per Class 1 Share, Series 15	**0.975**	0.792021	–
Cash dividend per Class 1 Share, Series 17	**0.975**	0.336575	–
Cash dividend per Class 1 Share, Series 19	**0.9884**	–	–

[1] On June 19, 2015, MFC redeemed all of its 14,000,000 outstanding Class A Shares Series 1.
[2] On June 19, 2014, MFC redeemed all of its 18,000,000 outstanding Class A Shares Series 4.
[3] On September 19, 2014, MFC redeemed all of its 14,000,000 outstanding Class 1 Shares Series 1.

Additional Information Available

Additional information relating to Manulife, including MFC's Annual Information Form, is available on the Company's website at www.manulife.com and on SEDAR at www.sedar.com.

Outstanding Shares – Selected Information

Common Shares

As at February 12, 2016, MFC had 1,971,934,996 common shares outstanding.