Manulife Financial Corporation | 2015 Annual Report

Annual Meeting | May 5, 2016

Manulife | John Hancock

Providing strong, reliable, trustworthy and forward-thinking solutions for our customers' most significant financial decisions.

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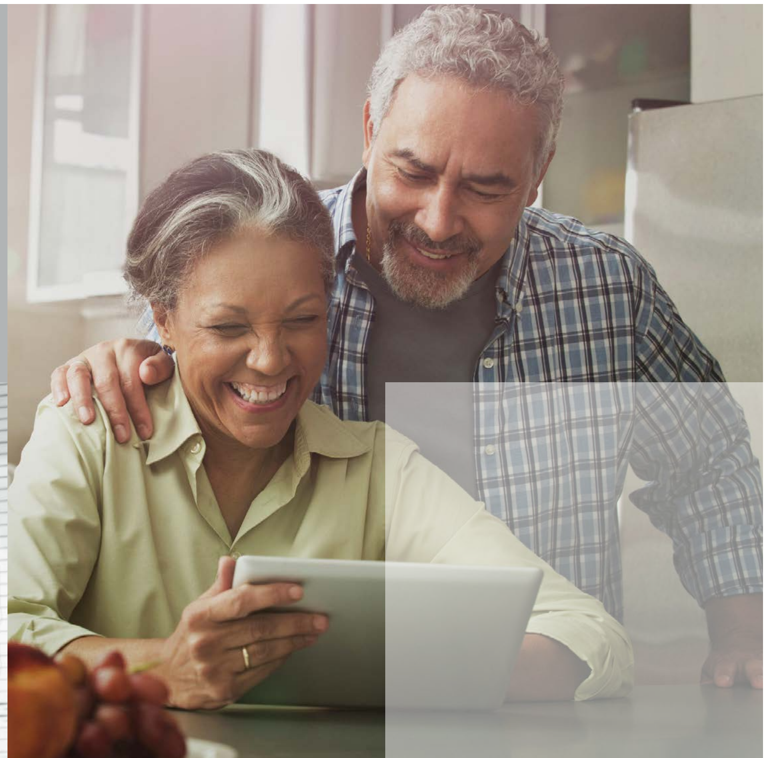
Around the world, we are embracing innovation and technology to capitalize on growth opportunities and deliver extraordinary customer experiences.



Leveraging our global advantage

p.17

We serve

Well-diversified core earnings

- Asia 32%
- Canada 31%
- United States 37%

In 2015, customers received claims, cash surrender values, annuity payments and other benefits valued in excess of

C$24.6 billion

Real estate owned worldwide

64 million square feet

(as at December 31, 2015)

In 2015, our employees volunteered

88,694 hours

Global Wealth and Asset Management net flows in 2015

C$34.4 billion

p.14

As of 2015, the Hancock Natural Resource Group has planted

907 million trees

1 tree for every 8 people on earth

Our diverse products and services

Asia

- Individual life insurance
- Individual living benefits insurance
- Creditor insurance
- Group life & health insurance
- Mutual funds
- Annuities
- Investment-linked products
- Individual retirement savings plans
- Education savings plans
- Group retirement savings plans

1 in 4 & **1 in 3**

adults in Hong Kong | adults in Canada

New York Life and Standard Life acquisitions:

Approx. **+C$100 billion**

in pension assets

in North America

p.19

Promoting

better customer health through wearable technology

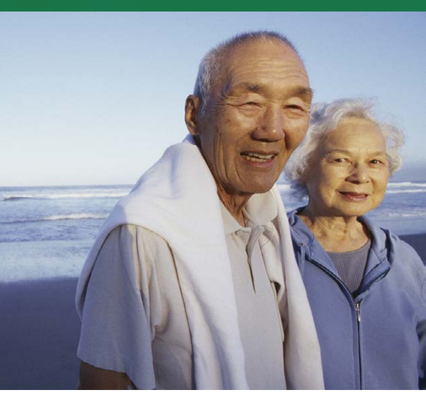
Vitality™ Manulife MOVE

In 2015,

insurance sales grew by

+24%

p.14



1st foreign-invested joint venture life insurance company

licensed to sell mutual funds in China

through our agency force

41%

of our employees worldwide

are under 35 years old

Canada

- Individual life insurance
- Individual living benefits insurance
- Creditor insurance
- Travel insurance
- Group life, health & disability insurance
- Mutual funds
- Annuities
- Private wealth management
- Group retirement savings plans
- Mortgages & investment loans
- High interest savings accounts & Guaranteed Investment Certificates

United States

- Individual life insurance
- Long-term care insurance
- Exchange traded funds
- Mutual funds
- Annuities
- Education savings plans
- Group retirement savings plans

Investment Capabilities

- Public & private bonds
- Public & private equities
- Commercial mortgages
- Real estate
- Oil & gas
- Power & infrastructure
- Renewable energy
- Timberland & farmland
- Asset allocation solutions

Richard B. DeWolfe
Chairman of the Board

To my fellow Shareholders,
I encourage you to look carefully at the details found in this annual report to appreciate the many accomplishments and strong core earnings which were achieved despite the impact of oil and gas prices on our net income.

I do not mean to minimize the importance of strong net income, but the requirements of mark-to-market IFRS accounting can sometimes disconnect those reported results from the strong underlying performance. Our core earnings – although not a GAAP measure – is a better indicator of the underlying earnings capacity of our business. In 2015, Manulife employees and agents in Canada, the United States and throughout Asia worked together to produce a 19% increase in annual core earnings. Our geographic operations enjoyed sales success throughout the year, and our Global Wealth and Asset Management businesses delivered net flows of more than $34 billion, up a remarkable $16 billion from the prior year, while establishing a reputation for innovation and investment performance.

In the last annual report, I was enthusiastic about the acquisition of Standard Life's Canadian operations and the New York Life Retirement Plan Services business. This year, I am pleased to report significant and successful progress toward integration of those businesses, well on track toward completion. As we began 2016, we launched our bancassurance partnership with DBS in Asia, and look forward to adding the Mandatory Provident Fund (pension) business of Standard Chartered in Hong Kong. These transactions not only provide us access to millions of additional customers, but also strengthen our capabilities across our markets for the long term.

Manulife continues its ongoing transformation, developing a true global platform, implementing the latest technology, introducing innovative new products like Vitality and executing on our plan to realign the Company around the customer. The Board of Directors is confident that this customer-centric strategic plan is crucial to building and delivering long-term shareholder value, and we are pleased with the pace at which the Company

is making progress. Notably, Asia and Global Wealth and Asset Management are important drivers of growth, and the Board strongly supports the Company's investments and focus on these areas.

The Board of Directors continues to express great confidence in Manulife's senior leadership team, including our CEO, Donald A. Guloien. His vision is sharpened by his intellectual curiosity and his passion for progress. His energy and ethics set the tone at the top, and his versatility has given the executive management team the guidance and latitude needed to speed the pace of critical decision-making. Manulife's executive management team has been further strengthened by the addition of new specialized and talented executives in every area of the Company. We expect that this team will be well prepared to cope with varied economic conditions and meet the challenges of aggressive competition in the marketplace.

Your Board is strongly supportive of Manulife's strategic plan and the Company's aspirations of becoming a leading global force in insurance and wealth and asset management. At the same time, we are mindful of our responsibilities to shareholders, policyholders, employees and the communities we serve. We understand the head-winds created by volatile markets, low interest rates and slow global growth. We are advocates for maintaining strong capital standards, balanced leverage, strong expense controls, sustainable dividend growth and diligent risk management.

In order to respond to the changing business environment, compliance and regulatory demands, digital disruption and the threats posed by cyber-crime, the Board has revisited its own skills matrix, introduced monthly mandatory education webinars and encouraged more direct on-site oversight visits to both local and global operations.

42%

cumulative increase in our quarterly dividend

in less than two years

(as of February 2016)

During 2015, in addition to our regular eight three-day meetings, nine directors joined me for a four-day review of our U.S. Wealth and Asset Management and Insurance businesses based in Boston, Massachusetts. Two directors served as liaisons to Manulife Bank and we also organized on-site visits to Montreal and the Philippines. We are vitally interested in the culture of the Company and its human resources programs, and are actively monitoring employee satisfaction and engagement. We also participate in employee-targeted programs and meetings to promote diversity and gender equity and encourage mobility and continuing education at Manulife.

I am pleased that the Company was, once again, recognized as one of Canada's governance leaders, and that we enhanced our subsidiary governance program to facilitate greater oversight on the governance practices of our major operating business ventures. For the second consecutive year, we commissioned an independent assessment of Board performance and effectiveness with very positive outcomes.

We continued our active shareholder engagement and outreach programs, and maintained our dialogue with proxy and investor advisory firms to continue to understand how shareholder concerns shape their annual recommendations. We considered their suggestions and advice in producing both our new-look management information circular and this annual report.

As I reflect on 2015, I am disappointed that the impact of weak oil and gas prices and the resulting shortfall in net income has diminished so many positive outcomes and individual accomplishments. However, I expect that the experience will strengthen our resolve and stoke the competitive spirit which has been so evident this past year.

I am thankful for and honoured by the support I have received from shareholders and from my Board colleagues, who inspire me with their unselfish hard work and commitment to Manulife. I am also very proud to be associated with what I see as the heart of our Company, which is demonstrated by thousands of our employees who donate their time, talent and income to charitable causes around the globe in every community we serve.

In Canada, Manulife, its employees, advisors and retirees raised almost $3.6 million for the United Way and other registered charities helping people in need.

In the United States, John Hancock contributed $1 million U.S. to the MLK Summer Scholars program, which provides hundreds of jobs to city teens in Boston. The goal of this program is to help Boston teens gain meaningful work experiences and develop the skills they need to succeed in college and in their careers.

In Asia, approximately 3,000 Manulife employees participated in the 2015 Walks for Millions, annual events to raise money for social welfare agencies under the umbrella of the Community Chest of Hong Kong.

In closing, as I write this letter, market volatility persists, and it remains difficult to obtain a clear view of the future. In spite of macroeconomic headwinds, your Board continues to work with vigilance on your behalf towards ever greater success, and I can tell you with certainty that Manulife remains committed to meeting our clients' holistic needs and providing more financial certainty in this uncertain world.

RB DeWolfe

Richard B. DeWolfe
Chairman of the Board

Donald A. Guloien
President and
Chief Executive Officer

Quite frankly, the year 2015 results for Manulife contained mixed outcomes: strong operating results, a 19% increase in core earnings, and significant progress on our strategic plan; but disappointing net income, primarily due to the mark-to-market decline in oil and gas valuations.

Of those four measures, the first three are by far the most important, because they speak to the long-term success of our Company; and the latter reflects short-term market movements.

In terms of operating results, we paid our customers claims, cash surrender values, annuity payments and other benefits worth more than $24.6 billion, and thanks to the trust our customers place in us, we now manage and administer a record $935 billion in assets.

With the dedicated effort of our Company's approximately 34,000 employees and 63,000 agents around the world, we delivered outstanding growth: total insurance sales were up 24% in 2015, while gross flows in our Global Wealth and Asset Management business rose 46%. Most significantly, we are growing our businesses most rapidly in the areas where we derive the highest shareholder return, measured by return on equity – particularly in Asia and Global Wealth and Asset Management – while continuing to service legacy blocks of business which still carry high capital.

We also remained focused on closely managing our expenses, and throughout 2015 we continued to drive significant cost savings through our Efficiency and Effectiveness initiative. We delivered approximately $350 million in net pre-tax savings in 2015, and are on track to exceed our target of $400 million in 2016. The money we save will help fund longer-term strategic initiatives, and the work to make our operations more efficient and effective will continue well after we have reached our target.

As a result of all of the above, our core earnings rose 28%, before giving effect to investment-related impacts, and 19% taking investment gains and losses into account. This result was ahead of plan, and highlighted Manulife's powerful operating momentum. We finished the year with a strong capital ratio of 223% and reduced our leverage ratio by four percentage points, to 23.8%.

Subsequent to year end, we raised our dividend once again, for a total of three times in less than two years, with a cumulative increase of 42%. This reflects your Board's confidence in Manulife's ability to deliver strong, consistent core earnings

#1 most trusted insurance brand in Canada

(Gustavson Brand Trust Index)

growth, as well as our robust capital ratio and lower leverage ratio.

Throughout the year, we made important progress on our customer-centric strategy, we capitalized on the growth opportunities we have developed in each of our businesses, and we continued to innovate to ensure we remain relevant and agile in a rapidly changing world.

IMPACT OF LOWER ENERGY PRICES ON NET INCOME AND SHAREHOLDER VALUE

Despite the strategic and operating success we saw throughout 2015, the year was disappointing in terms of net income, largely due to the accounting impact of the decline in oil and gas prices.

When reviewing Manulife's net income, it is important to remember that in order to meet our long-term obligations, we invest for the very long term across a variety of asset classes, much as a pension plan would do. Despite the fact that we benefit by taking this long-term view, our investments are marked to market on a quarterly basis – and this can produce significant swings in net income in the short term.

Over the past five years, investment experience has been highly positive, leading to an almost linear increase in net income. Some of you may even recall my past warnings that while this has been very positive for the Company, it would be overly optimistic to assume this trajectory would continue unabated. In 2015, that came to happen: the drastic decline in energy prices led to fair value adjustment charges of $876 million. Although other assets in our portfolio performed well, recording investment-related gains of $346 million, this led to a year-over-year decline of 37% in net income, to $2.2 billion – clearly a disappointing result.

In terms of energy prices, we expect that volatility will likely persist into 2016, and it would be reasonable to expect that continued weakness or any further declines in oil and gas prices would have an adverse impact on our investment experience and earnings. Over the long term, which is the horizon for which we manage the Company, we expect positive results from the range of assets we invest in – real estate, energy, timber, agriculture and equities – in order to meet our long-term obligations, and deliver shareholder return.

Delivered innovative digital platforms to engage with customers.

- Serving our mainland Chinese customers through social media
- Enabling Canadian customers to envision their life after retirement
- Equipping agents in Asia with a world-class tablet application
- Promoting better health through wearable technology in the U.S.

Manulife produced a negative Total Shareholder Return (TSR) of 3.7% in 2015. While this outperformed the TSR of the S&P/TSX index by 4.6 percentage points, both our share price and Canadian equity prices in general were adversely impacted by macroeconomic concerns, with low oil and gas prices again playing a central role. This was disappointing, but we believe that if we stay the course, we will be rewarded with a higher TSR in the future, as we have in the past.

DELIVERING ON OUR STRATEGIC PLAN

As a result of new technology, innovation and education, customer expectations are increasing in every aspect of life, including financial services. Accordingly, Manulife will continue to aggressively invest in innovation and the deployment of technology throughout the Company, for the betterment of our offerings to customers, and for enhanced shareholder return.

Our investments will be balanced: we will use technology to attract, retain and better serve our customers; to serve distributors and help them use our products; to build our brand; to improve efficiency and make our people more effective, productive and collaborative; and to help manage risk, improve our reporting and our security, and advance our use of information and analytics.

“I don’t feel like a customer, I feel like a friend.”

Customer, Hong Kong

“Your excellent help with my father’s estate made me decide to keep investing with Manulife and to continue to build this great relationship. Thank you!”

Customer, United States

Our bold strategy has three key themes:

- We will develop more holistic and long-lasting customer relationships.
- We will continue 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.
- We will leverage skills and experiences across our international operations.

Over the course of 2015, we made meaningful progress on all of these fronts, with the goal of putting our customers at the centre of everything we do.

We launched tools, products and services, including electronic Point of Sale and our innovative ManulifeMOVE product in Asia; we entered the Exchange Traded Fund market and launched LifeTrack and 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 in strengthening our ability to provide holistic solutions to our customers in a growing market.

Across the Company, we continue to embrace innovation and technology. We opened our Labs of Forward Thinking in Boston and Toronto, establishing hubs for innovative thought in partnership with start-ups, universities and innovators, including those in Silicon Valley.

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 have also appointed a Chief Innovation Officer, who will be responsible for pursuing new business opportunities by partnering, investing in, and potentially forming joint ventures with outside entities to accelerate initiatives with the largest potential impact.

We are also successfully expanding the channels through which we reach our customers. For example, in 2015 we sold insurance policies over the WeChat messaging app in Asia and the results exceeded our expectations. In Canada, our direct CoverMe offering has generated exciting results.

Our rapidly growing Asia and Global Wealth and Asset Management businesses are delivering our highest returns. To capitalize on the opportunity they represent, we continued to add new capabilities and scale throughout the year.

We successfully completed the acquisitions of the Canadian-based operations of Standard Life, as well as New York Life’s Retirement Plan Services business in the U.S. We signed an exclusive regional distribution agreement with DBS covering four markets in Asia. DBS is the biggest bank in Singapore by a considerable margin, with ambitions to be a true regional champion, which makes it a great partner for us as we continue to build out our businesses in the region. We announced a Mandatory Provident Fund distribution partnership with Standard Chartered in Hong Kong, as well as a related acquisition. We also signed other smaller distribution agreements with local banks in the region during the year.

We expect all of these investments will contribute significantly to Manulife's future growth as we more fully leverage our footprint to deliver holistic wealth and insurance solutions to our customers around the world.

We are proud of the growth we have experienced in our Asia business, and the various initiatives which are driving our success there. We believe that we have the appropriate business mix and the right strategic partnerships, and that we operate in the best markets to further build on our momentum in the region.

When discussing our presence in Asia, I am sometimes asked about our operations in Japan, given that country's low-growth economy. While it's true that Japan's economy has experienced challenges, we are a nimble player and we have been very successful in identifying opportunities and driving business growth in that country. Manulife's insurance sales in Japan have grown by an average of 23% per year over the last decade and in 2015, the business experienced significant improvement in new business value margins. We also manage approximately $12 billion on behalf of our institutional customers in this market.

During 2015, Manulife Asset Management also continued to build its business in Europe, with the goal of expanding our product offering and further establishing and enhancing our brand as a premier asset manager across global markets. This included key leadership appointments in product and distribution in our London office, complementing earlier build-out of our investment teams. We also continue to pursue our institutional and wholesale expansion into Europe, the Middle East and Latin American markets.

The global nature of our business is integral to our ongoing success and, consequently, we are working to adopt a truly global mindset in transferring both people and ideas across our geographies. For example, across the Company we are sharing the experience we gathered from launching wellness programs in the U.S. and Asia, and the lessons from the mobile success we've seen in Asia are being shared with our North American businesses.

RECOGNITION OF OUR SUCCESS

Aside from strictly financial measures of progress, we strive for excellence in how we operate, what sort of workplace experience we offer our

> "Everyone I've dealt with at Manulife has provided excellent care and service to my husband and me. I simply feel healthier and better equipped to cope with my disabilities."

Customer, Canada

"You completely dealt with my needs in a very professional way, and with empathy and kindness."

Customer, Hong Kong

employees, and how we deliver for our customers and communities. Success in these areas is often reflected in awards earned by our businesses around the world.

Some of our most significant awards this year were those which speak to the character of our organization and the customer trust which our employees earn through their numerous contributions.

To that end, I was delighted we were named the Most Trusted Insurance Brand in Canada by the Gustavson School of Business. In Asia, we won the Reader's Digest Trusted Brands Award, and Manulife-Sinochem was named the Most Reputable Brand at the 2015 China Finance Summit.

We earned other important accolades throughout the year. In Canada, we won the Glassdoor Employees' Choice Award, placing us on its list of the Best Places to Work in 2016. We won this award because a number of our employees took their own time to volunteer comments and insights about our Company on the Glassdoor website. To me, this award is a direct acknowledgement that we are moving in the right direction as we continue to strengthen our culture and workplace experience.

We were also named one of Canada's 10 Most Admired Corporate Cultures, and were again chosen one of Canada's Top Employers for Young People. John Hancock was named one of the Best Places to Work for LGBT Equality by Human Rights Campaign.

A NOTE OF THANKS

Our Board of Directors had a clear message for our management team at our planning session in Montreal in October: go faster, be bolder – the world is changing rapidly and we want to lead, not follow. I am personally grateful for the Board's ongoing counsel and guidance, and sincerely appreciate their enthusiastic support of Manulife's strategic direction.

Any strategy is only as good as the teams we have in place to execute it, and our success wouldn't be possible without the efforts of our employees, our agents and our other distribution partners around the world. I want to thank everyone for everything they do each day to serve our customers and contribute to the strength of our Company.

I would also like to thank our shareholders for the trust they continue to place in our Company, strategy and team. I am confident Manulife is strongly positioned to build on our momentum in 2016 and beyond and to achieve the long-term objectives and goals we have set for ourselves.

Donald A. Guloien
President and
Chief Executive Officer

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
Annual Report

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 $ 2015	Canadian $ 2014	Canadian $ 2013	US $ 2015	US $ 2014	US $ 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.

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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.

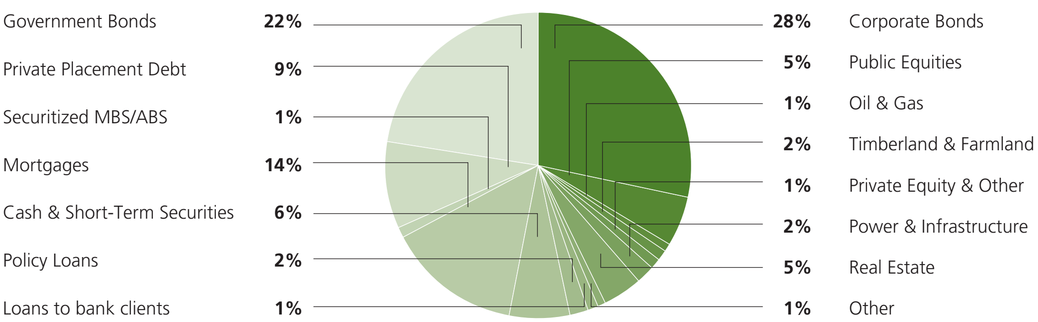
General Fund

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.

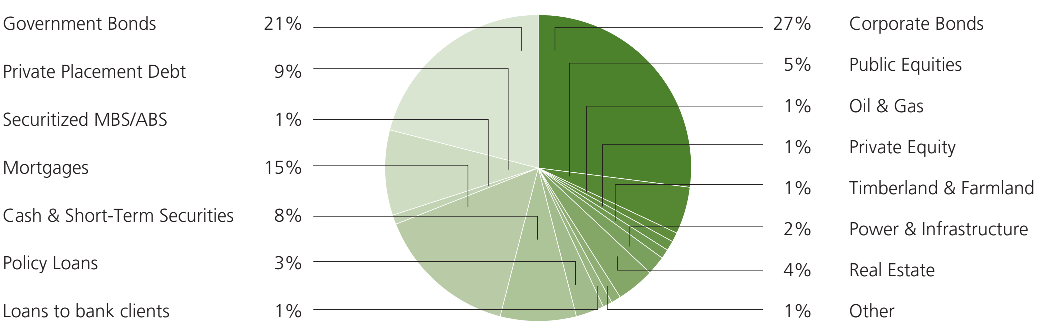
General Fund Assets

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.

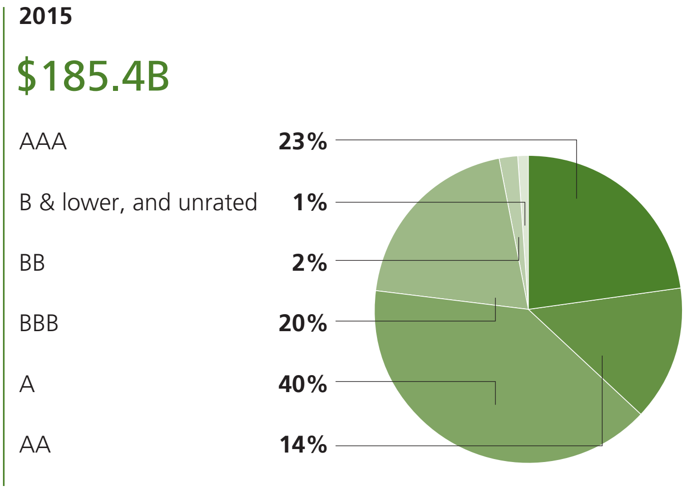
The large change in net unrealized and realized gains (losses) related to the changes in interest rates and equity markets. In 2015, the general increase in U.S. interest rates resulted in losses of $4.0 billion (2014 – gains of $8.9 billion) on debt securities. Declines in equity markets in 2015 resulted 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.

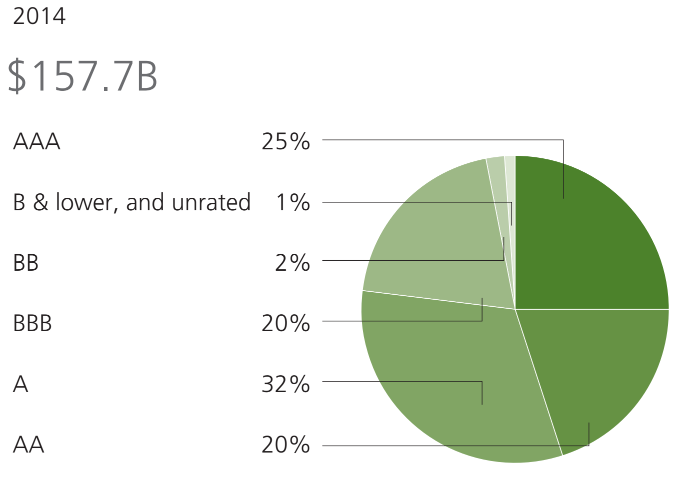
As the measurement of insurance and investment contract liabilities includes estimates regarding future expected investment income on assets supporting the insurance and investment contract liabilities, only the difference between the mark-to-market accounting on the measurement of both assets and liabilities 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]





[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	 Private placement debt	 Total	2014 Debt securities	 Private placement debt	 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.

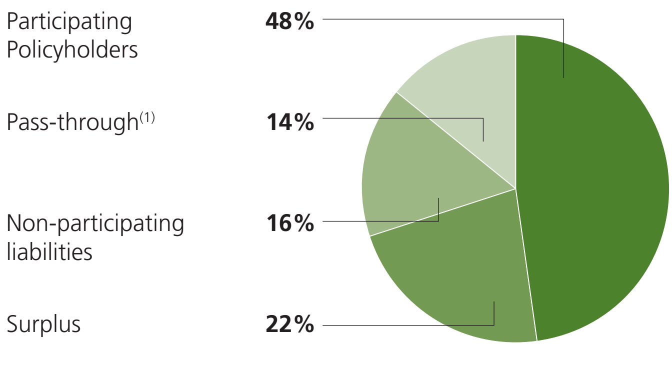
Public Equities

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

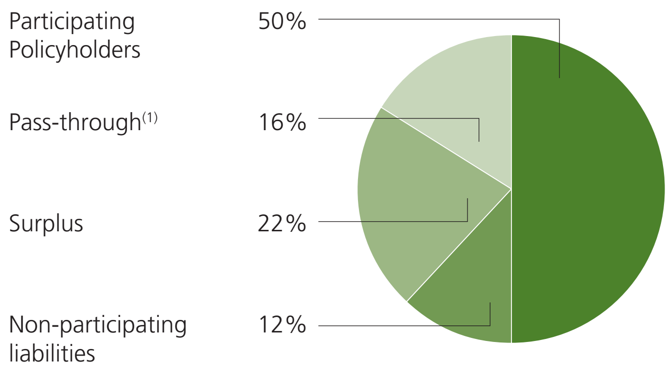
2015

$17.0B



2014

$14.5B



(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

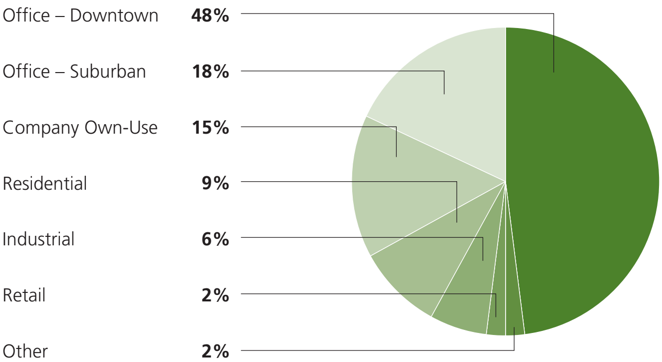
Real Estate

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:

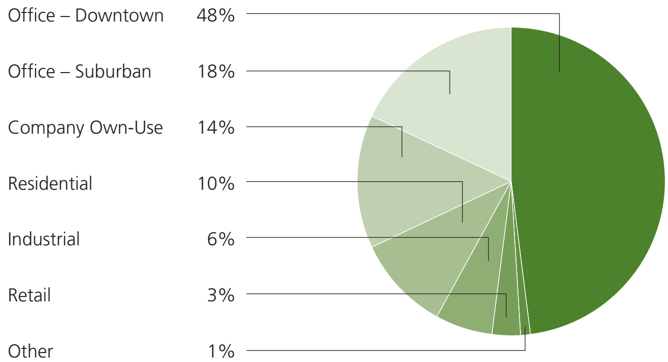
2015

$16.4B[(1)]



2014

$10.8B[(1)]



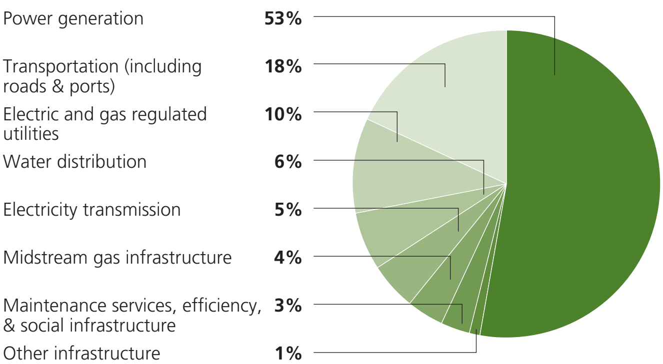
(1) These figures represent the fair value of the real estate portfolio. The carrying value of the portfolio was $15.3 billion and $10.1 billion at December 31, 2015 and December 31, 2014, respectively.

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:

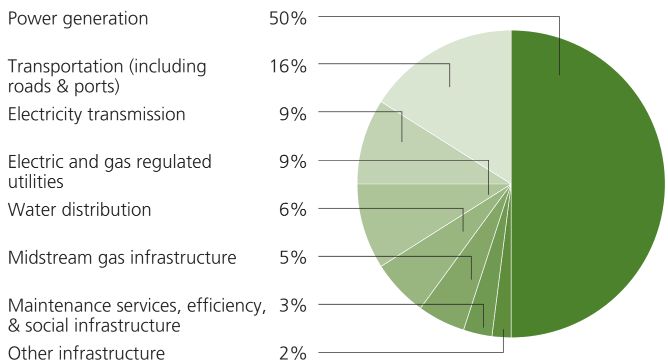
2015

$5.3B



2014

$4.0B



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.

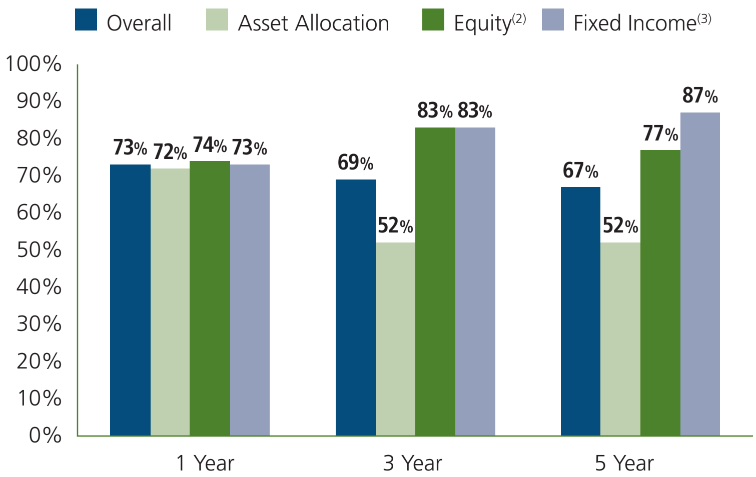
Total MAM External AUM by Client Geography

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 institutional 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

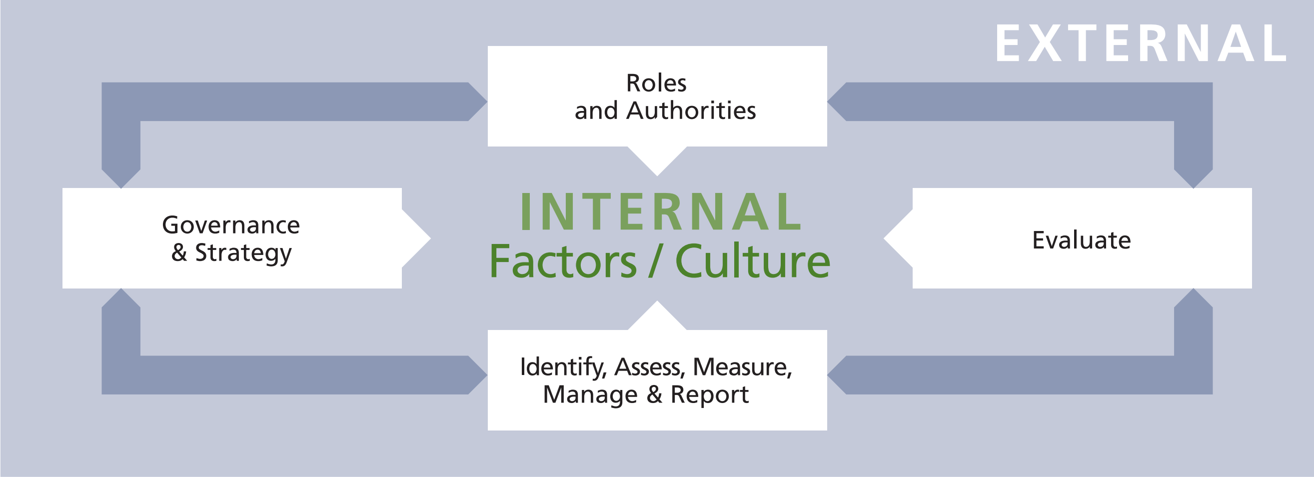
Risk Management

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,	**2015**		2014	
(C$ millions)	-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,	**2015**		2014	
(C$ millions)	-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** -10%	**2015** 10%	2014 -10%	2014 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** +10% strengthening	**2015** -10% weakening	2014 +10% strengthening	2014 -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.

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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

	Increase (decrease) in after-tax income			
As at	**December 31, 2015**		December 31,2014	
(C$ millions)	Increase	Decrease	Increase	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.
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	4Q 2014	Full Year Results 2015	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.

Responsibility for Financial Reporting

The accompanying consolidated financial statements of Manulife Financial Corporation are the responsibility of management and have been approved by the Board of Directors. It is also the responsibility of management to ensure that all information in the annual report to shareholders is consistent with these consolidated financial statements.

The consolidated financial statements have been prepared by management in accordance with International Financial Reporting Standards and the accounting requirements of the Office of the Superintendent of Financial Institutions, Canada. When alternative accounting methods exist, or when estimates and judgment are required, management has selected those amounts that present the Company's financial position and results of operations in a manner most appropriate to the circumstances.

Appropriate systems of internal control, policies and procedures have been maintained to ensure that financial information is both relevant and reliable. The systems of internal control are assessed on an ongoing basis by management and the Company's internal audit department.

The actuary appointed by the Board of Directors (the "Appointed Actuary") is responsible for ensuring that assumptions and methods used in the determination of policy liabilities are appropriate to the circumstances and that reserves will be adequate to meet the Company's future obligations under insurance and annuity contracts.

The Board of Directors is responsible for ensuring that management fulfills its responsibility for financial reporting and is ultimately responsible for reviewing and approving the consolidated financial statements. These responsibilities are carried out primarily through an Audit Committee of unrelated and independent directors appointed by the Board of Directors.

The Audit Committee meets periodically with management, the internal auditors, the external auditors and the Appointed Actuary to discuss internal control over the financial reporting process, auditing matters and financial reporting issues. The Audit Committee reviews the consolidated financial statements prepared by management and then recommends them to the Board of Directors for approval. The Audit Committee also recommends to the Board of Directors and shareholders the appointment of external auditors and approval of their fees.

The consolidated financial statements have been audited by the Company's external auditors, Ernst & Young LLP, in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States). Ernst & Young LLP has full and free access to management and the Audit Committee.

Donald A. Guloien
President and Chief Executive Officer

Steve B. Roder
Senior Executive Vice President and Chief Financial Officer

Toronto, Canada

February 18, 2016

Appointed Actuary's Report to the Shareholders

I have valued the policy liabilities and reinsurance recoverables of Manulife Financial Corporation for its Consolidated Statements of Financial Position as at December 31, 2015 and 2014 and their change in the Consolidated Statements of Income for the years then ended in accordance with actuarial practice generally accepted in Canada, including selection of appropriate assumptions and methods.

In my opinion, the amount of policy liabilities net of reinsurance recoverables makes appropriate provision for all policyholder obligations and the consolidated financial statements fairly present the results of the valuation.

Cindy Forbes, F.C.I.A.
Executive Vice President and Appointed Actuary

Toronto, Canada

February 18, 2016

Independent Auditors' Report of Registered Public Accounting Firm

To the Shareholders of Manulife Financial Corporation

We have audited the accompanying consolidated financial statements of Manulife Financial Corporation, which comprise the Consolidated Statements of Financial Position as at December 31, 2015 and 2014, and the Consolidated Statements of Income, Comprehensive Income, Changes in Equity and Cash Flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Manulife Financial Corporation as at December 31, 2015 and 2014, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board.

Other Matter

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Manulife Financial Corporation's internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 18, 2016 expressed an unqualified opinion on Manulife Financial Corporation's internal control over financial reporting.

Ernst & Young LLP

Chartered Professional Accountants
Licensed Public Accountants

Toronto, Canada

February 18, 2016

Independent Auditors' Report of Registered Public Accounting Firm on Internal Control Under Standards of The Public Company Accounting Oversight Board (United States)

To the Shareholders of Manulife Financial Corporation

We have audited Manulife Financial Corporation's internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Manulife Financial Corporation's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in Management's Report on Internal Control Over Financial Reporting contained in the Management's Discussion and Analysis. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Manulife Financial Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on the COSO criteria.

We also have audited, in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States), the Consolidated Statements of Financial Position as at December 31, 2015 and 2014, and the Consolidated Statements of Income, Comprehensive Income, Changes in Equity and Cash Flows for the years then ended of Manulife Financial Corporation, and our report dated February 18, 2016, expressed an unqualified opinion thereon.

Ernst & Young LLP

Chartered Professional Accountants
Licensed Public Accountants

Toronto, Canada

February 18, 2016

Consolidated Statements of Financial Position

As at December 31, (Canadian $ in millions)	2015	2014
Assets		
Cash and short-term securities	$ 17,885	$ 21,079
Debt securities	157,827	134,446
Public equities	16,983	14,543
Mortgages	43,818	39,458
Private placements	27,578	23,284
Policy loans	7,673	7,876
Loans to Bank clients	1,778	1,772
Real estate	15,347	10,101
Other invested assets	20,378	16,751
Total invested assets (note 4)	309,267	269,310
Other assets		
Accrued investment income	2,275	2,003
Outstanding premiums	878	737
Derivatives (note 5)	24,272	19,315
Reinsurance assets (note 8)	35,426	18,525
Deferred tax assets (note 6)	4,067	3,329
Goodwill and intangible assets (note 7)	9,384	5,461
Miscellaneous	5,825	4,194
Total other assets	82,127	53,564
Segregated funds net assets (note 22)	313,249	256,532
Total assets	$ 704,643	$ 579,406
Liabilities and Equity		
Liabilities		
Insurance contract liabilities (note 8)	$ 287,059	$ 229,513
Investment contract liabilities (note 9)	3,497	2,644
Deposits from Bank clients	18,114	18,384
Derivatives (note 5)	15,050	11,283
Deferred tax liabilities (note 6)	1,235	1,228
Other liabilities	14,953	14,365
	339,908	277,417
Long-term debt (note 11)	1,853	3,885
Liabilities for preferred shares and capital instruments (note 12)	7,695	5,426
Liabilities for subscription receipts (note 3)	–	2,220
Segregated funds net liabilities (note 22)	313,249	256,532
Total liabilities	662,705	545,480
Equity		
Preferred shares (note 13)	2,693	2,693
Common shares (note 13)	22,799	20,556
Contributed surplus	277	267
Shareholders' retained earnings	8,398	7,624
Shareholders' accumulated other comprehensive income (loss):		
Pension and other post-employment plans	(521)	(529)
Available-for-sale securities	345	794
Cash flow hedges	(264)	(211)
Translation of foreign operations and real estate revaluation surplus	7,432	2,112
Total shareholders' equity	41,159	33,306
Participating policyholders' equity	187	156
Non-controlling interests	592	464
Total equity	41,938	33,926
Total liabilities and equity	$ 704,643	$ 579,406

The accompanying notes are an integral part of these Consolidated Financial Statements.

Donald A. Guloien
President and Chief Executive Officer

Richard B. DeWolfe
Chairman of the Board of Directors

Consolidated Statements of Income

For the years ended December 31, (Canadian $ in millions except per share amounts)	2015	2014
Revenue		
Premium income		
Gross premiums	$ 32,020	$ 25,156
Premiums ceded to reinsurers	(8,095)	(7,343)
Premiums ceded, net of commission and additional consideration relating to Closed Block reinsurance transaction (note 3)	(7,996)	–
Net premiums	15,929	17,813
Investment income (note 4)		
Investment income	11,465	10,744
Realized and unrealized gains (losses) on assets supporting insurance and investment contract liabilities and on the macro hedge program	(3,062)	17,092
Net investment income	8,403	27,836
Other revenue	10,098	8,739
Total revenue	34,430	54,388
Contract benefits and expenses		
To contract holders and beneficiaries		
Gross claims and benefits (note 8)	23,761	20,318
Change in insurance contract liabilities	7,452	24,185
Change in investment contract liabilities	203	65
Benefits and expenses ceded to reinsurers	(7,265)	(6,709)
Change in reinsurance assets (note 3)	(6,810)	506
Net benefits and claims	17,341	38,365
General expenses	6,221	4,772
Investment expenses (note 4)	1,615	1,319
Commissions	5,176	4,250
Interest expense	1,101	1,131
Net premium taxes	358	287
Total contract benefits and expenses	31,812	50,124
Income before income taxes	2,618	4,264
Income tax expense (note 6)	(328)	(671)
Net income	$ 2,290	$ 3,593
Net income attributed to:		
Non-controlling interests	$ 69	$ 71
Participating policyholders	30	21
Shareholders	2,191	3,501
	$ 2,290	$ 3,593
Net income attributed to shareholders	2,191	3,501
Preferred share dividends	(116)	(126)
Common shareholders' net income	$ 2,075	$ 3,375
Earnings per share		
Basic earnings per common share (note 13)	$ 1.06	$ 1.82
Diluted earnings per common share (note 13)	1.05	1.80
Dividends per common share	0.665	0.57

The accompanying notes are an integral part of these Consolidated Financial Statements.

Consolidated Statements of Comprehensive Income

For the years ended December 31, (Canadian $ in millions)	2015	2014
Net income	**$ 2,290**	$ 3,593
Other comprehensive income ("OCI"), net of tax		
Items that may be subsequently reclassified to net income:		
Foreign exchange gains (losses) on:		
Translation of foreign operations	**5,450**	1,888
Net investment hedges	**(131)**	(34)
Available-for-sale financial securities:		
Unrealized gains (losses) arising during the year	**(165)**	700
Reclassification of net realized gains and impairments to net income	**(283)**	(231)
Cash flow hedges:		
Unrealized losses arising during the year	**(64)**	(136)
Reclassification of realized losses to net income	**11**	9
Share of other comprehensive income (loss) of associates	**(3)**	4
Total items that may be subsequently reclassified to net income	**4,815**	2,200
Items that will not be reclassified to net income:		
Change in pension and other post-employment plans	**8**	(77)
Real estate revaluation reserve	**2**	1
Total items that will not be reclassified to net income	**10**	(76)
Other comprehensive income, net of tax	**4,825**	2,124
Total comprehensive income, net of tax	**$ 7,115**	$ 5,717
Total comprehensive income attributed to:		
Non-controlling interests	**$ 67**	$ 74
Participating policyholders	**31**	22
Shareholders	**7,017**	5,621

Income Taxes included in Other Comprehensive Income

For the years ended December 31, (Canadian $ in millions)	2015	2014
Income tax expense (recovery) on		
Unrealized foreign exchange gains/losses on translation of foreign operations	**$ 5**	$ 9
Unrealized foreign exchange gains/losses on net investment hedges	**(48)**	(12)
Unrealized gains/losses on available-for-sale financial securities	**(120)**	162
Reclassification of realized gains/losses and recoveries/impairments to net income on available-for-sale financial securities	**(36)**	(62)
Unrealized gains/losses on cash flow hedges	**(39)**	(69)
Reclassification of realized gains/losses to net income on cash flow hedges	**6**	5
Share of other comprehensive income (loss) of associates	**(1)**	2
Change in pension and other post-employment plans	**(11)**	(33)
Real estate revaluation reserve	**1**	1
Total income tax expense (recovery)	**$ (243)**	$ 3

The accompanying notes are an integral part of these Consolidated Financial Statements.

Consolidated Statements of Changes in Equity

For the years ended December 31, (Canadian $ in millions)	2015	2014
Preferred shares		
Balance, beginning of year	**$ 2,693**	$ 2,693
Issued (note 13)	**–**	800
Redeemed (note 13)	**–**	(784)
Issuance costs, net of tax	**–**	(16)
Balance, end of year	**2,693**	2,693
Common shares		
Balance, beginning of year	**20,556**	20,234
Issued on exercise of stock options	**37**	43
Issued under dividend reinvestment and share purchase plans	**–**	279
Issued in exchange of subscription receipts (note 3)	**2,206**	–
Balance, end of year	**22,799**	20,556
Contributed surplus		
Balance, beginning of year	**267**	256
Exercise of stock options and deferred share units	**(6)**	(3)
Stock option expense	**16**	14
Balance, end of year	**277**	267
Shareholders' retained earnings		
Balance, beginning of year	**7,624**	5,294
Net income attributed to shareholders	**2,191**	3,501
Preferred share dividends	**(116)**	(126)
Par redemption value in excess of carrying value for preferred shares redeemed	**–**	(16)
Common share dividends	**(1,301)**	(1,029)
Balance, end of year	**8,398**	7,624
Shareholders' accumulated other comprehensive income (loss) ("AOCI")		
Balance, beginning of year	**2,166**	46
Change in unrealized foreign exchange gains (losses) of net foreign operations	**5,319**	1,854
Change in actuarial gains (losses) on pension and other post-employment plans	**8**	(77)
Change in unrealized gains (losses) on available-for-sale financial securities	**(446)**	466
Change in unrealized gains (losses) on derivative instruments designated as cash flow hedges	**(53)**	(127)
Change in real estate revaluation reserve	**1**	–
Share of other comprehensive income (loss) of associates	**(3)**	4
Balance, end of year	**6,992**	2,166
Total shareholders' equity, end of year	**41,159**	33,306
Participating policyholders' equity		
Balance, beginning of year	**156**	134
Net income attributed to participating policyholders	**30**	21
Other comprehensive income attributed to policyholders	**1**	1
Balance, end of year	**187**	156
Non-controlling interests		
Balance, beginning of year	**464**	376
Net income attributed to non-controlling interests	**69**	71
Other comprehensive Income (loss) attributed to non-controlling interests	**(2)**	3
Contributions, net	**61**	14
Balance, end of year	**592**	464
Total equity, end of year	**$ 41,938**	$ 33,926

The accompanying notes are an integral part of these Consolidated Financial Statements.

Consolidated Statements of Cash Flows

For the years ended December 31, (Canadian $ in millions)	2015	2014
Operating activities		
Net income	**$ 2,290**	$ 3,593
Adjustments:		
Increase in insurance contract liabilities	**7,452**	24,185
Increase in investment contract liabilities	**203**	65
Decrease in reinsurance assets, excluding the impact of Closed Block reinsurance transaction (note 3)	**1,391**	506
Amortization of (premium) discount on invested assets	**90**	(1)
Other amortization	**580**	462
Net realized and unrealized (gains) losses and impairments on assets	**3,487**	(17,312)
Deferred income tax expense (recovery)	**(343)**	98
Stock option expense	**16**	14
Cash provided by operating activities before undernoted items	**15,166**	11,610
Cash decrease due to Closed Block reinsurance transaction (note 3)	**(2,023)**	–
Changes in policy related and operating receivables and payables	**(2,809)**	(804)
Cash provided by operating activities	**10,334**	10,806
Investing activities		
Purchases and mortgage advances	**(77,109)**	(62,754)
Disposals and repayments	**66,950**	58,871
Change in investment broker net receivables and payables	**102**	16
Net cash decrease from sale and purchase of subsidiaries and businesses	**(3,808)**	(199)
Cash used in investing activities	**(13,865)**	(4,066)
Financing activities		
Increase (decrease) in repurchase agreements and securities sold but not yet purchased	**(212)**	273
Repayment of long-term debt (note 11)	**(2,243)**	(1,000)
Issue of capital instruments, net (note 12)	**2,089**	995
Redemption of capital instruments (note 12)	**(350)**	–
Issue of subscription receipts (note 3)	**–**	2,220
Funds borrowed (repaid), net	**(46)**	1
Secured borrowing from securitization transactions	**436**	–
Changes in deposits from Bank clients, net	**(351)**	(1,526)
Shareholders' dividends paid in cash	**(1,427)**	(910)
Contributions from (distributions to) non-controlling interests, net	**61**	(59)
Common shares issued, net (note 13)	**37**	43
Preferred shares issued, net (note 13)	**–**	784
Preferred shares redeemed, net (note 13)	**–**	(800)
Cash provided (used in) by financing activities	**(2,006)**	21
Cash and short-term securities		
Increase (decrease) during the year	**(5,537)**	6,761
Effect of foreign exchange rate changes on cash and short-term securities	**2,102**	790
Balance, beginning of year	**20,437**	12,886
Balance, December 31	**17,002**	20,437
Cash and short-term securities		
Beginning of year		
Gross cash and short-term securities	**21,079**	13,630
Net payments in transit, included in other liabilities	**(642)**	(744)
Net cash and short-term securities, January 1	**20,437**	12,886
End of year		
Gross cash and short-term securities	**17,885**	21,079
Net payments in transit, included in other liabilities	**(883)**	(642)
Net cash and short-term securities, December 31	**$ 17,002**	$ 20,437
Supplemental disclosures on cash flow information		
Interest received	**$ 9,925**	$ 8,834
Interest paid	**1,086**	1,079
Income taxes paid	**787**	754

The accompanying notes are an integral part of these Consolidated Financial Statements.

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Notes to Consolidated Financial Statements

Note 1 Nature of Operations and Significant Accounting Policies

(a) Reporting entity

Manulife Financial Corporation ("MFC") is a publicly traded company and the holding company of The Manufacturers Life Insurance Company ("MLI"), a Canadian life insurance company, and John Hancock Reassurance Company Ltd. ("JHRECO"), a Bermudian reinsurance company. MFC and its subsidiaries (collectively, "Manulife" or the "Company") is a leading financial services group with principal operations in Asia, Canada and the United States. Manulife's international network of employees, agents and distribution partners offers financial protection and wealth management products and services to personal and business clients as well as asset management services to institutional customers. The Company operates as Manulife in Canada and Asia and as John Hancock in the United States.

MFC is domiciled in Canada and incorporated under the Insurance Companies Act (Canada) ("ICA"). These Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

These Consolidated Financial Statements should be read in conjunction with "Risk Management" in the 2015 Management's Discussion and Analysis ("MD&A") dealing with IFRS 7 "Financial Instruments: Disclosures" as the discussion on market risk and liquidity risk includes certain disclosures that are considered an integral part of these Consolidated Financial Statements.

These Consolidated Financial Statements as at and for the year ended December 31, 2015 were authorized for issue by MFC's Board of Directors on February 18, 2016.

(b) Basis of preparation

The preparation of Consolidated Financial Statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets and liabilities, and the disclosure of contingent assets and liabilities as at the date of the Consolidated Financial Statements, and the reported amounts of revenue and expenses during the reporting periods. Actual results may differ from these estimates. The most significant estimation processes relate to the assumptions used in measuring insurance and investment contract liabilities, assessing assets for impairment, determination of pension and other post-employment benefit obligation and expense assumptions, determining income taxes and uncertain tax positions and fair valuation of certain invested assets. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the year in which the estimates are revised and in any future years affected. Although some variability is inherent in these estimates, management believes that the amounts recorded are appropriate. The significant accounting policies used and the most significant judgments made by management in applying these accounting policies in the preparation of these Consolidated Financial Statements are summarized below.

(c) Fair value measurement

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction (not a forced liquidation or distress sale) between market participants at the measurement date, that is, an exit value.

When available, quoted market prices are used to determine fair value. If quoted market prices are not available, fair value is typically based upon alternative valuation techniques such as discounted cash flows, matrix pricing, consensus pricing services and other techniques. Broker quotes are generally used when external public vendor prices are not available.

The Company has a process in place that includes a review of price movements relative to the market, a comparison of prices between vendors, and a comparison to internal matrix pricing which uses predominately external observable data. Judgment is applied in adjusting external observable data for items including liquidity and credit factors.

The Company categorizes its fair value measurements according to a three-level hierarchy. The hierarchy prioritizes the inputs used by the Company's valuation techniques. A level is assigned to each fair value measurement based on the lowest level input significant to the fair value measurement in its entirety. The three levels of the fair value hierarchy are defined as follows:

Level 1 – Fair value measurements that reflect unadjusted, quoted prices in active markets for identical assets and liabilities that the Company has the ability to access at the measurement date reflecting market transactions.

Level 2 – Fair value measurements using inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets and liabilities in inactive markets, inputs that are observable that are not prices (such as interest rates, credit risks, etc.) and inputs that are derived from or corroborated by observable market data. Most debt securities are classified within Level 2. Also, included in the Level 2 category are derivative instruments that are priced using models with observable market inputs, including interest rate swaps, equity swaps, and foreign currency forward contracts.

Level 3 – Fair value measurements using significant non-market observable inputs. These include valuations for assets and liabilities that are derived using data, some or all of which is not market observable, including assumptions about risk. Level 3 securities include less liquid securities such as structured asset-backed securities, commercial mortgage-backed securities ("CMBS") and other securities that have little or no price transparency. Embedded and complex derivative financial instruments as well as real estate classified as investment property are also included in Level 3.

(d) Basis of consolidation

MFC consolidates the financial statements of all entities, including certain structured entities that it controls. Subsidiaries are entities controlled by the Company. The Company has control over an entity when the Company has the power to govern the financial and operating policies of the entity, is exposed to variable returns from its activities which are significant in relation to the total variable returns of the entity and the Company is able to use its power over the entity to affect its share of variable returns. In assessing control, significant judgment is applied while considering all relevant facts and circumstances. When assessing decision-making power, the Company considers the extent of its rights relative to the management of an entity, the level of voting rights held in an entity which are potentially or presently exercisable, the existence of any contractual management agreements which may provide the Company with power over an entity's financial and operating policies and to the extent of minority ownership in an entity, if any, the possibility for de facto control being present. When assessing returns, the Company considers the significance of direct and indirect financial and non-financial variable returns to the Company from an entity's activities in addition to the proportionate significance of such returns. The Company also considers the degree to which its interests are aligned with those of other parties investing in an entity and the degree to which it may act in its own interest.

The financial statements of subsidiaries and controlled structured entities are included in the Company's consolidated results from the date control is established and are excluded from consolidation from the date control ceases. The initial control assessment is performed at inception and is reconsidered at a later date if the Company acquires or loses power over the key operating and financial policies of the entity; acquires additional interests or disposes of interests in the entity; the contractual arrangements of the entity are amended such that the Company's proportionate exposure to variable returns changes; or if the Company's ability to use its power to affect its variable returns from the entity changes.

The Company's Consolidated Financial Statements have been prepared using uniform accounting policies for like transactions and events in similar circumstances. Intercompany balances, and income and expenses arising from intercompany transactions, have been eliminated in preparing the Consolidated Financial Statements.

Non-controlling interests are interests of other parties in the equity of the Company's subsidiaries and are presented within total equity, separate from the equity of MFC's shareholders. Non-controlling interests in the net income and other comprehensive income ("OCI") of MFC's subsidiaries and consolidated structured entities are included in total net income and total other comprehensive income, respectively. An exception to this occurs where the subsidiary or consolidated structured entity's shares are required to be redeemed for cash on a fixed or determinable date, in which case non-controlling interests in the subsidiary's capital are presented as liabilities of the Company and non-controlling interests in the subsidiary's income and OCI are recorded as expenses of the Company.

The equity method of accounting is used to account for entities over which the Company has significant influence (an "associate"), whereby the Company records its share of the associate's net assets and financial results using uniform accounting policies for similar transactions and events. Significant judgment is used to determine whether voting rights, contractual management and other relationships with the entity, if any, provide the Company with significant influence over the entity. Gains and losses on the sale of associates are included in income when realized, while impairment losses are recognized immediately when there is objective evidence of impairment. Gains and losses on transactions with associates are eliminated to the extent of the Company's interest in the associate. Investments in associates are included in other invested assets on the Company's Consolidated Statements of Financial Position.

(e) Invested assets

Invested assets that are considered financial instruments are classified as fair value through profit or loss ("FVTPL"), loans and receivables, or as available-for-sale ("AFS") financial assets. The Company determines the classification of its financial assets at initial recognition. Invested assets are recognized initially at fair value plus, in the case of investments not at FVTPL, directly attributable transaction costs. Invested assets are classified as financial instruments at FVTPL if they are held for trading, if they are designated by management under the fair value option, or if a derivative is embedded in the investment. Invested assets classified as AFS are non-derivative financial assets that do not fall into any of the other categories described above.

Valuation methods for the Company's invested assets are described above. All fair value valuations are performed in accordance with IFRS 13 "Fair Value Measurement". The three levels of the fair value hierarchy and the disclosure of the fair value for financial instruments not carried at fair value on the Consolidated Statements of Financial Position are described in note 4. Fair value valuations are performed internally by the Company and by third-party service providers. When third-party service providers are engaged, the Company performs a variety of procedures to corroborate pricing information. These procedures may include, but are not limited to, inquiry and review of valuation techniques, inputs to the valuation and vendor controls reports.

Cash and short-term securities comprise cash, current operating accounts, overnight bank and term deposits, and fixed income securities held for the purpose of meeting short-term cash commitments. Short-term securities are carried at their fair values. Short-term securities are comprised of investments due to mature within one year of the date of purchase. The carrying value of these instruments approximates fair value due to their short-term maturities and they are generally classified as Level 1. Commercial paper and discount notes are classified as Level 2 because these securities are typically not actively traded. Net payments in transit and overdraft bank balances are included in other liabilities.

Debt securities are carried at fair value. Debt securities are generally valued by independent pricing vendors using proprietary pricing models incorporating current market inputs for similar instruments with comparable terms and credit quality (matrix pricing). The significant inputs include, but are not limited to, yield curves, credit risks and spreads, measures of volatility and prepayment rates. These debt securities are classified as Level 2, but can be Level 3 if the significant inputs are unobservable. Realized gains and losses on sale of debt securities and unrealized gains and losses on debt securities designated as FVTPL are recognized in investment income immediately. Unrealized gains and losses on AFS debt securities are recorded in OCI, with the exception of unrealized gains and losses on foreign currency translation which are included in income. Impairment losses on AFS debt securities are recognized in income when there is objective evidence of impairment. Impairment is considered to have occurred, based on management's judgment, when it is deemed probable that the Company will not be able to collect all amounts due according to the debt security's contractual terms.

Equities are comprised of common and preferred equities and are carried at fair value. Equities are classified as Level 1, as fair values are based on quoted market prices. Realized gains and losses on sale of equities and unrealized gains and losses on equities designated as FVTPL are recognized in investment income immediately. Unrealized gains and losses on AFS equities are recorded in OCI. Impairment losses on AFS equities are recognized in income on an individual security basis when there is objective evidence of impairment. Impairment is considered to have occurred when fair value has declined below cost by significant amounts or for prolonged periods of time. Judgment is applied in determining whether the decline is significant or prolonged.

Mortgages are carried at amortized cost, and are classified as Level 3 due to the observability and significance of valuation inputs. Realized gains and losses are recorded in investment income immediately. Impairment losses are recorded on mortgages when there is no longer reasonable assurance as to the timely collection of the full amount of principal and interest and are measured based on the discounted value of expected future cash flows at the original effective interest rates inherent in the mortgages. Expected future cash flows are typically determined in reference to the fair value of collateral security underlying the mortgages, net of expected costs of realization and any applicable insurance recoveries. Significant judgment is applied in the determination of impairment including the timing and account of future collections.

The Company accounts for insured mortgage securitizations as secured financing transactions since the criteria for sale accounting are not met. For these transactions, the Company continues to recognize the mortgages and records a liability in other liabilities for the amount owed at maturity. Interest income on the mortgages and interest expense on the borrowing are recorded using the effective interest rate method.

Private placements, which include corporate loans for which there is no active market, are carried at amortized cost. Realized gains and losses are recorded in income immediately. Impairment losses are recorded on private placements when there is no longer assurance as to the timely collection of the full amount of principal and interest. Impairment is measured based on the discounted value of expected future cash flows at the original effective interest rates inherent in the loans. Significant judgment is applied in the determination of impairment including the timing and amount of future collections.

Policy loans are carried at an amount equal to their unpaid balance. Policy loans are fully collateralized by the cash surrender value of the underlying policies.

Loans to Bank clients are carried at unpaid principal less allowance for credit losses, if any. Loans to Bank clients are considered impaired when there is objective evidence of impairment as a result of one or more loss events that have occurred after initial recognition, with a negative impact on the estimated future cash flows of a loan.

Once established, allowances for impairment of mortgages, private placements and loans to Bank clients are reversed only if the conditions that caused the impairment no longer exist. Reversals of impairment charges on AFS debt securities are only recognized in income to the extent that increases in fair value can be attributed to events subsequent to the impairment loss being recorded. Impairment losses for AFS equity instruments are not reversed through income. On disposition of an impaired asset, any allowance for impairment is released.

In addition to impairment and provisions for loan losses (recoveries) reported in investment income, the measurement of insurance contract liabilities and the investment return assumptions include expected future credit losses on fixed income investments. Refer to note 8(d).

Interest income is recognized on debt securities, mortgages, private placements, policy loans and loans to Bank clients as it accrues and is calculated by using the effective interest rate method. Premiums, discounts and transaction costs are amortized over the life of the underlying investment using the effective yield method for all debt securities as well as mortgages and private placements measured at amortized cost.

The Company records purchases and sales of invested assets on a trade date basis, except for originated loans, which are recognized on a settlement date basis.

Real estate consists of both own use and investment property. Own use property is carried at cost less accumulated depreciation and any accumulated impairment losses. Depreciation is calculated based on the cost of an asset less its residual value and is recognized in income on a straight-line basis over the estimated useful life ranging from 30 to 60 years. Impairment losses are recorded in income to the extent the recoverable amount is less than the carrying amount. Where own use property is included in assets backing insurance contract liabilities, the fair value of own use property is used in the valuation of insurance contract liabilities.

Investment property is property held to earn rental income, for capital appreciation, or both. Investment property is measured at fair value with changes in fair value recognized in income. Fair value is determined using external appraisals that are based on the highest and best use of the property. The valuation techniques used include discounted cash flows, the direct capitalization method as well as comparable sales analysis and include both observable and unobservable inputs. Inputs include existing and assumed tenancies, market data from recent comparable transactions, future economic outlook and market risk assumptions, capitalization rates and internal rates of return. Investment property is classified as Level 3.

Other invested assets include private equity and property investments held in power and infrastructure and timber as well as the agriculture and oil and gas sectors. Private equity investments are accounted for as associates using the equity method (as described in note 1(d) above) or are classified as FVTPL or AFS and carried at fair value. Investments in oil and gas exploration and evaluation costs are measured on a "successful efforts" basis. Timber and agriculture properties are measured at fair value with changes in fair value recognized in income. The fair value of other invested assets is determined using a variety of valuation techniques as described in note 4. Other invested assets that are measured at fair value are classified as Level 3.

Other invested assets also include investments in leveraged leases, which are accounted for using the equity method. The carrying value under the equity method reflects the amortized cost of the lease receivable and related non-recourse debt using the effective yield method.

(f) Goodwill and intangible assets

Goodwill represents the difference between the purchase cost of an acquired business and the Company's proportionate share of the net identifiable assets acquired and liabilities and contingent liabilities assumed. It is initially recorded at cost and subsequently measured at cost less any accumulated impairment.

Goodwill is tested for impairment at least annually or whenever events or changes in circumstances indicate that the carrying amounts may not be recoverable at the cash generating unit ("CGU") or group of CGUs level. The Company allocates goodwill to CGUs or groups of CGUs for the purpose of impairment testing based on the lowest level within the entity in which the goodwill is monitored for internal management purposes. The allocation is made to those CGUs or groups of CGUs that are expected to benefit from the business combination in which the goodwill arose. Any potential impairment of goodwill is identified by comparing the recoverable amount of a CGU or group of CGUs to its carrying value. Goodwill is reduced by the amount of deficiency, if any. If the deficiency exceeds the carrying amount of goodwill, the carrying values of the remaining assets in the CGU or group of CGUs are reduced by the excess on a pro-rata basis.

The recoverable amount of a CGU is the higher of the estimated fair value less costs to sell or the value-in-use of the CGU. In assessing value-in-use, the estimated future cash flows are discounted using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In some cases, the most recent detailed calculation made in a prior period of the recoverable amount of a CGU is used in the testing of impairment of goodwill in the current period. This is the case only if there are no significant changes to the CGU, the likelihood of impairment is remote based on the analysis of the current events and circumstances, and the most recent recoverable amount substantially exceeds the carrying amount of the CGU.

Intangible assets with indefinite useful lives specifically include the John Hancock brand name and certain investment management contracts. The indefinite useful life assessment for brand is based on the brand name being protected in markets where branded products are sold by trademarks, which are renewable indefinitely, and for certain investment management contracts due to the ability to renew the contract indefinitely. In addition, there are no legal, regulatory or contractual provisions that limit the useful lives of these intangible assets. An intangible asset with an indefinite useful life is not amortized but is subject to an annual impairment test which is performed more frequently if there is an indication that it is not recoverable.

Intangible assets with finite useful lives include acquired customer relationships, distribution networks, certain investment management contracts, capitalized software and other contractual rights. Software intangible assets are amortized on a straight-line basis over their estimated useful lives of three to five years. Customer relationships, distribution networks and other finite life intangible assets are amortized over their estimated useful lives, five to 68 years, either based on straight-line or in relation to the associated gross margin from the related business. Finite life intangible assets are assessed for indicators of impairment at each reporting period, or more frequently when events or changes in circumstances dictate. If any indication of impairment exists, these assets are subject to an impairment test.

(g) Miscellaneous assets

Miscellaneous assets include assets in a rabbi trust with respect to unfunded defined benefit obligations, deferred acquisition costs, capital assets and defined benefit assets, if any (refer to note 1(o)). Deferred acquisition costs are carried at cost less accumulated amortization. These costs are recognized over the period where redemption fees may be charged or over the period revenue is earned. Capital assets are carried at cost less accumulated amortization computed on a straight-line basis over their estimated useful lives, which vary from two to 10 years.

(h) Segregated funds

The Company manages a number of segregated funds on behalf of policyholders. The investment returns on these funds are passed directly to policyholders. In some cases, the Company has provided guarantees associated with these funds.

Segregated funds net assets are measured at fair value and primarily include investments in mutual funds, debt securities, equities, real estate, short-term investments and cash and cash equivalents. With respect to the consolidation requirement of IFRS, in assessing the Company's degree of control over the underlying investments, the Company considers the scope of its decision making rights, the rights held by other parties, its remuneration as an investment manager and its exposure to the variability of returns. The Company has determined that it does not have control over the underlying investments as it acts as an agent on behalf of segregated fund policyholders.

The methodology applied to determine the fair value of investments held in segregated funds is consistent with that applied to invested assets held by the general fund, as described above in note 1(e). Segregated funds net liabilities are measured based on the value of the segregated funds net assets. Investment returns on segregated fund assets belong to policyholders and the Company does not bear the risk associated with these assets outside of guarantees offered on certain variable life and annuity products, for which the underlying investment is segregated funds. Accordingly, investment income earned by segregated funds and expenses incurred by segregated funds are offset and are not separately presented in the Consolidated Statements of Income. Fee income earned by the Company for managing the segregated funds is included in other revenue. Refer to note 22.

Liabilities related to the guarantees associated with certain funds, as a result of certain variable life and annuity contracts, are recorded within the Company's insurance contract liabilities. The Company holds assets supporting these guarantees which are recognized in invested assets according to their investment type.

(i) Insurance and investment contract liabilities

Most contracts issued by the Company are considered insurance, investment or service contracts. Contracts under which the Company accepts significant insurance risk from a policyholder are classified as insurance contracts in the Consolidated Financial Statements. A contract is considered to have significant insurance risk if, and only if, an insured event could cause an insurer to make significant additional payments in any scenario, excluding scenarios that lack commercial substance at the inception of the contract. Contracts under which the Company does not accept significant insurance risk are classified as either investment contracts or considered service contracts and are accounted for in accordance with IAS 39 "Financial Instruments: Recognition and Measurement" or IAS 18 "Revenue", respectively.

Once a contract has been classified as an insurance contract it remains an insurance contract even if the insurance risk reduces significantly. Investment contracts can be reclassified as insurance contracts if insurance risk subsequently becomes significant.

Insurance contract liabilities, net of reinsurance assets, represent the amount which, together with estimated future premiums and net investment income, will be sufficient to pay estimated future benefits, policyholder dividends and refunds, taxes (other than income taxes) and expenses on policies in-force. Insurance contract liabilities are presented gross of reinsurance assets on the Consolidated Statements of Financial Position. The Company's Appointed Actuary is responsible for determining the amount of insurance contract liabilities in accordance with standards established by the Canadian Institute of Actuaries. Insurance contract liabilities, net of reinsurance assets, have been determined using CALM as permitted by IFRS 4 "Insurance Contracts". Refer to note 8.

Investment contract liabilities include contracts issued to retail and institutional investors that do not contain significant insurance risk. Investment contract liabilities and deposits are measured at amortized cost, or at fair value by election, if the election reduces accounting mismatches between the assets supporting the contracts and the liabilities. The liability is derecognized when the contract expires, is discharged or is cancelled.

Derivatives embedded within insurance contracts are separated if they are not considered to be closely related to the host insurance contract and do not meet the definition of an insurance contract. These embedded derivatives are presented separately in other assets or other liabilities and are measured at fair value with changes in fair value recognized in income.

(j) Reinsurance assets

The Company uses reinsurance in the normal course of business to manage its risk exposure. Insurance ceded to a reinsurer does not relieve the Company from its obligations to policyholders. The Company remains liable to its policyholders for the portion reinsured to the extent that any reinsurer does not meet its obligations for reinsurance ceded to it under the reinsurance agreements.

Reinsurance assets represent the benefit derived from reinsurance agreements in-force at the reporting date, taking into account the financial condition of the reinsurer. Amounts recoverable from reinsurers are estimated in accordance with the terms of the relevant reinsurance contract.

Gains or losses on reinsurance transactions are recognized in income immediately on the transaction date and are not amortized. Premiums ceded and claims reimbursed are presented on a gross basis on the Consolidated Statements of Income. Reinsurance assets are not offset against the related insurance contract liabilities and are presented separately on the Consolidated Statements of Financial Position. Refer to note 8(a).

(k) Other financial instruments accounted for as liabilities

The Company issues a variety of other financial instruments classified as liabilities, including notes payable, term notes, senior notes, senior debentures, subordinated notes, surplus notes, subscription receipts and preferred shares. These financial liabilities are measured at amortized cost, with issuance costs deferred and amortized using the effective interest rate method.

(l) Income taxes

The provision for income taxes is calculated based on income tax laws and income tax rates substantively enacted as at the date of the Consolidated Statements of Financial Position. The income tax provision is comprised of current income taxes and deferred income taxes. Current and deferred income taxes relating to items recognized in OCI and directly in equity are similarly recognized in OCI and directly in equity, respectively.

Current income taxes are amounts expected to be payable or recoverable as a result of operations in the current year and any adjustments to taxes payable in respect of previous years.

Deferred income taxes are provided for using the liability method and result from temporary differences between the carrying values of assets and liabilities and their respective tax bases. Deferred income taxes are measured at the substantively enacted tax rates that are expected to be applied to temporary differences when they reverse.

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. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets and they relate to income taxes levied by the same tax authority on the same taxable entity.

Deferred tax liabilities are recognized for all taxable temporary differences, except in respect of taxable temporary differences associated with investments in subsidiaries and associates, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

The Company records provisions for uncertain tax positions if it is probable that the Company will make a payment on tax positions as a result of examinations by the tax authorities. These provisions are measured at the Company's best estimate of the amount expected to be paid. Provisions are reversed to income in the period in which management assesses they are no longer required or determined by statute.

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 and deferred 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 year. The Company may be required to change its provision for income taxes or deferred income tax balances when the ultimate deductibility of certain items is successfully challenged by taxing authorities, or if estimates used in determining the amount of deferred tax asset to recognize change significantly, or when receipt of new information indicates the need for adjustment in the amount of deferred income taxes to be recognized. 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 taxes, deferred tax balances and the effective tax rate. Any such changes could materially affect the amounts reported in the Consolidated Financial Statements in the period these changes occur.

(m) Foreign currency translation

Items included in the financial statements of each of the Company's subsidiaries are measured using the currency of the primary economic environment in which the entity operates (the "functional currency").

Transactions in a foreign currency are translated to the functional currency at the exchange rate prevailing at the date of the transaction. Assets and liabilities denominated in foreign currencies are translated to the functional currency at the exchange rate in effect at the reporting date. Revenue and expenses denominated in foreign currencies are translated at the average exchange rate prevailing during the quarter reported. Exchange gains and losses are recognized in income with the exception of translation of net investments in foreign operations and the results of hedging these positions. These foreign exchange gains and losses are recognized in OCI until such time that the foreign operation is disposed of or control or significant influence over it is lost.

(n) Stock-based compensation

The Company provides stock-based compensation to certain employees and directors as described in note 16. Compensation expense of equity instruments is accrued based on the best estimate of the number of instruments expected to vest, with revisions made to that estimate if subsequent information indicates that actual forfeitures are likely to differ from initial estimates, unless forfeitures are due to market-based conditions.

Stock options are expensed with a corresponding increase in contributed surplus. Restricted share units, special restricted share units and deferred share units are expensed with a corresponding liability accrued based on the market value of MFC's common shares at the end of each quarter. Performance share units are expensed with a corresponding liability accrued based on specific performance conditions and the market value of MFC's common shares. The change in the value of the awards resulting from changes in the market value of the Company's common shares or changes in the specific performance conditions and credited dividends is recognized in income, offset by the impact of total return swaps used to manage the variability of the related liability.

Stock-based compensation cost is recognized over the applicable vesting period, except if the employee is eligible to retire at the time of grant or will be eligible to retire during the vesting period. Compensation cost, attributable to stock options and restricted share units granted to employees who are eligible to retire on the grant date or who will become eligible to retire during the vesting period, is recognized over the period from the grant date to the date of retirement eligibility.

Contributions to the Global Share Ownership Plan ("GSOP") (refer to note 15(d)), are expensed as incurred. Under the GSOP, subject to certain conditions, the Company will match a percentage of an employee's eligible contributions to certain maximums. All contributions are used by the plan's trustee to purchase MFC common shares in the open market.

(o) Employee future benefits

The Company maintains defined contribution and defined benefit pension plans and other post-employment plans for employees and agents including registered (tax qualified) pension plans 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 Company's obligation in respect of defined benefit pension and other post-employment plans is calculated for each plan as the estimated present value of the future benefits that eligible employees have earned in return for their service up to the reporting date using the projected benefit method. The discount rate used is based on the yield at the reporting date on high quality corporate debt securities that have approximately the same term as the obligations and that are denominated in the same currency in which the benefits are expected to be paid and is updated annually.

To determine the Company's net defined benefit asset or liability, the fair value of plan assets are deducted from the defined benefit obligations. When this calculation results in a surplus, the asset recognized is limited to the present value of future economic benefit available in the form of future refunds from the plan or reductions in future contributions to the plan (the asset limit).

Defined benefit assets are included in other assets and defined benefit liabilities are included in other liabilities. The net benefit cost for the year is recognized in income and is calculated as the sum of the service cost in respect of the fiscal year, the net interest income or expense and any applicable administration expenses, plus past service costs resulting from plan amendments or curtailments. The net interest income or expense is determined by applying the discount rate to the net defined benefit asset or liability. Changes in the net defined benefit asset or liability due to re-measurement of pension and retiree welfare plans are recorded in OCI in the period in which they occur and are not reclassified to income in subsequent periods. They consist of actuarial gains and losses, the impact of the asset limit if any, and the return on plan assets, excluding amounts included in net interest income or expense. Changes in the net defined benefit asset or liability due to re-measurement of disability welfare plans are recognized in income in the period in which they occur.

The cost of defined contribution plans is the contribution provided by the Company and is recognized in income in the periods during which services are rendered by employees.

The cost of retiree welfare plans is recognized in income over the employees' years of service to their dates of full entitlement.

The current year cost of disability welfare plans is the year-over-year change in the defined benefit obligation, including any actuarial gains or losses.

(p) Derivative and hedging instruments

The Company uses derivative financial instruments ("derivatives") including swaps, forward and futures agreements, and options to manage current and anticipated exposures to changes in interest rates, foreign exchange rates, commodity prices and equity market prices, and to replicate permissible investments. Derivatives embedded in other financial instruments ("host instruments") are separately recorded as derivatives when their economic characteristics and risks are not closely related to those of the host instrument, the terms of the embedded derivative are the same as those of a standalone derivative and the host instrument itself is not recorded at FVTPL. Derivatives are recorded at fair value. Derivatives with unrealized gains are reported as derivative assets and derivatives with unrealized losses are reported as derivative liabilities.

A determination is made for each derivative as to whether to apply hedge accounting. Where hedge accounting is not applied, changes in the fair value of derivatives are recorded in investment income. Refer to note 5.

Where the Company has elected to apply hedge accounting, a hedging relationship is designated and documented at inception. Hedge effectiveness is evaluated at inception and throughout the term of the hedge and hedge accounting is only applied when the Company expects that the hedging relationship will be highly effective in achieving offsetting changes in fair value or changes in cash flows attributable to the risk being hedged. The assessment of hedge effectiveness is performed at the end of each reporting period both prospectively and retrospectively. When it is determined that a hedging relationship is no longer effective, or the hedging instrument or the hedged item has been sold or terminated, the Company discontinues hedge accounting prospectively. In such cases, if the derivatives are not sold or terminated, any subsequent changes in fair value of the derivatives are recognized in investment income.

For derivatives that are designated as hedging instruments, changes in fair value are recognized according to the nature of the risks being hedged, as discussed below.

In a fair value hedging relationship, changes in the fair value of the hedging derivatives are recorded in investment income, along with changes in fair value attributable to the hedged risk. The carrying value of the hedged item is adjusted for changes in fair value attributable to the hedged risk. To the extent the changes in the fair value of derivatives do not offset the changes in the fair value of the hedged item attributable to the hedged risk in investment income, any ineffectiveness will remain in investment income. When hedge accounting is discontinued, the carrying value of the hedged item is no longer adjusted and the cumulative fair value adjustments are amortized to investment income over the remaining term of the hedged item unless the hedged item is sold, at which time the balance is recognized immediately in investment income.

In a cash flow hedging relationship, the effective portion of the changes in the fair value of the hedging instrument is recorded in OCI while the ineffective portion is recognized in investment income. Gains and losses accumulated in OCI are recognized in income during the same periods as the variability in the cash flows hedged or the hedged forecasted transactions are recognized in income. The reclassifications from accumulated other comprehensive income ("AOCI") are made to investment income, with the exception of total return swaps that hedge restricted share units, which are reclassified to general expenses.

Gains and losses on cash flow hedges accumulated in OCI are reclassified immediately to investment income when the hedged item is sold or the forecasted transaction is no longer expected to occur. When a hedge is discontinued, but the hedged forecasted transaction remains highly probable to occur, the amounts accumulated in OCI are reclassified to investment income in the periods during which variability in the cash flows hedged or the hedged forecasted transaction is recognized in income.

In a net investment hedging relationship, the gains and losses relating to the effective portion of the hedge are recorded in OCI. Gains and losses in AOCI are recognized in income during the periods when gains or losses on the underlying hedged net investment in foreign operations are recognized in income.

(q) Premium income and related expenses

Gross premiums for all types of insurance contracts, and contracts with limited mortality or morbidity risk, are generally recognized as revenue when due. Premiums are reported gross of reinsurance ceded (refer to note 8). Revenue on service contracts is recognized as services are rendered.

Expenses are recognized when incurred. Insurance contract liabilities are computed at the end of each year, resulting in benefits and expenses being matched with the premium income.

Note 2 Accounting and Reporting Changes

(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.

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.

Note 3 Acquisitions and Distribution Agreement

(a) Canadian-based operations of Standard Life plc

On January 30, 2015, the Company completed its purchase of 100 per cent of the shares of Standard Life Financial Inc. and of Standard Life Investments Inc., collectively the Canadian-based operations of Standard Life plc ("Standard Life"), for cash consideration of $4 billion. On the same day, the Company's outstanding subscription receipts were automatically converted on a one-for-one basis for 105,647,334 MFC common shares with a stated value of approximately $2.2 billion. The cash consideration included $2.2 billion from net proceeds of the subscription receipts and $1.8 billion from the general assets of the Company.

The acquisition contributes to the Company's growth strategy, particularly in wealth and asset management.

The Company has finalized its evaluation of the fair value of the net assets acquired from Standard Life and the purchase price allocation is complete. In the fourth quarter of 2015, the Company finalized its review of acquired insurance contract liabilities. As a result of this review, net identifiable assets acquired decreased by $63 and goodwill increased by a commensurate amount. The following table summarizes the final amounts assigned to the assets acquired, liabilities assumed and resulting goodwill as at the acquisition date.

	Fair value recognized on acquisition
Assets acquired	
Cash and short-term securities	**$ 571**
Invested assets	**19,256**
Reinsurance assets	**316**
Intangible assets	**1,010**
Other assets	**457**
Segregated funds net assets	**31,838**
Total identifiable assets	**53,448**
Liabilities	
Insurance and investment contract liabilities	**17,670**
Other liabilities	**1,028**
Subordinated debentures	**425**
Segregated funds net liabilities	**31,838**
Total identifiable liabilities	**50,961**
Net identifiable assets acquired	**2,487**
Purchase consideration	**4,000**
Excess consideration paid over identifiable net assets acquired allocated to goodwill	**$ 1,513**

The Standard Life acquisition contributed $2 to net income for the 11 months ended December 31, 2015, excluding a $99 charge related to integration activities and acquisitions costs. The Company incurred $35 related to the amortization of intangible assets associated with the Standard Life acquisition.

(b) Retirement plan services business of New York Life

On April 14, 2015, the Company completed the acquisition of New York Life's ("NYL") Retirement Plan Services ("RPS") business. The consideration for the purchase of the RPS business included the assumption by NYL of the Company's in-force participating life insurance closed block ("Closed Block") through net 60% reinsurance agreements, effective July 1, 2015.

The acquisition of the NYL RPS business contributed to John Hancock's expansion into the mid-case and large-case retirement plan markets, added US$56.6 billion of plan assets under administration and supports Manulife's global growth strategy for wealth and asset management businesses.

Under IFRS 3 "Business Combinations", the acquisition of the NYL RPS business and the Closed Block reinsurance agreements are considered one transaction because mutual agreement on both the acquisition and the reinsurance was required in order to proceed with the transaction. While the Company has substantially completed its comprehensive evaluation, the purchase price allocation remains open until March 31, 2016. The following table summarizes the purchase consideration, and resulting goodwill and intangible assets as at the acquisition date.

	Fair value recognized on acquisition
Purchase consideration	**$ 398**
Additional consideration related to reinsuring the Closed Block, net of tax of $205	**389**
Total purchase consideration	**787**
Excess consideration paid over identifiable net assets acquired allocated to goodwill and intangible assets(1)	**$ 787**

(1) The fair value of intangible assets acquired and goodwill were $128 and $659, respectively.

The NYL RPS acquisition contributed $19 to net income for the 8.5 months ended December 31, 2015, excluding a charge of $50 related to integration activities and acquisition costs.

The reinsurance ceded portion of the transaction included a transfer of $14.0 billion of invested assets to NYL, the recognition of a $13.4 billion reinsurance asset related to both the 60% of the block that was ceded and the 40% of the block that was retained on a funds withheld basis, as well as a $0.6 billion pre-tax shortfall ($0.4 billion post-tax) that was reported as additional consideration for the retirement plan service business.

In total the transaction had no impact on net income. The ceded portion of the transaction resulted in the Company recording a net $8.0 billion charge to revenue for premiums ceded ($9.1 billion) net of commissions received ($0.5 billion) and the additional consideration for the retirement plan services business ($0.6 billion). These items were fully offset by an $8.0 billion increase in the change in reinsurance assets.

(c) Distribution agreement with DBS Bank Ltd ("DBS")

On April 8, 2015, the Company 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.

The distribution agreement became effective on January 1, 2016 and accelerates Manulife's Asia growth strategy, deepens and diversifies our insurance business, and gives us access to a wider range of customers.

During 2015, payments to DBS of $796 were made which are reported as other assets. On January 4, 2016, final payments of $831 were made.

(d) Mandatory Provident Fund businesses of Standard Chartered

On September 10, 2015, Manulife entered into an agreement with Standard Chartered, an international banking group, 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 expand Manulife's retirement business in Hong Kong. Subject to the receipt of all necessary approvals and other customary closing conditions, the transaction is expected to close in late 2016.

Note 4 Invested Assets and Investment Income

(a) Carrying values and fair values of invested assets

As at December 31, 2015	FVTPL[1]	AFS[2]	Other[3]	Total carrying value	Total fair value[9]
Cash and short-term securities[4]	**$ 574**	**$ 13,548**	**$ 3,763**	**$ 17,885**	**$ 17,885**
Debt securities[5]					
Canadian government and agency	**16,965**	**4,318**	**–**	**21,283**	**21,283**
U.S. government and agency	**15,964**	**12,688**	**–**	**28,652**	**28,652**
Other government and agency	**17,895**	**1,688**	**–**	**19,583**	**19,583**
Corporate	**80,269**	**4,925**	**–**	**85,194**	**85,194**
Mortgage/asset-backed securities	**2,797**	**318**	**–**	**3,115**	**3,115**
Public equities	**14,689**	**2,294**	**–**	**16,983**	**16,983**
Mortgages	**–**	**–**	**43,818**	**43,818**	**45,307**
Private placements	**–**	**–**	**27,578**	**27,578**	**29,003**
Policy loans	**–**	**–**	**7,673**	**7,673**	**7,673**
Loans to Bank clients	**–**	**–**	**1,778**	**1,778**	**1,782**
Real estate					
Own use property[6]	**–**	**–**	**1,379**	**1,379**	**2,457**
Investment property	**–**	**–**	**13,968**	**13,968**	**13,968**
Other invested assets					
Alternative long-duration assets[7]	**8,952**	**76**	**7,253**	**16,281**	**16,261**
Various other[8]	**163**	**–**	**3,934**	**4,097**	**4,097**
Total invested assets	**$ 158,268**	**$ 39,855**	**$ 111,144**	**$ 309,267**	**$ 313,243**

As at December 31, 2014	FVTPL[1]	AFS[2]	Other[3]	Total carrying value	Total fair value[9]
Cash and short-term securities[4]	$ 320	$ 14,505	$ 6,254	$ 21,079	$ 21,079
Debt securities[5]					
Canadian government and agency	13,762	3,858	–	17,620	17,620
U.S. government and agency	15,225	9,611	–	24,836	24,836
Other government and agency	13,838	1,489	–	15,327	15,327
Corporate	68,828	4,437	–	73,265	73,265
Mortgage/asset-backed securities	3,047	351	–	3,398	3,398
Public equities	12,389	2,154	–	14,543	14,543
Mortgages	–	–	39,458	39,458	41,493
Private placements	–	–	23,284	23,284	25,418
Policy loans	–	–	7,876	7,876	7,876
Loans to Bank clients	–	–	1,772	1,772	1,778
Real estate					
Own use property[6]	–	–	831	831	1,566
Investment property	–	–	9,270	9,270	9,270
Other invested assets					
Alternative long-duration assets[7]	6,942	73	6,144	13,159	13,194
Various other[8]	149	–	3,443	3,592	3,592
Total invested assets	$ 134,500	$ 36,478	$ 98,332	$ 269,310	$ 274,255

(1) The FVTPL classification was elected for securities backing insurance contract liabilities in order to substantially reduce any accounting mismatch arising from changes in the value of these assets and changes in the value of the related insurance contract liabilities. There would otherwise be a mismatch if the available-for-sale ("AFS") classification was selected because changes in insurance contract liabilities are recognized in net income rather than in OCI.

(2) Securities that are designated as AFS are not actively traded by the Company but sales do occur as circumstances warrant. Such sales result in a reclassification of any accumulated unrealized gain (loss) in AOCI to net income as a realized gain (loss).

(3) Primarily includes assets classified as loans and carried at amortized cost, own use property, investment property, equity method accounted investments, oil and gas investments, and leveraged leases. Refer to note 1(e) for further details regarding accounting policy.

(4) Includes short-term securities with maturities of less than one year at acquisition amounting to $4,796 (2014 – $6,502) cash equivalents with maturities of less than 90 days at acquisition amounting to $9,326 (2014 – $8,322) and cash of $3,763 (2014 – $6,254).

(5) Debt securities include securities which were acquired with maturities of less than one year and less than 90 days of $905 and $39, respectively (2014 – $1,218 and $109, respectively).

(6) Includes accumulated depreciation of $366 (2014 – $322).

(7) Includes investments in private equity of $3,754, power and infrastructure of $5,260, oil and gas of $1,740, timber and agriculture of $5,092 and various other invested assets of $435 (2014 – $2,758, $4,002, $2,161, $3,949 and $289, respectively).

(8) Includes $3,549 (2014 – $2,925) of leveraged leases. Refer to note 1(e) regarding accounting policy.

(9) The methodologies for determining fair value of the Company's invested assets are described in note 1 and note 4(g).

(b) Other invested assets

Other invested assets include investments in associates and joint ventures which were accounted for using the equity method of accounting as follows.

As at December 31,	2015 Carrying value	2015 % of total	2014 Carrying value	2014 % of total
Leveraged leases	**$ 3,549**	**70**	$ 2,925	70
Timber and agriculture	**423**	**9**	354	8
Real estate	**370**	**7**	238	6
Other	**714**	**14**	647	16
Total	**$ 5,056**	**100**	$ 4,164	100

The Company's share of profit and dividends from these investments for the year ended December 31, 2015 were $23 and $14, respectively (2014 – $105 and $8, respectively).

(c) Investment income

For the year ended December 31, 2015	FVTPL	AFS	Other[1]	Total	Yields[2]
Cash and short-term securities					**1.8%**
Interest income	**$ 10**	**$ 92**	**$ –**	**$ 102**	
Gains (losses)[3]	**(13)**	**220**	**–**	**207**	
Debt securities					**1.0%**
Interest income	**4,849**	**529**	**–**	**5,378**	**3.6%**
Gains (losses)[3]	**(3,969)**	**106**	**–**	**(3,863)**	**(2.5%)**
Recovery, net	**(13)**	**4**	**–**	**(9)**	
Public equities					**1.0%**
Dividend income	**434**	**59**	**–**	**493**	
Gains (losses)[3]	**(551)**	**257**	**–**	**(294)**	
Impairment loss	**–**	**(32)**	**–**	**(32)**	
Mortgages					**4.7%**
Interest income	**–**	**–**	**1,758**	**1,758**	
Gains (losses)[3]	**–**	**–**	**279**	**279**	
Private placements					**5.6%**
Interest income	**–**	**–**	**1,375**	**1,375**	
Gains (losses)[3]	**–**	**–**	**97**	**97**	
Impairment, net	**–**	**–**	**(37)**	**(37)**	
Policy loans	**–**	**–**	**388**	**388**	**4.8%**
Loans to Bank clients					**3.9%**
Interest income	**–**	**–**	**69**	**69**	
Provision, net	**–**	**–**	**(1)**	**(1)**	
Real estate					**11.5%**
Rental income, net of depreciation[4]	**–**	**–**	**509**	**509**	
Gains (losses)[3]	**–**	**–**	**946**	**946**	
Derivatives					**n/a**
Interest income, net	**–**	**–**	**932**	**932**	
Gains (losses)[3]	**–**	**–**	**(512)**	**(512)**	
Other invested assets					**3.4%**
Interest income	**–**	**–**	**112**	**112**	
Oil and gas, timber, agriculture and other income	**–**	**–**	**891**	**891**	
Gains (losses)[3]	**111**	**3**	**55**	**169**	
Impairment, net	**(3)**	**–**	**(551)**	**(554)**	
Total investment income	**$ 855**	**$ 1,238**	**$ 6,310**	**$ 8,403**	**2.8%**
Investment income					
Interest income	**$ 4,859**	**$ 621**	**$ 4,634**	**$ 10,114**	**3.4%**
Dividend, rental and other income	**434**	**59**	**1,400**	**1,893**	**0.6%**
Impairments and provisions for loan losses	**(16)**	**(28)**	**(589)**	**(633)**	**(0.2%)**
Other	**(164)**	**549**	**(294)**	**91**	**0.0%**
	5,113	**1,201**	**5,151**	**11,465**	
Realized and unrealized gains (losses) on assets supporting insurance and investment contract liabilities and on macro equity hedges					
Debt securities	**(3,969)**	**12**	**–**	**(3,957)**	**(1.3%)**
Public equities	**(538)**	**25**	**–**	**(513)**	**(0.2%)**
Mortgages	**–**	**–**	**278**	**278**	**0.1%**
Private placements	**–**	**–**	**95**	**95**	**0.0%**
Real estate	**–**	**–**	**980**	**980**	**0.3%**
Other invested assets	**249**	**–**	**106**	**355**	**0.1%**
Derivatives, including macro equity hedging program	**–**	**–**	**(300)**	**(300)**	**(0.1%)**
	(4,258)	**37**	**1,159**	**(3,062)**	
Total investment income	**$ 855**	**$ 1,238**	**$ 6,310**	**$ 8,403**	**2.8%**

For the year ended December 31, 2014	FVTPL	AFS	Other[1]	Total	Yields[2]
Cash and short-term securities					0.9%
Interest income	$ 6	$ 79	$ –	$ 85	
Gains (losses)[3]	(31)	88	–	57	
Debt securities					11.5%
Interest income	4,191	492	–	4,683	3.8%
Gains (losses)[3]	8,925	153	–	9,078	7.5%
Recovery (Impairment loss), net	21	1	–	22	
Public equities					10.1%
Dividend income	381	54	–	435	
Gains (losses)[3]	765	148	–	913	
Impairment loss	–	(11)	–	(11)	
Mortgages					4.7%
Interest income	–	–	1,667	1,667	
Gains (losses)[3]	–	–	68	68	
Provision, net	–	–	(16)	(16)	
Private placements					6.1%
Interest income	–	–	1,308	1,308	
Gains (losses)[3]	–	–	(7)	(7)	
Impairment, net	–	–	(9)	(9)	
Policy loans	–	–	368	368	4.8%
Loans to Bank clients					4.3%
Interest income	–	–	76	76	
Real estate					7.3%
Rental income, net of depreciation[4]	–	–	434	434	
Gains (losses)[3]	–	–	264	264	
Impairment loss	–	–	(5)	(5)	
Derivatives					n/a
Interest income, net	–	–	720	720	
Gains (losses)[3]	–	–	6,240	6,240	
Other invested assets					10.3%
Interest income	–	–	51	51	
Oil and gas, timber, agriculture and other income	–	–	931	931	
Gains (losses)[3]	378	11	241	630	
Impairment, net	(7)	–	(139)	(146)	
Total investment income	$ 14,629	$ 1,015	$ 12,192	$ 27,836	11.8%
Investment Income					
Interest income	$ 4,197	$ 571	$ 4,191	$ 8,959	3.7%
Dividend, rental and other income	381	54	1,365	1,800	0.7%
Impairments and provisions for loan losses	14	(10)	(169)	(165)	(0.1%)
Other	(97)	371	(124)	150	0.1%
	4,495	986	5,263	10,744	
Realized and unrealized gains (losses) on assets supporting insurance and investment contract liabilities and on macro equity hedges					
Debt securities	8,926	9	–	8,935	3.6%
Public equities	752	20	–	772	0.3%
Mortgages	–	–	66	66	0.0%
Private placements	–	–	(8)	(8)	0.0%
Real estate	–	–	264	264	0.1%
Other invested assets	456	–	165	621	0.2%
Derivatives, including macro equity hedging program	–	–	6,442	6,442	2.6%
	10,134	29	6,929	17,092	
Total investment income	$ 14,629	$ 1,015	$ 12,192	$ 27,836	11.8%

[1] Primarily includes assets classified as loans and carried at amortized cost, own use property, investment property, derivative and hedging instruments including those where hedge accounting is applied, equity method accounted investments, oil and gas investments, and leveraged leases.
[2] Yields are based on IFRS income and are calculated using the geometric average of assets held at IFRS carrying value during the reporting year.
[3] Includes net realized gains (losses) as well as net unrealized gains (losses) for financial instruments at FVTPL, real estate investment properties, and other invested assets measured at fair value. Also includes net realized gains (losses) for financial instruments at AFS and other invested assets carried at amortized cost.
[4] Rental income from investment properties is net of direct operating expenses and includes net market rental income on own use properties.

(d) Investment expenses

The following table presents total investment expenses of the Company.

For the years ended December 31,	2015	2014
Related to invested assets	**$ 572**	$ 470
Related to segregated, mutual and other funds	**1,043**	849
Total investment expenses	**$ 1,615**	$ 1,319

(e) Investment properties

The following table identifies the amounts included in investment income relating to investment properties.

For the years ended December 31,	2015	2014
Rental income from investment properties	**$ 1,164**	$ 906
Direct operating expenses of investment properties that generated rental income	**(719)**	(540)
Total	**$ 445**	$ 366

(f) Mortgage securitization

The Company securitizes certain insured fixed and variable rate commercial and residential mortgages and Home Equity Lines of Credit ("HELOC") through creation of mortgage-backed securities under the Canadian Mortgage Bond Program ("CMB"), as well as through a HELOC securitization program.

Benefits received from the securitization include interest spread between the asset and associated liability. There are no expected credit losses on mortgages that have been securitized under the Government of Canada CMB and the HELOC securitization program as they are insured by the Canada Mortgage and Housing Corporation ("CMHC") and other third-party insurance programs against borrowers' default.

Cash flows received from the underlying securitized assets/mortgages are used to settle the related secured borrowing liability. For CMB transactions receipts of principal are deposited into a trust account for settlement of the liability at time of maturity. These transferred assets and related cash flows cannot be transferred or used for other purposes. For the HELOC transactions, investors are entitled to periodic interest payments and the remaining cash receipts of principal are allocated to the Company (the "Seller") during the revolving period of the deal and are accumulated for settlement of the liability based on the terms of the note.

The carrying amount of securitized assets reflecting the Company's continuing involvement with the mortgages and the associated liabilities is as follows.

As at December 31, 2015	Securitized assets			
Securitization program	Securitized mortgages	Restricted cash and short-term securities	Total	Secured borrowing liabilities[2]
HELOC securitization[1]	**$ 1,500**	**$ 8**	**$ 1,508**	**$ 1,500**
CMB securitization	**436**	**–**	**436**	**436**
Total	**$ 1,936**	**$ 8**	**$ 1,944**	**$ 1,936**
As at December 31, 2014				
HELOC securitization[1]	$ 2,000	$ 10	$ 2,010	$ 1,999
CMB securitization	72	2	74	74
Total	$ 2,072	$ 12	$ 2,084	$ 2,073

(1) Manulife Bank of Canada (the "Bank"), a MFC subsidiary, securitizes a portion of its HELOC receivables through Platinum Canadian Mortgage Trust, which funds the purchase of the co-ownership interests from the Bank by issuing term notes collateralized by the underlying pool of CMHC insured HELOCs to institutional investors. The restricted cash balance for the HELOC securitization reflects a cash reserve fund established in relation to the transactions. The reserve will be drawn upon only in the event of insufficient cash flows from the underlying HELOCs to satisfy the secured borrowing liability.

(2) The secured borrowing liabilities primarily comprise of Series 2011-1 notes with a floating rate which are expected to mature on December 15, 2021. Manulife Bank also securitizes insured amortizing mortgages under the National Housing Act Mortgage-Backed Securities (NHA MBS) program sponsored by the Canada Mortgage and Housing Corporation (CMHC). Manulife Bank participates in the Canada Mortgage Bond (CMB) program by selling NHA MBS securities to Canada Housing Trust (CHT), as a source of fixed rate funding.

Fair value of the securitized assets as at December 31, 2015 was $1,964 (2014 – $2,084) and the fair value of the associated liabilities was $1,937 (2014 – $2,079).

(g) Fair value measurement

The following table presents fair value of the Company's invested assets and segregated funds net assets, measured at fair value in the Consolidated Statements of Financial Position and categorized by hierarchy.

As at December 31, 2015	Total fair value	Level 1	Level 2	Level 3
Cash and short-term securities				
FVTPL	**$ 574**	**$ –**	**$ 574**	**$ –**
AFS	**13,548**	**–**	**13,548**	**–**
Other	**3,763**	**3,763**	**–**	**–**
Debt securities[1]				
FVTPL				
Canadian government and agency	**16,965**	**–**	**15,299**	**1,666**
U.S. government and agency	**15,964**	**–**	**15,119**	**845**
Other government and agency	**17,895**	**–**	**17,483**	**412**
Corporate	**80,269**	**2**	**76,296**	**3,971**
Residential mortgage/asset-backed securities	**27**	**–**	**12**	**15**
Commercial mortgage/asset-backed securities	**718**	**–**	**207**	**511**
Other securitized assets	**2,052**	**–**	**2,004**	**48**
AFS				
Canadian government and agency	**4,318**	**–**	**4,165**	**153**
U.S. government and agency	**12,688**	**–**	**12,675**	**13**
Other government and agency	**1,688**	**–**	**1,645**	**43**
Corporate	**4,925**	**–**	**4,607**	**318**
Residential mortgage/asset-backed securities	**49**	**–**	**41**	**8**
Commercial mortgage/asset-backed securities	**123**	**–**	**27**	**96**
Other securitized assets	**146**	**–**	**141**	**5**
Public equities				
FVTPL	**14,689**	**14,686**	**2**	**1**
AFS	**2,294**	**2,292**	**2**	**–**
Real estate – investment property[2]	**13,968**	**–**	**–**	**13,968**
Other invested assets[3]	**13,504**	**–**	**–**	**13,504**
Segregated funds net assets[4]	**313,249**	**277,779**	**30,814**	**4,656**
Total	**$ 533,416**	**$ 298,522**	**$ 194,661**	**$ 40,233**

As at December 31, 2014	Total fair value	Level 1	Level 2	Level 3
Cash and short-term securities				
FVTPL	$ 320	$ –	$ 320	$ –
AFS	14,505	–	14,505	–
Other	6,254	6,254	–	–
Debt securities[1]				
FVTPL				
Canadian government and agency	13,762	–	12,756	1,006
U.S. government and agency	15,225	–	14,417	808
Other government and agency	13,838	–	13,401	437
Corporate	68,828	–	65,678	3,150
Residential mortgage/asset-backed securities	146	–	13	133
Commercial mortgage/asset-backed securities	835	–	258	577
Other securitized assets	2,066	–	2,005	61
AFS				
Canadian government and agency	3,858	–	2,974	884
U.S. government and agency	9,611	–	9,599	12
Other government and agency	1,489	–	1,435	54
Corporate	4,437	–	4,203	234
Residential mortgage/asset-backed securities	103	–	75	28
Commercial mortgage/asset-backed securities	98	–	15	83
Other securitized assets	150	–	137	13
Public equities				
FVTPL	12,389	12,381	6	2
AFS	2,154	2,154	–	–
Real estate – investment property[2]	9,270	–	–	9,270
Other invested assets[3]	10,759	–	–	10,759
Segregated funds net assets[4]	256,532	234,120	19,821	2,591
Total	$ 446,629	$ 254,909	$ 161,618	$ 30,102

[1] The debt securities included in Level 3 consist primarily of maturities greater than 30 years for which the Treasury yield curve is not observable and is extrapolated, as well as debt securities where only unobservable single quoted broker prices are provided.

[2] For investment property, the significant unobservable inputs are capitalization rates (ranging from 3.75% to 9.5% during the year and ranging from 4.0% to 10.25% for the year 2014) and terminal capitalization rates (ranging from 4.5% to 9.75% during the year and ranging from 4.9% to 9.25% during the year 2014). Holding other

factors constant, a lower capitalization or terminal capitalization rate will tend to increase the fair value of an investment property. Changes in fair value based on variations in unobservable inputs generally cannot be extrapolated because the relationship between the directional changes of each input is not usually linear.

(3) Other invested assets measured at fair value are held primarily in the power and infrastructure and timber sectors. The significant inputs used in the valuation of the Company's power and infrastructure investments are primarily future distributable cash flows, terminal values and discount rates. Holding other factors constant, an increase to future distributable cash flows or terminal values would tend to increase the fair value of a power and infrastructure investment, while an increase in the discount rate would have the opposite effect. Discount rates during the year ranged from 10.05% to 16.0% (2014 – ranged from 10.0% to 16.0%). Disclosure of distributable cash flow and terminal value ranges are not meaningful given the disparity in estimates by project. The significant inputs used in the valuation of the Company's investments in timberland are timber prices and discount rates. Holding other factors constant, an increase to timber prices would tend to increase the fair value of a timberland investment, while an increase in the discount rates would have the opposite effect. Discount rates during the year ranged from 5.0% to 7.5% (2014 – ranged from 5.25% to 8.0%). A range of prices for timber is not meaningful as the market price depends on factors such as property location and proximity to markets and export yards.

(4) Segregated funds net assets are measured at fair value. The Company's Level 3 segregated funds assets are predominantly invested in timberland properties value as described above.

For invested assets not measured at fair value in the Consolidated Statements of Financial Position, the following tables disclose the summarized fair value information categorized by hierarchy, together with the related carrying values.

As at December 31, 2015	Carrying value	Total fair value	Level 1	Level 2	Level 3
Mortgages(1)	**$ 43,818**	**$ 45,307**	**$ –**	**$ –**	**$ 45,307**
Private placements(2)	**27,578**	**29,003**	**–**	**23,629**	**5,374**
Policy loans(3)	**7,673**	**7,673**	**–**	**7,673**	**–**
Loans to Bank clients(4)	**1,778**	**1,782**	**–**	**1,782**	**–**
Real estate – own use property(5)	**1,379**	**2,457**	**–**	**–**	**2,457**
Other invested assets(6)	**6,874**	**6,854**	**–**	**–**	**6,854**
Total invested assets disclosed at fair value	**$ 89,100**	**$ 93,076**	**$ –**	**$ 33,084**	**$ 59,992**
As at December 31, 2014					
Mortgages(1)	$ 39,458	$ 41,493	$ –	$ –	$ 41,493
Private placements(2)	23,284	25,418	–	20,813	4,605
Policy loans(3)	7,876	7,876	–	7,876	–
Loans to Bank clients(4)	1,772	1,778	–	1,778	–
Real estate – own use property(5)	831	1,566	–	–	1,566
Other invested assets(6)	5,992	6,027	–	–	6,027
Total invested assets disclosed at fair value	$ 79,213	$ 84,158	$ –	$ 30,467	$ 53,691

(1) Fair value of commercial mortgages is derived through an internal valuation methodology using both observable and unobservable inputs. Unobservable inputs include credit assumptions and liquidity spread adjustments. Fair value of fixed-rate residential mortgages is determined using the discounted cash flow method. Inputs used for valuation are primarily comprised of prevailing interest rates and prepayment rates, if applicable. Fair value of variable-rate residential mortgages is assumed to be their carrying value.

(2) Fair value of private placements is derived through an internal valuation methodology using both observable and unobservable inputs. Unobservable inputs include credit assumptions and liquidity spread adjustments. Private placements are classified within Level 2 unless the liquidity adjustment constitutes a significant price impact, in which case the securities are classified as Level 3.

(3) The fair value of policy loans is equal to their unpaid principal balances.

(4) Fair value of fixed-rate loans to Bank clients is determined using the discounted cash flow method. Inputs used for valuation are primarily comprised of current interest rates. Fair value of variable-rate loans is assumed to be their carrying value.

(5) Fair value of own use real estate and the level of the fair value hierarchy are calculated in accordance with the methodologies described for real estate – investment property in note 1.

(6) Other invested assets disclosed at fair value primarily include leveraged leases, oil and gas properties and equity method accounted other invested assets. Fair value of leveraged leases is shown at their carrying values as fair value is not routinely calculated on these investments. Fair value for oil and gas properties is determined using external appraisals based on discounted cash flow methodology. Inputs used in valuation are primarily comprised of forecasted price curves, planned production, as well as capital expenditures, and operating costs. Fair value of equity method accounted other invested assets is determined using a variety of valuation techniques including discounted cash flows and market comparable approaches. Inputs vary based on the specific investment.

Transfers between Level 1 and Level 2

The Company's policy is to record transfers of assets and liabilities between Level 1 and Level 2 at their fair values as at the end of each reporting period, consistent with the date of the determination of fair value. Assets are transferred out of Level 1 when they are no longer transacted with sufficient frequency and volume in an active market. During the year ended December 31, 2015, the Company transferred nil (2014 – nil) of assets measured at fair value from Level 1 to Level 2. Conversely, assets are transferred from Level 2 to Level 1 when transaction volume and frequency are indicative of an active market. The Company transferred nil (2014 – nil) of assets from Level 2 to Level 1 during the year ended December 31, 2015.

For segregated funds net assets, the Company had no transfers from Level 1 to Level 2 for the year ended December 31, 2015 (2014 – $17). The Company had $43 transfers from Level 2 to Level 1 for the year ended December 31, 2015 (2014 – nil).

Invested assets and segregated funds net assets measured at fair value on the Consolidated Statements of Financial Position using significant unobservable inputs (Level 3)

The Company classifies the fair values of invested assets and segregated funds net assets as Level 3 if there are no observable markets for these assets or, in the absence of active markets, the majority of the inputs used to determine fair value are based on the Company's own assumptions about market participant assumptions. The Company prioritizes the use of market-based inputs over entity-based assumptions in determining Level 3 fair values and, therefore, the gains and losses in the tables below include changes in fair value due to both observable and unobservable factors.

The following tables present a roll forward of all invested assets and segregated funds net assets measured at fair value using significant unobservable inputs (Level 3) for the years ended December 31, 2015 and 2014.

For the year ended December 31, 2015	Balance as at January 1, 2015	Net realized / unrealized gains (losses) included in net income(1)	Net realized / unrealized gains (losses) included in AOCI(2)	Purchases(3) /issuances	Sales	Settlements	Transfer into Level 3(4)	Transfer out of Level 3(4)	Currency movement	Balance as at December 31, 2015	Change in unrealized gains (losses) on assets still held
Debt securities											
FVTPL											
Canadian government & agency	**$ 1,006**	**$ (267)**	**$ –**	**$ 2,753**	**$ (839)**	**$ –**	**$ –**	**$ (987)**	**$ –**	**$ 1,666**	**$ (317)**
U.S. government & agency	**808**	**(52)**	**–**	**–**	**(15)**	**–**	**–**	**(35)**	**139**	**845**	**(52)**
Other government & agency	**437**	**5**	**–**	**54**	**(83)**	**(7)**	**–**	**(6)**	**12**	**412**	**4**
Corporate	**3,150**	**(313)**	**–**	**1,574**	**(96)**	**(91)**	**53**	**(588)**	**282**	**3,971**	**(279)**
Residential mortgage/asset-backed securities	**133**	**1**	**–**	**–**	**(122)**	**(22)**	**1**	**–**	**24**	**15**	**9**
Commercial mortgage/ asset-backed securities	**577**	**(18)**	**–**	**141**	**(157)**	**(85)**	**–**	**(43)**	**96**	**511**	**(26)**
Other securitized assets	**61**	**–**	**–**	**–**	**(13)**	**(18)**	**6**	**–**	**12**	**48**	**–**
	6,172	**(644)**	**–**	**4,522**	**(1,325)**	**(223)**	**60**	**(1,659)**	**565**	**7,468**	**(661)**
AFS											
Canadian government & agency	**884**	**62**	**76**	**466**	**(728)**	**–**	**–**	**(607)**	**–**	**153**	**–**
U.S. government & agency	**12**	**–**	**(1)**	**–**	**–**	**–**	**–**	**–**	**2**	**13**	**–**
Other government & agency	**54**	**–**	**(1)**	**10**	**(17)**	**(1)**	**–**	**(1)**	**(1)**	**43**	**–**
Corporate	**234**	**(1)**	**62**	**28**	**(11)**	**(15)**	**16**	**(5)**	**10**	**318**	**–**
Residential mortgage/asset-backed securities	**28**	**2**	**(1)**	**–**	**(20)**	**(7)**	**–**	**–**	**6**	**8**	**–**
Commercial mortgage/ asset-backed securities	**83**	**1**	**14**	**19**	**(21)**	**(12)**	**–**	**(3)**	**15**	**96**	**–**
Other securitized assets	**13**	**–**	**–**	**–**	**(5)**	**(11)**	**5**	**–**	**3**	**5**	**–**
	1,308	**64**	**149**	**523**	**(802)**	**(46)**	**21**	**(616)**	**35**	**636**	**–**
Public equities											
FVTPL	**2**	**(1)**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**1**	**(1)**
AFS	**–**	**–**	**–**	**2**	**(2)**	**–**	**–**	**–**	**–**	**–**	**–**
	2	**(1)**	**–**	**2**	**(2)**	**–**	**–**	**–**	**–**	**1**	**(1)**
Real estate – investment property	**9,270**	**1,000**	**–**	**2,645**	**(106)**	**–**	**–**	**–**	**1,159**	**13,968**	**988**
Other invested assets	**10,759**	**177**	**(1)**	**2,067**	**(537)**	**(625)**	**–**	**–**	**1,664**	**13,504**	**(57)**
	20,029	**1,177**	**(1)**	**4,712**	**(643)**	**(625)**	**–**	**–**	**2,823**	**27,472**	**931**
Segregated funds net assets	**2,591**	**265**	**–**	**2,134**	**(821)**	**8**	**5**	**–**	**474**	**4,656**	**248**
Total	**$ 30,102**	**$ 861**	**$ 148**	**$ 11,893**	**$ (3,593)**	**$ (886)**	**$ 86**	**$ (2,275)**	**$ 3,897**	**$ 40,233**	**$ 517**

For the year ended December 31, 2014	Balance as at January 1, 2014	Net realized / unrealized gains (losses) included in net income[1]	Net realized / unrealized gains (losses) included in AOCI[2]	Purchases[3] /issuances	Sales	Settlements	Transfer into Level 3[4]	Transfer out of Level 3[4]	Currency movement	Balance as at December 31, 2014	Change in unrealized gains (losses) on assets still held
Debt securities											
FVTPL											
Canadian government & agency	$ 824	$ 143	$ –	$ 1,131	$ (881)	$ –	$ –	$ (216)	$ 5	$ 1,006	$ 115
U.S. government & agency	578	121	–	111	–	–	–	(61)	59	808	121
Other government & agency	320	65	–	90	(27)	(2)	–	(22)	13	437	63
Corporate	3,061	193	–	513	(109)	(159)	34	(489)	106	3,150	184
Residential mortgage/asset-backed securities	147	7	–	–	–	(32)	–	–	11	133	4
Commercial mortgage/asset-backed securities	353	8	–	236	(7)	(52)	–	(2)	41	577	13
Other securitized assets	77	6	–	–	–	(31)	4	(1)	6	61	6
	5,360	543	–	2,081	(1,024)	(276)	38	(791)	241	6,172	506
AFS											
Canadian government & agency	538	33	96	658	(430)	–	–	(11)	–	884	–
U.S. government & agency	5	–	2	6	–	–	–	–	(1)	12	–
Other government & agency	60	–	2	19	(27)	(1)	–	(1)	2	54	–
Corporate	228	1	6	18	(4)	(21)	15	(16)	7	234	–
Residential mortgage/asset-backed securities	31	2	1	–	–	(9)	–	–	3	28	–
Commercial mortgage/asset-backed securities	58	–	4	28	(3)	(11)	–	(1)	8	83	–
Other securitized assets	31	–	1	–	–	(21)	–	(1)	3	13	–
	951	36	112	729	(464)	(63)	15	(30)	22	1,308	–
Public equities											
FVTPL	–	(1)	–	1	–	–	1	–	1	2	(1)
AFS	–	–	–	1	–	–	–	–	(1)	–	–
	–	(1)	–	2	–	–	1	–	–	2	(1)
Real estate – investment property	8,904	262	–	830	(1,217)	–	–	–	491	9,270	265
Other invested assets	8,508	602	(33)	2,107	(417)	(657)	–	–	649	10,759	454
	17,412	864	(33)	2,937	(1,634)	(657)	–	–	1,140	20,029	719
Segregated funds net assets	2,361	179	–	71	(290)	(2)	51	–	221	2,591	62
Total	$ 26,084	$ 1,621	$ 79	$ 5,820	$ (3,412)	$ (998)	$ 105	$ (821)	$ 1,624	$ 30,102	$ 1,286

(1) These amounts, except for the amount related to segregated funds net assets, are included in net investment income on the Consolidated Statements of Income.
(2) These amounts are included in AOCI on the Consolidated Statements of Financial Position.
(3) Purchases in 2015 include assets acquired from Standard Life and purchases in 2014 include timber properties recognized upon initial consolidation of Hancock Victoria Plantations PTY Limited ("HVPH").
(4) For assets that are transferred into and/or out of Level 3, the Company uses the fair value of the assets at the beginning of the year.

Transfers into Level 3 primarily result from securities that were impaired during the year or securities where a lack of observable market data (versus the previous period) resulted in reclassifying assets into Level 3. Transfers from Level 3 primarily result from observable market data now being available for the entire term structure of the debt security.

Note 5 Derivative and Hedging Instruments

Derivatives are financial contracts, the value of which is derived from underlying interest rates, foreign exchange rates, other financial instruments, commodity prices or indices. The Company uses derivatives including swaps, forward and futures agreements, and options to manage current and anticipated exposures to changes in interest rates, foreign exchange rates, commodity prices and equity market prices, and to replicate permissible investments.

Swaps are over-the-counter ("OTC") contractual agreements between the Company and a third party to exchange a series of cash flows based upon rates applied to a notional amount. For interest rate swaps, counterparties generally exchange fixed or floating interest rate payments based on a notional value in a single currency. Cross currency swaps involve the exchange of principal amounts between parties as well as the exchange of interest payments in one currency for the receipt of interest payments in another currency. Total return swaps are contracts that involve the exchange of payments based on changes in the values of a reference asset, including any returns such as interest earned on these assets, in return for amounts based on reference rates specified in the contract.

Forward and futures agreements are contractual obligations to buy or sell a financial instrument, foreign currency or other underlying commodity on a predetermined future date at a specified price. Forward contracts are OTC contracts negotiated between counterparties, whereas futures agreements are contracts with standard amounts and settlement dates that are traded on regulated exchanges.

Options are contractual agreements whereby the holder has the right, but not the obligation, to buy (call option) or sell (put option) a security, exchange rate, interest rate, or other financial instrument at a predetermined price/rate within a specified time.

See variable annuity guarantee dynamic hedging strategy in the "Risk Management" section of the Company's 2015 MD&A for an explanation of the Company's dynamic hedging strategy for its variable annuity product guarantees.

(a) Fair value of derivatives

The pricing models used to value OTC derivatives are based on market standard valuation methodologies and the inputs to these models are consistent with what a market participant would use when pricing the instruments. Derivative valuations can be affected by changes in interest rates, currency exchange rates, financial indices, credit spreads, default risk (including the counterparties to the contract), and market volatility. The significant inputs to the pricing models for most OTC derivatives are inputs that are observable or can be corroborated by observable market data and are classified as Level 2. Inputs that are observable generally include interest rates, foreign currency exchange rates and interest rate curves. However, certain OTC derivatives may rely on inputs that are significant to the fair value that are not observable in the market or cannot be derived principally from, or corroborated by, observable market data and these derivatives are classified as Level 3. Inputs that are unobservable generally include broker quotes, volatilities and inputs that are outside of the observable portion of the interest rate curve or other relevant market measures. These unobservable inputs may involve significant management judgment or estimation. Even though unobservable, these inputs are based on assumptions deemed appropriate given the circumstances and consistent with what market participants would use when pricing such instruments. The Company use of unobservable inputs is limited and the impact on derivative fair values does not represent a material amount as evidenced by the limited amount of Level 3 derivatives. The credit risk of both the counterparty and the Company are considered in determining the fair value for all OTC derivatives after taking into account the effects of netting agreements and collateral arrangements.

The gross notional amount and the fair value of derivative contracts by the underlying risk exposure for derivatives in qualifying hedging and derivatives not designated in qualifying hedging relationships are summarized in the following table.

As at December 31,		2015			2014		
		Notional	Fair value		Notional	Fair value	
Type of hedge	Instrument type	amount	Assets	Liabilities	amount	Assets	Liabilities
Qualifying hedge accounting relationships							
Fair value hedges	Interest rate swaps	**$ 2,077**	**$ 1**	**$ 553**	$ 4,350	$ 12	$ 918
	Foreign currency swaps	**95**	**1**	**3**	80	–	15
Cash flow hedges	Foreign currency swaps	**826**	**–**	**476**	827	–	284
	Forward contracts	**351**	**–**	**43**	114	–	4
	Equity contracts	**98**	**–**	**3**	95	9	–
Total derivatives in qualifying hedge accounting relationships		**3,447**	**2**	**1,078**	5,466	21	1,221
Derivatives not designated in qualifying hedge accounting relationships							
	Interest rate swaps	**315,230**	**22,771**	**11,935**	234,690	17,354	9,134
	Interest rate futures	**9,455**	**–**	**–**	6,111	–	–
	Interest rate options	**5,887**	**200**	**–**	3,900	108	–
	Foreign currency swaps	**9,382**	**331**	**1,758**	6,786	141	887
	Currency rate futures	**5,746**	**–**	**–**	4,277	–	–
	Forward contracts	**13,393**	**520**	**241**	8,319	1,096	33
	Equity contracts	**11,251**	**438**	**38**	10,317	586	8
	Credit default swaps	**748**	**10**	**–**	477	9	–
	Equity futures	**19,553**	**–**	**–**	14,070	–	–
Total derivatives not designated in qualifying hedge accounting relationships		**390,645**	**24,270**	**13,972**	288,947	19,294	10,062
Total derivatives		**$ 394,092**	**$ 24,272**	**$ 15,050**	$ 294,413	$ 19,315	$ 11,283

Fair value of derivative instruments is summarized by term to maturity in the following tables. Fair values shown do not incorporate the impact of master netting agreements. Refer to note 10.

	Term to maturity				
As at December 31, 2015	Less than 1 year	1 to 3 years	3 to 5 years	Over 5 years	Total
Derivative assets	**$ 362**	**$ 689**	**$ 593**	**$ 22,628**	**$ 24,272**
Derivative liabilities	**298**	**676**	**632**	**13,444**	**15,050**
As at December 31, 2014					
Derivative assets	$ 657	$ 895	$ 596	$ 17,167	$ 19,315
Derivative liabilities	99	302	413	10,469	11,283

	Remaining term to maturity (notional amounts)				Fair value				
As at December 31, 2015	Under 1 year	1 to 5 years	Over 5 years	Total	Positive	Negative	Net	Credit risk equivalent[(1)]	Risk-weighted amount[(2)]
Interest rate contracts									
OTC swap contracts	**$ 14,646**	**$ 33,625**	**$ 172,579**	**$ 220,850**	**$ 20,006**	**$ (10,684)**	**$ 9,322**	**$ 10,680**	**$ 1,555**
Cleared swap contracts	**7,160**	**22,043**	**67,255**	**96,458**	**3,828**	**(2,739)**	**1,089**	**–**	**–**
Forward contracts	**3,145**	**6,851**	**1,695**	**11,691**	**503**	**(212)**	**291**	**252**	**38**
Futures	**9,455**	**–**	**–**	**9,455**	**–**	**–**	**–**	**–**	**–**
Options purchased	**–**	**–**	**5,886**	**5,886**	**199**	**–**	**199**	**373**	**56**
Subtotal	**34,406**	**62,519**	**247,415**	**344,340**	**24,536**	**(13,635)**	**10,901**	**11,305**	**1,649**
Foreign exchange									
Swap contracts	**711**	**2,740**	**6,851**	**10,302**	**333**	**(2,255)**	**(1,922)**	**1,298**	**162**
Forward contracts	**1,739**	**315**	**–**	**2,054**	**17**	**(73)**	**(56)**	**112**	**15**
Futures	**5,746**	**–**	**–**	**5,746**	**–**	**–**	**–**	**–**	**–**
Credit derivatives	**298**	**450**	**–**	**748**	**10**	**–**	**10**	**–**	**–**
Equity contracts									
Swap contracts	**2,280**	**124**	**–**	**2,404**	**14**	**(22)**	**(8)**	**404**	**44**
Futures	**19,553**	**–**	**–**	**19,553**	**–**	**–**	**–**	**–**	**–**
Options purchased	**4,205**	**4,740**	**–**	**8,945**	**422**	**(18)**	**404**	**2,184**	**285**
Subtotal including accrued interest	**68,938**	**70,888**	**254,266**	**394,092**	**25,332**	**(16,003)**	**9,329**	**15,303**	**2,155**
Less accrued interest	**–**	**–**	**–**	**–**	**1,060**	**(953)**	**107**	**–**	**–**
Total	**$ 68,938**	**$ 70,888**	**$ 254,266**	**$ 394,092**	**$ 24,272**	**$ (15,050)**	**$ 9,222**	**$ 15,303**	**$ 2,155**
As at December 31, 2014									
Interest rate contracts									
OTC swap contracts	$ 11,221	$ 29,197	$ 149,857	$ 190,275	$ 16,154	$ (8,470)	$ 7,684	$ 8,843	$ 1,019
Cleared swap contracts	3,028	12,645	33,092	48,765	2,022	(2,281)	(259)	–	–
Forward contracts	2,295	5,225	–	7,520	1,090	(4)	1,086	106	12
Futures	6,111	–	–	6,111	–	–	–	–	–
Options purchased	–	–	3,900	3,900	108	–	108	237	28
Subtotal	22,655	47,067	186,849	256,571	19,374	(10,755)	8,619	9,186	1,059
Foreign exchange									
Swap contracts	235	2,361	5,097	7,693	144	(1,200)	(1,056)	988	109
Forward contracts	863	50	–	913	6	(33)	(27)	30	3
Futures	4,277	–	–	4,277	–	–	–	–	–
Credit derivatives	–	477	–	477	10	–	10	–	–
Equity contracts									
Swap contracts	1,508	122	1	1,631	28	(7)	21	238	24
Futures	14,070	–	–	14,070	–	–	–	–	–
Options purchased	2,388	6,393	–	8,781	564	(1)	563	2,184	240
Subtotal including accrued interest	45,996	56,470	191,947	294,413	20,126	(11,996)	8,130	12,626	1,435
Less accrued interest	–	–	–	–	811	(713)	98	–	–
Total	$ 45,996	$ 56,470	$ 191,947	$ 294,413	$ 19,315	$ (11,283)	$ 8,032	$ 12,626	$ 1,435

(1) Credit risk equivalent is the sum of replacement cost and the potential future credit exposure. Replacement cost represents the current cost of replacing all contracts with a positive fair value. The amounts take into consideration legal contracts that permit offsetting of positions. The potential future credit exposure is calculated based on a formula prescribed by OSFI.

(2) Risk-weighted amount represents the credit risk equivalent, weighted according to the creditworthiness of the counterparty, as prescribed by OSFI.

The total notional value of $394 billion (2014 – $294 billion) includes $225 billion (2014 – $165 billion) related to derivatives utilized in our variable annuity guarantee dynamic hedging and our macro equity risk hedging programs. As a result of the Company's variable annuity hedging practices, a large number of trades are in offsetting positions, resulting in materially lower net fair value exposure to the Company than what the gross notional amount would suggest.

The following table presents the fair value of derivative contracts categorized by hierarchy.

As at December 31, 2015	Total fair value	Level 1	Level 2	Level 3
Derivative assets				
Interest rate contracts	**$ 23,475**	**$ –**	**$ 22,767**	**$ 708**
Foreign exchange contracts	**349**	**–**	**339**	**10**
Equity contracts	**438**	**–**	**79**	**359**
Credit default swaps	**10**	**–**	**10**	**–**
Total derivative assets	**$ 24,272**	**$ –**	**$ 23,195**	**$ 1,077**
Derivative liabilities				
Interest rate contracts	**$ 12,700**	**$ –**	**$ 11,997**	**$ 703**
Foreign exchange contracts	**2,309**	**–**	**2,309**	**–**
Equity contracts	**41**	**–**	**17**	**24**
Total derivative liabilities	**$ 15,050**	**$ –**	**$ 14,323**	**$ 727**

As at December 31, 2014	Total fair value	Level 1	Level 2	Level 3
Derivative assets				
Interest rate contracts	$ 18,564	$ –	$ 17,553	$ 1,011
Foreign exchange contracts	147	–	144	3
Equity contracts	595	–	84	511
Credit default swaps	9	–	9	–
Total derivative assets	$ 19,315	$ –	$ 17,790	$ 1,525
Derivative liabilities				
Interest rate contracts	$ 10,057	$ –	$ 9,652	$ 405
Foreign exchange contracts	1,218	–	1,211	7
Equity contracts	8	–	–	8
Total derivative liabilities	$ 11,283	$ –	$ 10,863	$ 420

The following table presents a roll forward for net derivative contracts measured at fair value using significant unobservable inputs (Level 3).

For the years ended December 31,	2015	2014
Balance at the beginning of the year	**$ 1,105**	$ (147)
Net realized / unrealized gains (losses) included in:		
Net income[(1)]	**(477)**	1,338
OCI[(2)]	**(20)**	(23)
Purchases[(3)]	**47**	320
Sales	**(301)**	(48)
Transfers		
Into Level 3[(4)]	**–**	(350)
Out of Level 3[(4)]	**(100)**	(34)
Currency movement	**96**	49
Balance at the end of the year	**$ 350**	$ 1,105
Change in unrealized gains (losses) on instruments still held	**$ (386)**	$ 927

(1) These amounts are included in investment income on the Consolidated Statements of Income.

(2) These amounts are included in AOCI on the Consolidated Statements of Financial Position.

(3) Purchases include derivatives recognized upon initial consolidation of HVPH, refer to note 4.

(4) For items that are transferred into and out of Level 3, the Company uses the fair value of the items at the end and beginning of the period, respectively. Transfers into Level 3 occur when the inputs used to price the assets and liabilities lack observable market data (versus the previous year). Transfers out of Level 3 occur when the inputs used to price the assets and liabilities become available from observable market data.

(b) Hedging relationships

The Company uses derivatives for economic hedging purposes. In certain circumstances, these hedges also meet the requirements for hedge accounting. Risk management strategies eligible for hedge accounting are designated as fair value hedges, cash flow hedges or net investment hedges, as described below.

Fair value hedges

The Company uses interest rate swaps to manage its exposure to changes in the fair value of fixed rate financial instruments caused by changes in interest rates. The Company also uses cross currency swaps to manage its exposure to foreign exchange rate fluctuations, interest rate fluctuations, or both.

The Company recognizes gains and losses on derivatives and the related hedged items in fair value hedges in investment income. These investment gains (losses) are shown in the following table.

Derivatives in qualifying fair value hedging relationships

For the year ended December 31, 2015	Hedged items in qualifying fair value hedging relationships	Gains (losses) recognized on derivatives	Gains (losses) recognized for hedged items	Ineffectiveness recognized in investment income
Interest rate swaps	Fixed rate assets	**$ (147)**	**$ 105**	**$ (42)**
	Fixed rate liabilities	**(2)**	**2**	**–**
Foreign currency swaps	Fixed rate assets	**14**	**(13)**	**1**
Total		**$ (135)**	**$ 94**	**$ (41)**

For the year ended December 31, 2014				
Interest rate swaps	Fixed rate assets	$ (1,080)	$ 983	$ (97)
	Fixed rate liabilities	(9)	10	1
Foreign currency swaps	Fixed rate assets	2	(3)	(1)
Total		$ (1,087)	$ 990	$ (97)

Cash flow hedges

The Company uses interest rate swaps to hedge the variability in cash flows from variable rate financial instruments and forecasted transactions. The Company also uses cross currency swaps and foreign currency forward contracts to hedge the variability from foreign currency financial instruments and foreign currency expenses. Total return swaps are used to hedge the variability in cash flows associated with certain stock-based compensation awards. Inflation swaps are used to reduce inflation risk generated from inflation-indexed liabilities.

The effects of derivatives in cash flow hedging relationships on the Consolidated Statements of Income and the Consolidated Statements of Comprehensive Income are shown in the following table.

Derivatives in qualifying cash flow hedging relationships

For the year ended December 31, 2015	Hedged items in qualifying cash flow hedging relationships	Gains (losses) deferred in AOCI on derivatives	Gains (losses) reclassified from AOCI into investment income	Ineffectiveness recognized in investment income
Interest rate swaps	Forecasted liabilities	**$ (9)**	**$ (15)**	**$ –**
Foreign currency swaps	Fixed rate assets	**2**	**(1)**	**–**
	Floating rate liabilities	**(195)**	**(126)**	**–**
Forward contracts	Forecasted expenses	**(44)**	**(4)**	**–**
Equity contracts	Stock-based compensation	**(7)**	**14**	**–**
Non-derivative financial instrument	Forecasted expenses	**3**	**–**	**–**
Total		**$ (250)**	**$ (132)**	**$ –**

For the year ended December 31, 2014				
Interest rate swaps	Forecasted liabilities	$ (7)	$ (17)	$ –
Foreign currency swaps	Fixed rate assets	(4)	(1)	–
	Floating rate liabilities	(218)	(54)	–
Forward contracts	Forecasted expenses	(6)	(4)	–
Equity contracts	Stock-based compensation	(19)	5	–
Total		$ (254)	$ (71)	$ –

The Company anticipates that net losses of approximately $43 will be reclassified from AOCI to net income within the next 12 months. The maximum time frame for which variable cash flows are hedged is 21 years.

Hedges of net investments in foreign operations

The Company primarily uses forward currency contracts, cross currency swaps and non-functional currency denominated debt to manage its foreign currency exposures to net investments in foreign operations.

The effects of derivatives in net investment hedging relationships on the Consolidated Statements of Income and the Consolidated Statements of Other Comprehensive Income are shown in the following table.

Hedging instruments in net investment hedging relationships

For the year ended December 31, 2015	Gains (losses) deferred in AOCI on derivatives	Gains (losses) reclassified from AOCI into investment income	Ineffectiveness recognized in investment income
Non-functional currency denominated debt	**$ (158)**	$ –	$ –
Total	**$ (158)**	**$ –**	**$ –**

For the year ended December 31, 2014			
Foreign currency forwards	$ (37)	$ –	$ –
Non-functional currency denominated debt	(106)	–	–
Total	$ (143)	$ –	$ –

(c) Derivatives not designated in qualifying hedge accounting relationships

Derivatives used in portfolios supporting insurance contract liabilities are generally not designated in qualifying hedge accounting relationships because the change in the value of the insurance contract liabilities economically hedged by these derivatives is also recorded through net income. Given the changes in fair value of these derivatives and related hedged risks are recognized in investment income as they occur, they generally offset the change in hedged risk to the extent the hedges are economically effective. Interest rate and cross currency swaps are used in the portfolios supporting insurance contract liabilities to manage duration and currency risks.

The effects of derivatives not designated in qualifying hedge accounting relationships on the Consolidated Statements of Income are shown in the following table.

Derivatives not designated in qualifying hedge accounting relationships

For the years ended December 31,	**2015**	2014
Investment income (loss)		
Interest rate swaps	**$ 978**	$ 6,628
Interest rate futures	**(83)**	(266)
Interest rate options	**23**	75
Foreign currency swaps	**(590)**	(327)
Currency rate futures	**(97)**	77
Forward contracts	**(371)**	1,569
Equity futures	**(36)**	(1,300)
Equity contracts	**(194)**	(71)
Credit default swaps	**(5)**	(2)
Total	**$ (375)**	$ 6,383

(d) Embedded derivatives

Certain insurance contracts contain features that are classified as embedded derivatives and are measured separately at FVTPL including reinsurance contracts related to guaranteed minimum income benefits and contracts containing certain credit and interest rate features.

Certain reinsurance contracts related to guaranteed minimum income benefits are considered embedded derivatives requiring separate measurement at FVTPL as the financial component contained in the reinsurance contracts does not contain significant insurance risk. As at December 31, 2015, reinsurance ceded guaranteed minimum income benefits had a fair value of $1,574 (2014 – $1,258) and reinsurance assumed guaranteed minimum income benefits had a fair value of $127 (2014 – $112). Claims recovered under reinsurance ceded contracts offset the claims expenses and claims paid on the reinsurance assumed are reported as contract benefits.

The Company's credit and interest rate embedded derivatives promise to pay the returns on a portfolio of assets to the contract holder. These embedded derivatives contain a credit and interest rate risk that is a financial risk embedded in the underlying insurance contract. As at December 31, 2015, these embedded derivatives had a fair value of $170 (2014 – $194).

Other financial instruments classified as embedded derivatives but exempt from separate measurement at fair value include variable universal life and variable life products, minimum guaranteed credited rates, no lapse guarantees, guaranteed annuitization options, CPI indexing of benefits, and segregated fund minimum guarantees other than reinsurance ceded/assumed guaranteed minimum income benefits. These embedded derivatives are measured and reported within insurance contract liabilities and are exempt from separate fair value measurement as they contain insurance risk and/or are closely related to the insurance host contract.

Note 6 Income Taxes

(a) Components of the income tax expense (recovery)

Income tax recognized in the Consolidated Statements of Income:

For the years ended December 31,	2015	2014
Current tax		
Current year	**$ 615**	$ 521
Adjustments to prior year	**56**	52
	671	573
Deferred tax		
Change related to temporary differences	**(293)**	102
Effects of changes in tax rates	**(50)**	(4)
Income tax expense	**$ 328**	$ 671

Income tax recognized in Other Comprehensive Income ("OCI"):

For the years ended December 31,	2015	2014
Current income tax expense (recovery)	**$ (139)**	$ 46
Deferred income tax recovery	**(104)**	(43)
Income tax expense (recovery)	**$ (243)**	$ 3

Income tax recognized directly in Equity:

For the years ended December 31,	2015	2014
Current income tax expense (recovery)	**$ 50**	$ (6)
Deferred income tax recovery	**(48)**	(25)
Income tax expense (recovery)	**$ 2**	$ (31)

The effective income tax rate reported in the Consolidated Statements of Income varies from the Canadian tax rate of 26.75 per cent for the year ended December 31, 2015 (2014 – 26.5 per cent) and the reasons are shown below.

Reconciliation of income tax expense

For the years ended December 31,	2015	2014
Income before income taxes	**$ 2,618**	$ 4,264
Income tax expense at Canadian statutory tax rate	**$ 700**	$ 1,130
Increase (decrease) in income taxes due to:		
Tax-exempt investment income	**(231)**	(185)
Differences in tax rate on income not subject to tax in Canada	**(44)**	(190)
General business tax credits net of tax credits not recognized	**(21)**	(31)
Recovery of unrecognized tax losses of prior periods	**(38)**	(39)
Adjustments to taxes related to prior years	**(32)**	(13)
Other differences	**(6)**	(1)
Income tax expense	**$ 328**	$ 671

(b) Current tax receivable and payable

As at December 31, 2015, the Company has approximately $527 of current tax payable included in other liabilities (2014 – $493) and a current tax receivable of $198 included in other assets (2014 – $168).

(c) Deferred tax assets and liabilities

Reflected on Consolidated Statements of Financial Position:

As at December 31,	2015	2014
Deferred tax assets	$ 4,067	$ 3,329
Deferred tax liabilities	(1,235)	(1,228)
Net deferred tax asset	**$ 2,832**	$ 2,101

Recognized deferred tax assets and liabilities are comprised of the following significant components.

	Balance January 1, 2015	Acquired in Business Combinations	Disposals	Recognized in Profit or Loss	Recognized in Other Comprehensive Income	Recognized in Equity	Translation and Other	Balance at December 31, 2015
Loss carryforwards	$ 1,662	$ –	$ –	$ (472)	$ –	$ 2	$ 301	$ 1,493
Actuarial liabilities	5,935	315	–	2,374	–	37	787	9,448
Pensions and post-employment benefits	277	58	–	(6)	4	–	(4)	329
Tax credits	535	–	–	105	–	–	110	750
Accrued interest	105	–	–	(3)	–	–	19	121
Real estate	(1,162)	(97)	–	(363)	(1)	–	(189)	(1,812)
Securities and other investments	(4,519)	(62)	–	(818)	74	10	(845)	(6,160)
Sale of investments	(214)	(19)	–	34	–	–	(1)	(200)
Goodwill and intangible assets	(773)	(263)	–	16	–	–	(118)	(1,138)
Other	255	20	–	(524)	27	(1)	224	1
Total	**$ 2,101**	**$ (48)**	**$ –**	**$ 343**	**$ 104**	**$ 48**	**$ 284**	**$ 2,832**

	Balance January 1, 2014	Acquired in Business Combinations	Disposals	Recognized in Profit or Loss	Recognized in Other Comprehensive Income	Recognized in Equity	Translation and Other	Balance at December 31, 2014
Loss carryforwards	$ 807	$ 35	$ –	$ 758	$ –	$ –	$ 62	$ 1,662
Actuarial liabilities	3,249	–	–	2,514	(15)	3	184	5,935
Pensions and post-employment benefits	283	–	–	(34)	19	–	9	277
Tax credits	585	–	–	(103)	–	–	53	535
Accrued interest	167	–	–	(77)	–	–	15	105
Real estate	(1,397)	–	–	337	(1)	–	(101)	(1,162)
Securities and other investments	(260)	(149)	–	(4,083)	11	–	(38)	(4,519)
Sale of investments	(250)	–	–	36	–	–	–	(214)
Goodwill and intangible assets	(743)	–	–	10	–	1	(41)	(773)
Other	(295)	4	–	544	29	21	(48)	255
Total	$ 2,146	$ (110)	$ –	$ (98)	$ 43	$ 25	$ 95	$ 2,101

The total deferred tax assets as at December 31, 2015 of $4,067 (2014 – $3,329) include $4,025 (2014 – $3,289) where the Company has suffered losses in either the current or preceding year and where the recognition is dependent on future taxable profits in the relevant jurisdictions and feasible management actions.

As at December 31, 2015, tax loss carryforwards available were approximately $4,963 (2014 – $5,812) of which $4,790 expire between the years 2016 and 2035 while $173 have no expiry date, and capital loss carryforwards available were approximately $8 (2014 – $8) and have no expiry date. A $1,493 (2014 – $1,662) tax benefit related to these tax loss carryforwards has been recognized as a deferred tax asset as at December 31, 2015, and a benefit of $66 (2014 – $195) has not been recognized. In addition, the Company has approximately $818 (2014 – $593) of tax credit carryforwards which will expire between the years 2016 and 2035 of which a benefit of $68 (2014 – $58) has not been recognized.

The total deferred tax liability as at December 31, 2015 was $1,235 (2014 – $1,228). This amount includes the deferred tax liability of consolidated entities. The aggregate amount of taxable temporary differences associated with the Company's own investments in subsidiaries is not included in the Consolidated Financial Statements and was $5,902 (2014 – $8,749).

(d) Tax related contingencies

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.

Note 7 Goodwill and Intangible Assets

(a) Carrying amounts of goodwill and intangible assets

As at December 31, 2015	Balance, January 1	Additions/ disposals	Amortization expense	Effect of changes in foreign exchange rates	Balance, December 31
Goodwill	**$ 3,181**	**$ 2,172**	**$ n/a**	**$ 332**	**$ 5,685**
Indefinite life intangible assets					
Brand	**696**	**–**	**n/a**	**135**	**831**
Fund management contracts and other[1]	**533**	**123**	**n/a**	**67**	**723**
	1,229	**123**	**n/a**	**202**	**1,554**
Finite life intangible assets[2]					
Distribution networks	**675**	**10**	**43**	**84**	**726**
Customer relationships	**36**	**945**	**50**	**16**	**947**
Software	**314**	**227**	**161**	**16**	**396**
Other	**26**	**50**	**3**	**3**	**76**
	1,051	**1,232**	**257**	**119**	**2,145**
Total intangible assets	**2,280**	**1,355**	**257**	**321**	**3,699**
Total goodwill and intangible assets	**$ 5,461**	**$ 3,527**	**$ 257**	**$ 653**	**$ 9,384**

As at December 31, 2014					
Goodwill	$ 3,110	$ 3	$ n/a	$ 68	$ 3,181
Indefinite life intangible assets					
Brand	638	–	n/a	58	696
Fund management contracts and other[1]	505	–	n/a	28	533
	1,143	–	n/a	86	1,229
Finite life intangible assets[2]					
Distribution networks	668	10	43	40	675
Customer relationships	38	–	2	–	36
Software	312	114	120	8	314
Other	27	–	3	2	26
	1,045	124	168	50	1,051
Total intangible assets	2,188	124	168	136	2,280
Total goodwill and intangible assets	$ 5,298	$ 127	$ 168	$ 204	$ 5,461

[1] For the fund management contracts, the significant CGUs to which these were allocated and their carrying values were John Hancock Investments and Retirement Plan Services with $405 (2014 – $340) and Canadian Wealth (excluding Manulife Bank of Canada) with $273 (2014 – $150).

[2] Gross carrying amount of finite life intangible assets was $999 for Distribution networks, $1,067 for Customer relationships, $1,563 for Software and $127 for Other (2014 – $882, $106, $1,327 and $65, respectively).

(b) Impairment testing of goodwill

In the fourth quarter of 2015, the Company completed its annual goodwill impairment testing by determining the recoverable amounts of its businesses based either on the 2016 five-year business plan and in-force and new business embedded values or on the most recent detailed similar calculations made in a prior period (refer to note 1(f)).

The Company has determined that there is no impairment of goodwill in 2015 and 2014.

The Company has 15 cash-generating units ("CGU") or groups of CGUs. Factors considered when identifying the Company's CGUs include how the Company is organized to interact with customers, how products are presented and sold, and where interdependencies exist. The carrying value of goodwill for all CGUs with goodwill balances is shown in the table below.

As at December 31, 2015 CGU or Group of CGUs	Balance, January 1	Additions/ disposals	Effect of changes in foreign exchange rates	Balance, December 31
Asia (excluding Hong Kong and Japan)	**$ 143**	**$ –**	**$ 23**	**$ 166**
Japan Insurance and Wealth	**339**	**–**	**65**	**404**
Canadian Individual Life	**155**	**–**	**–**	**155**
Canadian Affinity Markets	**83**	**–**	**–**	**83**
Canadian Wealth (excluding Manulife Bank)	**750**	**339**	**–**	**1,089**
Canadian Group Benefits and Group Retirement Solutions	**826**	**963**	**–**	**1,789**
International Group Program	**78**	**–**	**15**	**93**
John Hancock Insurance	**317**	**–**	**61**	**378**
John Hancock Investments and Retirement Plan Services	**420**	**659**	**155**	**1,234**
Corporate and Other	**70**	**211**	**13**	**294**
Total	**$ 3,181**	**$ 2,172**	**$ 332**	**$ 5,685**

As at December 31, 2014 CGU or Group of CGUs				
Asia (excluding Hong Kong and Japan)	$ 134	$ –	$ 9	$ 143
Japan Insurance and Wealth	355	–	(16)	339
Canadian Individual Life	155	–	–	155
Canadian Affinity Markets	83	–	–	83
Canadian Wealth (excluding Manulife Bank)	750	–	–	750
Canadian Group Benefits and Group Retirement Solutions	826	–	–	826
International Group Program	71	–	7	78
John Hancock Insurance	290	–	27	317
John Hancock Investments and Retirement Plan Services	385	–	35	420
Corporate and Other	61	3	6	70
Total	$ 3,110	$ 3	$ 68	$ 3,181

The valuation techniques, significant assumptions and sensitivities, where applicable, applied in the goodwill impairment testing are described below.

(c) Valuation techniques

The recoverable value of each CGU or group of CGUs was based on value-in-use ("VIU") for the U.S. (John Hancock) based CGUs, the Canadian Individual Life CGU and the Japan CGU. For all other CGUs, fair value less costs to sell ("FVLCS") was used. When determining if a CGU is impaired, the Company compares its recoverable amount to the allocated capital for that unit, which is aligned with the Company's internal reporting practices.

Under the VIU approach, an embedded appraisal value is determined from a projection of future distributable earnings derived from both the in-force business and new business expected to be sold in the future, and therefore, reflects the economic value for each CGU's or group of CGUs' profit potential under a set of assumptions. This approach requires assumptions including sales and revenue growth rates, capital requirements, interest rates, equity returns, mortality, morbidity, policyholder behaviour, tax rates and discount rates.

Under the FVLCS approach, the Company determined the fair value of the CGU or group of CGUs using an earnings-based approach which incorporated forecasted earnings, excluding interest and equity market impacts and normalized new business expenses multiplied by an earnings multiple derived from the observable price-to-earnings multiples of comparable financial institutions. The price-to-earnings multiples used by the Company for testing ranged from 9.5 to 12.9 (2014 – 10 to 14.9).

(d) Significant assumptions

To calculate the embedded value, the Company discounted projected earnings from each in-force contract and valued 10 years of new business growing at expected plan levels, consistent with the periods used for forecasting long-term businesses such as insurance. In arriving at its projections, the Company considered past experience, economic trends such as interest rates, equity returns and product mix as well as industry and market trends. Where growth rate assumptions for new business cash flows were used in the embedded value calculations, they ranged from zero per cent to 17 per cent (2014 – zero per cent to 17 per cent).

Interest rate assumptions are based on prevailing market rates at the valuation date.

Tax rates applied to the projections include the impact of internal reinsurance treaties and amounted to 26.8 per cent, 35 per cent and 28.9 per cent (2014 – 26.5 per cent, 35 per cent and 30.8 per cent) for the Canadian, U.S. and Japan jurisdictions, respectively. Tax assumptions are sensitive to changes in tax laws as well as assumptions about the jurisdictions in which profits are earned. It is possible that actual tax rates could differ from those assumed.

Discount rates assumed in determining the value-in-use for applicable CGUs or groups of CGUs ranged from nine per cent to 14 per cent on an after-tax basis or 11 per cent to 15 per cent on a pre-tax basis (2014 – nine per cent to 14 per cent on an after-tax basis or 11 per cent to 15 per cent on a pre-tax basis).

The key assumptions described above may change as economic and market conditions change, which may lead to impairment charges in the future. 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.

Note 8 Insurance Contract Liabilities and Reinsurance Assets

(a) Insurance contract liabilities and reinsurance assets

Insurance contract liabilities are reported gross of reinsurance ceded and the ceded liabilities are reported separately as a reinsurance asset. Insurance contract liabilities include actuarial liabilities as well as benefits payable, provision for unreported claims and policyholder amounts on deposit. The components of gross and net insurance contract liabilities are shown below.

As at December 31,	2015	2014
Gross insurance contract liabilities	**$ 274,999**	$ 219,600
Gross benefits payable and provision for unreported claims	**3,046**	2,433
Gross policyholder amounts on deposit	**9,014**	7,480
Gross insurance contract liabilities	**287,059**	229,513
Reinsurance assets	**(35,426)**	(18,525)
Net insurance contract liabilities	**$ 251,633**	$ 210,988

Net insurance contract liabilities represent the amount which, together with estimated future premiums and net investment income, will be sufficient to pay estimated future benefits, policyholder dividends and refunds, taxes (other than income taxes) and expenses on policies in-force net of reinsurance premiums and recoveries.

Net insurance contract liabilities under IFRS retain the existing valuation methodology that was used under previous Canadian generally accepted accounting principles. Net actuarial liabilities are determined using CALM, as required by the Canadian Institute of Actuaries.

The determination of net insurance liabilities is based on an explicit projection of cash flows using current assumptions for each material cash flow item. Investment returns are projected using the current asset portfolios and projected reinvestment strategies.

Each assumption is based on the best estimate adjusted by a margin for adverse deviation. For fixed income returns, this margin is established by scenario testing a range of prescribed and company-developed scenarios consistent with Canadian Actuarial Standards of Practice. For all other assumptions, this margin is established by directly adjusting the best estimate assumption.

Cash flows used in the net insurance contract liabilities valuation adjust the gross policy cash flows to reflect projected cash flows from ceded reinsurance. The cash flow impact of ceded reinsurance varies depending upon the amount of reinsurance, the structure of the reinsurance treaties, the expected economic benefit from the treaty cash flows and the impact of margins for adverse deviation. The gross insurance contract liabilities are determined by discounting the gross policy cash flows using the same discount rate as the net CALM model discount rate.

The reinsurance asset is determined by taking the difference between the gross insurance contract liabilities and the net insurance contract liabilities. The reinsurance asset represents the benefit derived from reinsurance arrangements in force at the date of the Consolidated Statements of Financial Position.

The period used for the projection of cash flows is the policy lifetime for most individual insurance contracts. For other types of contracts a shorter projection period may be used, with the contract generally ending at the earlier of the first renewal date at or after the Consolidated Statements of Financial Position date where the Company can exercise discretion in renewing its contractual obligations or terms of those obligations and the renewal or adjustment date that maximizes the insurance contract liabilities. For segregated fund products with guarantees the projection period is generally set as the period that leads to the largest insurance contract liability. Where the projection period is less than the policy lifetime, insurance contract liabilities may be reduced by an allowance for acquisition expenses expected to be recovered from policy cash flows beyond the projection period used for the liabilities. Such allowances are tested for recoverability using assumptions that are consistent with other components of the actuarial valuation.

(b) Composition

The composition of insurance contract liabilities and reinsurance assets by line of business and reporting segment is as follows.

Gross insurance contract liabilities

As at December 31, 2015	Individual insurance: Participating	Individual insurance: Non-participating	Annuities and pensions	Other insurance contract liabilities[1]	Total, net of reinsurance ceded	Total reinsurance ceded	Total, gross of reinsurance ceded
Asia division	**$ 27,808**	**$ 12,518**	**$ 3,353**	**$ 2,307**	**$ 45,986**	**$ 866**	**$ 46,852**
Canadian division	**10,389**	**29,283**	**21,253**	**10,548**	**71,473**	**263**	**71,736**
U.S. division	**9,743**	**53,637**	**31,851**	**39,446**	**134,677**	**33,993**	**168,670**
Corporate and Other	**–**	**(795)**	**74**	**218**	**(503)**	**304**	**(199)**
Total, net of reinsurance ceded	**47,940**	**94,643**	**56,531**	**52,519**	**251,633**	**$ 35,426**	**$ 287,059**
Total reinsurance ceded	**15,125**	**10,963**	**8,226**	**1,112**	**35,426**		
Total, gross of reinsurance ceded	**$ 63,065**	**$ 105,606**	**$ 64,757**	**$ 53,631**	**$ 287,059**		
As at December 31, 2014							
Asia division	$ 22,404	$ 7,047	$ 2,521	$ 1,690	$ 33,662	$ 700	$ 34,362
Canadian division	10,287	22,001	13,028	9,172	54,488	520	55,008
U.S. division	21,074	42,545	27,035	32,535	123,189	16,887	140,076
Corporate and Other	–	(645)	73	221	(351)	418	67
Total, net of reinsurance ceded	53,765	70,948	42,657	43,618	210,988	$ 18,525	$ 229,513
Total reinsurance ceded	523	8,885	8,097	1,020	18,525		
Total, gross of reinsurance ceded	$ 54,288	$ 79,833	$ 50,754	$ 44,638	$ 229,513		

[1] Other insurance contract liabilities include group insurance and individual and group health including long-term care insurance.

Separate sub-accounts were established for participating policies in-force at the demutualization of MLI and John Hancock Life Insurance Company. These sub-accounts permit this participating business to be operated as separate "closed blocks" of participating policies. As at December 31, 2015, $29,588 (2014 – $32,361) of both assets and insurance contract liabilities related to these closed blocks of participating policies.

(c) Assets backing insurance contract liabilities, other liabilities and capital

Assets are segmented and matched to liabilities with similar underlying characteristics by product line and major currency. The Company has established target investment strategies and asset mixes for each asset segment supporting insurance contract liabilities which take into account the risk attributes of the liabilities supported by the assets and expectations of market performance. Liabilities with rate and term guarantees are predominantly backed by fixed-rate instruments on a cash flow matching basis for a targeted duration horizon. Longer duration cash flows on these liabilities as well as on adjustable products such as participating life insurance are backed by a broader range of asset classes, including equity and alternative long-duration investments. The Company's capital is invested in a range of debt and equity investments, both public and private.

Changes in the fair value of assets backing net insurance contract liabilities, that the Company considers to be other than temporary, would have a limited impact on the Company's net income wherever there is an effective matching of assets and liabilities, as these changes would be substantially offset by corresponding changes in value of actuarial liabilities. The fair value of assets backing net insurance contract liabilities as at December 31, 2015, excluding reinsurance assets, was estimated at $254,732 (2014 – $214,804).

The fair value of assets backing capital and other liabilities as at December 31, 2015 was estimated at $453,888 (2014 – $369,545).

The carrying value of total assets backing net insurance contract liabilities, other liabilities and capital was as follows.

As at December 31, 2015	Individual insurance Participating	Individual insurance Non-participating	Annuities and pensions	Other insurance contract liabilities[1]	Other liabilities[2]	Capital[3]	Total
Assets							
Debt securities	**$ 26,180**	**$ 49,111**	**$ 28,180**	**$ 23,988**	**$ 8,766**	**$ 21,602**	**$ 157,827**
Public equities	**7,454**	**3,897**	**794**	**366**	**769**	**3,703**	**16,983**
Mortgages	**2,219**	**9,209**	**8,166**	**5,600**	**18,530**	**94**	**43,818**
Private placements	**3,253**	**10,816**	**6,322**	**5,758**	**1,210**	**219**	**27,578**
Real estate	**3,022**	**6,068**	**1,917**	**2,361**	**693**	**1,286**	**15,347**
Other	**5,812**	**15,542**	**11,152**	**14,446**	**373,145**	**22,993**	**443,090**
Total	**$ 47,940**	**$ 94,643**	**$ 56,531**	**$ 52,519**	**$ 403,113**	**$ 49,897**	**$ 704,643**

As at December 31, 2014	Individual insurance Participating	Individual insurance Non-participating	Annuities and pensions	Other insurance contract liabilities[1]	Other liabilities[2]	Capital[3]	Total
Assets							
Debt securities	$ 29,223	$ 37,365	$ 22,190	$ 20,149	$ 7,556	$ 17,963	$ 134,446
Public equities	7,165	3,340	188	176	494	3,180	14,543
Mortgages	3,897	6,929	5,606	4,322	18,497	207	39,458
Private placements	4,288	7,709	5,413	4,394	1,017	463	23,284
Real estate	2,385	3,767	1,278	2,318	353	–	10,101
Other	6,807	11,838	7,982	12,259	300,938	17,750	357,574
Total	$ 53,765	$ 70,948	$ 42,657	$ 43,618	$ 328,855	$ 39,563	$ 579,406

[1] Other insurance contract liabilities include group insurance and individual and group health including long-term care insurance.
[2] Other liabilities are non-insurance contract liabilities which include segregated funds, bank deposits, long-term debt, deferred tax liabilities, derivatives, investment contracts, non-exempt embedded derivatives and other miscellaneous liabilities.
[3] Capital is defined in note 14.

(d) Significant insurance contract liability valuation assumptions

The determination of insurance contract liabilities involves the use of estimates and assumptions. Insurance contract liabilities have two major components: a best estimate amount and a provision for adverse deviation.

Best estimate assumptions

Best estimate assumptions are made with respect to mortality and morbidity, investment returns, rates of policy termination, operating expenses and certain taxes. Actual experience is monitored to ensure that assumptions remain appropriate and assumptions are changed as warranted. Assumptions are discussed in more detail in the following table.

Nature of factor and assumption methodology		Risk management
Mortality and morbidity	Mortality relates to the occurrence of death. Mortality is a key assumption for life insurance and certain forms of annuities. Mortality assumptions are based on the Company's internal experience as well as past and emerging industry experience. Assumptions are differentiated by sex, underwriting class, policy type and geographic market. Assumptions are made for future mortality improvements. Morbidity relates to the occurrence of accidents and sickness for insured risks. Morbidity is a key assumption for long-term care insurance, disability insurance, critical illness and other forms of individual and group health benefits. Morbidity assumptions are based on the Company's internal experience as well as past and emerging industry experience and are established for each type of morbidity risk and geographic market. Assumptions are made for future morbidity improvements.	The Company maintains underwriting standards to determine the insurability of applicants. Claim trends are monitored on an ongoing basis. Exposure to large claims is managed by establishing policy retention limits, which vary by market and geographic location. Policies in excess of the limits are reinsured with other companies. Mortality is monitored monthly and the overall 2015 experience was unfavourable (2014 – favourable) when compared to the Company's assumptions. Morbidity is also monitored monthly and the overall 2015 experience was unfavourable (2014 – unfavourable) when compared to the Company's assumptions.

Nature of factor and assumption methodology		Risk management
Investment returns	The Company segments assets to support liabilities by business segment and geographic market and establishes investment strategies for each liability segment. Projected cash flows from these assets are combined with projected cash flows from future asset purchases/sales to determine expected rates of return on these assets for future years. Investment strategies are based on the target investment policies for each segment and the reinvestment returns are derived from current and projected market rates for fixed income investments and a projected outlook for other alternative long-duration assets. Investment return assumptions include expected future asset credit losses on fixed income investments. Credit losses are projected based on past experience of the Company and industry as well as specific reviews of the current investment portfolio. Investment return assumptions for each asset class and geographic market also incorporate expected investment management expenses that are derived from internal cost studies. The costs are attributed to each asset class to develop unitized assumptions per dollar of asset for each asset class and geographic market.	The Company's policy of closely matching asset cash flows with those of the corresponding liabilities is designed to mitigate the Company's exposure to future changes in interest rates. The interest rate risk positions in business segments are monitored on an ongoing basis. Under CALM, the reinvestment rate is developed using interest rate scenario testing and reflects the interest rate risk positions. In 2015, the movement in interest rates positively (2014 – positively) impacted the Company's net income. This positive impact was driven by reductions in swap spreads and increases in corporate spreads, partially offset by the impact of risk free interest rate movements on policy liabilities. The exposure to credit losses is managed against policies that limit concentrations by issuer, corporate connections, ratings, sectors and geographic regions. On participating policies and some non-participating policies, credit loss experience is passed back to policyholders through the investment return crediting formula. For other policies, premiums and benefits reflect the Company's assumed level of future credit losses at contract inception or most recent contract adjustment date. The Company holds explicit provisions in actuarial liabilities for credit risk including provisions for adverse deviation. In 2015, credit loss experience on debt securities and mortgages was favourable (2014 – favourable) when compared to the Company's assumptions. Equities, real estate and other alternative long-duration assets are used to support liabilities where investment return experience is passed back to policyholders through dividends or credited investment return adjustments. Equities, real estate, oil and gas and other alternative long-duration assets are also used to support long-dated obligations in the Company's annuity and pension businesses and for long-dated insurance obligations on contracts where the investment return risk is borne by the Company. In 2015, investment experience on alternative long-duration assets backing policyholder liabilities was unfavourable (2014 – unfavourable) primarily due to losses on oil and gas properties, private equities and timber and agriculture properties, partially offset by gains on real estate. In 2015, alternative long-duration asset origination exceeded (2014 – exceeded) valuation requirements. 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. In 2015, investment expense experience was favourable (2014 – favourable) when compared to the Company's assumptions.

Nature of factor and assumption methodology		Risk management
Policyholder behaviour	Policies are terminated through 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 the Company's recent experience adjusted for expected future conditions. Assumptions reflect differences by type of contract within each geographic market.	The Company seeks to design products that minimize financial exposure to lapse, surrender and other policyholder behaviour risk. The Company monitors lapse, surrender and other policyholder behaviour experience. In aggregate, 2015 policyholder behaviour experience was unfavourable (2014 – unfavourable) when compared to the Company's assumptions used in the computation of actuarial 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 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 grow. 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.	The Company prices its products to cover the expected costs of servicing and maintaining them. In addition, the Company monitors expenses monthly, including comparisons of actual expenses to expense levels allowed for in pricing and valuation. Maintenance expenses for 2015 were unfavourable (2014 – unfavourable) when compared to the Company's assumptions used in the computation of actuarial liabilities. The Company prices its products to cover the expected cost of taxes.
Policyholder dividends, experience rating refunds, and other adjustable policy elements	The best estimate projections for policyholder dividends and experience rating refunds, and other adjustable elements of policy benefits are determined to be consistent with management's expectation of how these elements will be managed should experience emerge consistently with the best estimate assumptions used for mortality and morbidity, investment returns, rates of policy termination, operating expenses and taxes.	The Company monitors policy experience and adjusts policy benefits and other adjustable elements to reflect this experience. Policyholder dividends are reviewed annually for all businesses under a framework of Board-approved policyholder dividend policies.
Foreign currency	Foreign currency risk results from a mismatch of the currency of liabilities and the currency of the assets designated to support these obligations. 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 foreign exchange rates.	The Company generally matches the currency of its 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.

The Company's practice is to review actuarial assumptions on an annual basis as part of its review of methods and assumptions. Where changes are made to assumptions (refer to note 8(h)), the full impact is recognized in income immediately.

(e) Sensitivity of insurance contract liabilities to changes in non-economic assumptions

The sensitivity of net income attributed to shareholders to changes in non-economic assumptions underlying policy liabilities is shown below, assuming that there is a simultaneous change in the assumption across all business units.

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; changes in business mix, effective tax rates and other market factors; and the general limitations of internal models.

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

As at December 31,	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 long-term care 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.

(f) Provision for adverse deviation assumptions

The assumptions made in establishing insurance contract liabilities reflect expected best estimates of future experience. To recognize the uncertainty in these best estimate assumptions, to allow for possible mis-estimation of and deterioration in experience and to provide a greater degree of assurance that the insurance contract liabilities are adequate to pay future benefits, the Appointed Actuary is required to include a margin in each assumption.

The margins are released into future earnings as the policy is released from risk. 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 the 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.

Specific guidance is also provided for other risks such as market, credit, mortality and morbidity risks. For other risks which are not specifically addressed by the Canadian Institute of Actuaries, a range is provided of five per cent to 20 per cent of the expected experience assumption. The Company uses assumptions within the permissible ranges, with the determination of the level set taking into account the risk profile of the business. On occasion, in specific circumstances for additional prudence, a margin may exceed the high end of the range, which is permissible under the Canadian Actuarial Standards of Practice. This additional margin would be released if the specific circumstances which led to it being established were to change.

Each margin is reviewed annually for continued appropriateness.

(g) Change in insurance contract liabilities

The change in insurance contract liabilities was a result of the following business activities and changes in actuarial estimates.

For the year ended December 31, 2015	Net actuarial liabilities	Other insurance contract liabilities[1]	Net insurance contract liabilities	Reinsurance assets	Gross insurance contract liabilities
Balance, January 1	**$ 201,724**	**$ 9,264**	**$ 210,988**	**$ 18,525**	**$ 229,513**
Acquisitions and divestitures[2]	**3,897**	**(861)**	**3,036**	**13,691**	**16,727**
New policies[3]	**2,205**	**–**	**2,205**	**196**	**2,401**
Normal in-force movement[3]	**5,468**	**231**	**5,699**	**(485)**	**5,214**
Changes in methods and assumptions[3]	**582**	**(24)**	**558**	**(380)**	**178**
Impact of changes in foreign exchange rates	**27,707**	**1,440**	**29,147**	**3,879**	**33,026**
Balance, December 31	**$ 241,583**	**$10,050**	**$ 251,633**	**$ 35,426**	**$ 287,059**

For the year ended December 31, 2014					
Balance, January 1	$ 167,298	$ 8,501	$ 175,799	$ 17,443	$ 193,242
New policies[4]	807	–	807	151	958
Normal in-force movement[4]	23,379	209	23,588	78	23,666
Changes in methods and assumptions[4]	240	18	258	(625)	(367)
Impact of changes in foreign exchange rates	10,000	536	10,536	1,478	12,014
Balance, December 31	$ 201,724	$ 9,264	$ 210,988	$ 18,525	$ 229,513

[1] Other insurance contract liabilities are comprised of benefits payable and provision for unreported claims and policyholder amounts on deposit.

[2] As outlined in note 3(a) and 3(b), 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.

[3] In 2015 the $7,452 increase reported as the change in insurance contract liabilities 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 gross insurance contract liabilities column of this table net to an increase of $7,793, of which $7,371 is included in the Consolidated Statements of Income increase in insurance contract liabilities, $439 is included in gross claims and benefits and $(17) is related to Life Retrocession insurance contract liabilities sold through a reinsurance agreement in 2011 and is offset in the change in reinsurance assets. The Consolidated Statements of Income change in insurance contract liabilities also includes the change in embedded derivatives associated with insurance contracts.

[4] In 2014 the $24,185 increase reported as the change in insurance contract liabilities 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 gross insurance contract liabilities column of this table net to an increase of $24,257, of which $23,835 is included in the Consolidated Statements of Income increase in insurance contract liabilities, $451 is included in gross claims and benefits and $(29) is related to Life Retrocession insurance contract liabilities sold through a reinsurance agreement in 2011 and is offset in the change in reinsurance assets. The Consolidated Statements of Income change in insurance contract liabilities also includes the change in embedded derivatives associated with insurance contracts.

(h) Actuarial methods and assumptions

A comprehensive review of valuation assumptions and methods 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 updating assumptions which represent a best estimate view of 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 the economic environment is likely to result in future changes to the valuation assumptions, which could be material.

2015 review

In 2015, the completion of the annual review of actuarial methods and assumptions resulted in an increase in insurance and investment contract liabilities of $558 net of reinsurance and a decrease in net income attributed to shareholders of $451.

For the year ended December 31, 2015	Change in gross insurance and investment contract liabilities	Change in net insurance and investment contract liabilities	Change in net income attributed to shareholders
Assumption			
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 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 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 in 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 decrease in net income attributed to shareholders. Lapse rates for 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 behaviour assumptions were made across several product lines including term and whole life insurance products in Japan, which led to a $211 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 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 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 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 alternative long-duration assets investment return assumptions and updates to certain future expense assumptions in JH Insurance.

2014 review

In 2014, the completion of the annual review of actuarial methods and assumptions resulted in an increase in insurance and investment contract liabilities of $258 net of reinsurance and a decrease in net income attributed to shareholders of $198.

For the year ended December 31, 2014	Change in gross insurance and investment contract liabilities	Change in net insurance and investment contract liabilities	Change in net income attributed to shareholders
Assumptions:			
Mortality and morbidity updates	$ (127)	$ (74)	$ 73
Lapses and policyholder behaviour	455	405	(314)
Updates to actuarial standards			
Segregated fund bond calibration	219	217	(157)
Economic reinvestment assumptions	(530)	(75)	65
Other updates	(384)	(215)	135
Net impact	$ (367)	$ 258	$ (198)

Updates to mortality and morbidity

Mortality assumptions were updated across several business units to reflect recent experience. Updates to the Canadian Retail Insurance mortality led to a $248 increase in net income attributed to shareholders. Other mortality and morbidity updates led to a $135 increase in net income attributed to shareholders, and were primarily related to the John Hancock Annuities business where in aggregate the Company benefited from updates to mortality assumptions. These increases were partially offset by updates in John Hancock Life insurance, primarily for policies issued at older ages, which led to a $310 decrease in net income attributed to shareholders.

Updates to lapses and policyholder behaviour

Lapse rates for several of the Canadian Retail Insurance non-participating whole life and universal life products were updated to reflect recent experience which led to a $214 decrease in net income attributed to shareholders.

Other updates to lapse and policyholder behaviour assumptions were made across several business units including Indonesia, and Canadian and U.S. variable annuities to reflect updated experience results which led to a $100 decrease in net income attributed to shareholders.

Updates to actuarial standards

Updates to actuarial standards related to bond parameter calibration for stochastic models used to value segregated fund liabilities resulted in a $157 decrease in net income attributed to shareholders.

Updates to actuarial standards related to economic reinvestment assumptions resulted in a $65 increase in net income attributed to shareholders. The increase in net income was due to changes to fixed income reinvestment assumptions, which included allowance for the use of credit spread assets for all durations, a change from deterministic to stochastically generated scenarios for most North American business, and changes to risk free interest rate scenarios. This increase in net income attributed to shareholders was partially offset by a decrease in net income attributed to shareholders due to a new margin for adverse deviation for alternative long-duration assets and public equities.

Other updates

The Company performed an in depth review of the modelling of future tax cash flows for its U.S. Insurance business resulting in an increase in net income attributed to shareholders of $473.

The Company made a number of model refinements related to the projection of both asset and liability cash flows across several business units which led to a $338 decrease in net income attributed to shareholders.

(i) Insurance contracts contractual obligations

Insurance contracts give rise to obligations fixed by agreement. As at December 31, 2015, the Company's contractual obligations and commitments relating to insurance contracts are as follows.

Payments due by period	Less than 1 year	1 to 3 years	3 to 5 years	Over 5 years	Total
Insurance contract liabilities[1]	**$ 9,967**	**$ 13,077**	**$ 18,825**	**$ 664,276**	**$ 706,145**

[1] Insurance contract liability 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. Cash flows include embedded derivatives measured separately at fair value.

(j) Gross claims and benefits

The following table presents a breakdown of gross claims and benefits.

For the years ended December 31,	2015	2014
Death, disability and other claims	**$ 13,130**	$ 10,878
Maturity and surrender benefits	**6,195**	5,625
Annuity payments	**4,211**	3,370
Policyholder dividends and experience rating refunds	**1,106**	1,047
Net transfers from segregated funds	**(881)**	(602)
Total	**$ 23,761**	$ 20,318

Note 9 Investment Contract Liabilities

Investment contract liabilities are contractual obligations made by the Company that do not contain significant insurance risk and are measured either at fair value or at amortized cost.

(a) Investment contract liabilities measured at fair value

Investment contract liabilities measured at fair value comprise certain investment savings and pension products sold primarily in Hong Kong and China. The carrying value of investment contract liabilities measured at fair value as at December 31, 2015 was $785 (2014 – $680).

The change in investment contract liabilities measured at fair value was a result of the following.

For the years ended December 31,	2015	2014
Balance, January 1	**$ 680**	$ 671
New policies	**52**	53
Changes in market conditions	**90**	2
Redemptions, surrenders and maturities	**(166)**	(104)
Impact of changes in foreign exchange rates	**129**	58
Balance, December 31	**$ 785**	$ 680

(b) Investment contract liabilities measured at amortized cost

Investment contract liabilities measured at amortized cost comprise funding agreements issued by John Hancock Life Insurance Company (U.S.A.) ("JHUSA") to John Hancock Global Funding II, Ltd ("JHGF II") and several fixed annuity products sold in Canada and the U.S. Fixed annuity products considered investment contracts are those that provide guaranteed income payments for a contractually determined period of time and are not contingent on survivorship.

Investment contract liabilities measured at amortized cost are shown below. The fair value associated with these contracts is also shown for comparative purposes.

As at December 31,	2015 Amortized cost	2015 Fair value	2014 Amortized cost	2014 Fair value
U.S. fixed annuity products	**$ 1,488**	**$ 1,542**	$ 1,280	$ 1,427
Canadian fixed annuity products	**1,224**	**1,290**	335	354
Funding agreements issued by JHUSA to JHGF II	**–**	**–**	349	349
Investment contract liabilities	**$ 2,712**	**$ 2,832**	$ 1,964	$ 2,130

The value of investment contract liabilities has increased since December 31, 2014 primarily due to the acquisition of Standard Life which was effective January 30, 2015.

The change in investment contract liabilities measured at amortized cost was a result of the following business activities.

For the years ended December 31,	2015	2014
Balance, January 1	**$ 1,964**	$ 1,853
Acquisitions and divestitures(1)	**943**	–
New policy deposits	**64**	86
Interest	**121**	70
Withdrawals	**(520)**	(190)
Fees	**(1)**	(1)
Other	**(127)**	8
Impact of changes in foreign exchange rates	**268**	138
Balance, December 31	**$ 2,712**	$ 1,964

(1) As outlined in note 3(a), in 2015 the Company acquired Standard Life.

During the year, JHGF II redeemed its funding agreements with JHUSA, paid off its remaining medium term notes and ceased operations.

The carrying value of the funding agreements issued by JHUSA to JHGF II was amortized at the effective interest rates which exactly discount the contractual cash flows to the net carrying amount of the liabilities at the date of issue.

The fair value of the funding agreements issued by JHUSA to JHGF II was determined using a discounted cash flow approach based on current market interest rates adjusted for the Company's own credit standing. Refer to note 17.

The carrying value of fixed annuity products is amortized at a rate that exactly discounts the projected actual cash flows to the net carrying amount of the liability at the date of issue.

The fair value of fixed annuity products is determined by projecting cash flows according to the contract terms and discounting the cash flows at current market rates adjusted for the Company's own credit standing. All investment contracts were categorized in Level 2 of the fair value hierarchy (2014 – Level 2).

(c) Investment contracts contractual obligations

Investment contracts give rise to obligations fixed by agreement. As at December 31, 2015, the Company's contractual obligations and commitments relating to investment contracts are as follows.

Payments due by period	Less than 1 year	1 to 3 years	3 to 5 years	Over 5 years	Total
Investment contract liabilities(1)	**$ 324**	**$ 608**	**$ 570**	**$ 4,401**	**$ 5,903**

(1) Due to the nature of the products, the timing of net cash flows may be before contract maturity. Cash flows are undiscounted.

Note 10 Risk Management

The Company's policies and procedures for managing risk related to financial instruments can be found in the "Risk Management" section of the Company's MD&A for the year ended December 31, 2015. Specifically, these disclosures are included in "Market Risk" and "Liquidity Risk" in this section. These disclosures are in accordance with IFRS 7 "Financial Instruments: Disclosures" and therefore, only the shaded text and tables form an integral part of these Consolidated Financial Statements.

(a) 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. Worsening regional and global economic conditions could result in defaults or downgrades and could lead to increased provisions or impairments related to the Company's general fund invested assets, derivative financial instruments and reinsurance and an increase in provisions for future credit impairments to be included in actuarial liabilities.

The Company's exposure to credit risk is managed through risk management policies and procedures which include a defined credit evaluation and adjudication process, delegated credit approval authorities and established exposure limits by borrower, corporate connection, credit rating, industry and geographic region. The Company measures 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.

The Company also ensures where warranted, that mortgages, private placements and loans to Bank clients are secured by collateral, the nature of which depends on the credit risk of the counterparty.

An allowance for losses on loans is established when a loan becomes impaired. Allowances for loan losses are calculated to reduce the carrying value of the loans to estimated net realizable value. The establishment of such allowances takes into consideration normal historical credit loss levels and future expectations, with an allowance for adverse deviations. In addition, policy liabilities include general provisions for credit losses from future asset impairments. Impairments are identified through regular monitoring of all credit related exposures, considering such information as general market conditions, industry and borrower specific credit events and any other relevant trends or conditions. Allowance for losses on reinsurance contracts is established when a reinsurance counterparty becomes unable or unwilling to fulfill its contractual obligations. The allowance for loss is based on current recoverable amounts and ceded policy liabilities.

Credit risk associated with derivative counterparties is discussed in note 10(d) and credit risk associated with reinsurance counterparties is discussed in note 10(i).

Credit exposure

The following table outlines the gross carrying amount of financial instruments subject to credit exposure, without taking into account any collateral held or other credit enhancements.

As at December 31,	2015	2014
Debt securities		
FVTPL	**$ 133,890**	$ 114,700
AFS	**23,937**	19,746
Mortgages	**43,818**	39,458
Private placements	**27,578**	23,284
Policy loans	**7,673**	7,876
Loans to Bank clients	**1,778**	1,772
Derivative assets	**24,272**	19,315
Accrued investment income	**2,275**	2,003
Reinsurance assets	**35,426**	18,525
Other financial assets	**4,044**	3,307
Total	**$ 304,691**	$ 249,986

Credit quality

The credit quality of commercial mortgages and private placements is assessed at least annually by using an internal rating based on regular monitoring of credit related exposures, considering both qualitative and quantitative factors.

A provision is recorded when internal risk ratings indicate that a loss represents the most likely outcome. The assets are designated as non-accrual and an allowance is established based on an analysis of the security and repayment sources.

The following table summarizes the credit quality and carrying value of commercial mortgages and private placements.

As at December 31, 2015	AAA	AA	A	BBB	BB	B and lower	Total
Commercial mortgages							
Retail	**$ 109**	**$ 1,307**	**$ 4,419**	**$ 2,135**	**$ 10**	**$ 5**	**$ 7,985**
Office	**112**	**944**	**3,301**	**2,444**	**286**	**50**	**7,137**
Multi-family residential	**862**	**1,227**	**1,630**	**905**	**–**	**–**	**4,624**
Industrial	**30**	**303**	**1,213**	**1,262**	**23**	**–**	**2,831**
Other	**487**	**270**	**1,083**	**870**	**70**	**–**	**2,780**
Total commercial mortgages	**1,600**	**4,051**	**11,646**	**7,616**	**389**	**55**	**25,357**
Agricultural mortgages	**–**	**–**	**230**	**540**	**168**	**–**	**938**
Private placements	**1,030**	**3,886**	**9,813**	**10,791**	**1,113**	**945**	**27,578**
Total	**$ 2,630**	**$ 7,937**	**$ 21,689**	**$ 18,947**	**$ 1,670**	**$ 1,000**	**$ 53,873**

As at December 31, 2014	AAA	AA	A	BBB	BB	B and lower	Total
Commercial mortgages							
Retail	$ 130	$ 815	$ 3,354	$ 2,050	$ 6	$ 4	$ 6,359
Office	83	706	2,644	2,460	149	118	6,160
Multi-family residential	1,189	657	1,087	930	–	–	3,863
Industrial	38	267	693	1,080	27	22	2,127
Other	515	221	586	899	–	–	2,221
Total commercial mortgages	1,955	2,666	8,364	7,419	182	144	20,730
Agricultural mortgages	–	189	238	522	160	–	1,109
Private placements	985	3,195	6,565	10,244	1,269	1,026	23,284
Total	$ 2,940	$ 6,050	$ 15,167	$ 18,185	$ 1,611	$ 1,170	$ 45,123

The credit quality of residential mortgages and loans to Bank clients is assessed at least annually with the loan being performing or non-performing as the key credit quality indicator.

Full or partial write-offs of loans are recorded when management believes there is no realistic prospect of full recovery. Write-offs, net of recoveries, are deducted from the allowance for credit losses. All impairments are captured in the allowance for credit losses.

The following table summarizes the carrying value of residential mortgages and loans to Bank clients.

	2015			2014		
As at December 31,	Insured	Uninsured	Total	Insured	Uninsured	Total
Residential mortgages						
Performing	**$ 8,027**	**$ 9,478**	**$ 17,505**	$ 8,577	$ 9,024	$ 17,601
Non-performing[(1)]	**7**	**11**	**18**	5	13	18
Loans to Bank clients						
Performing	**n/a**	**1,778**	**1,778**	n/a	1,771	1,771
Non-performing[(1)]	**n/a**	**–**	**–**	n/a	1	1
Total	**$ 8,034**	**$ 11,267**	**$ 19,301**	$ 8,582	$ 10,809	$ 19,391

[(1)] Non-performing refers to assets that are 90 days or more past due if uninsured and 365 days or more if insured.

The carrying value of government-insured mortgages was 20 per cent of the total mortgage portfolio as at December 31, 2015 (2014 – 25 per cent). The majority of these insured mortgages are residential loans as classified in the table above.

Past due or credit impaired financial assets

The Company provides for credit risk by establishing allowances against the carrying value of impaired loans and recognizing impairment losses on AFS debt securities. In addition, the Company reports as impairment certain declines in the fair value of debt securities designated as FVTPL which it deems represent an impairment.

The following table summarizes the carrying value or impaired value, in the case of impaired debt securities, of the Company's financial assets that are considered past due or impaired.

	Past due but not impaired			
As at December 31, 2015	Less than 90 days	90 days and greater	Total	Total impaired
Debt securities				
FVTPL	**$ 92**	**$ –**	**$ 92**	**$ 15**
AFS	**3**	**1**	**4**	**–**
Private placements	**214**	**–**	**214**	**114**
Mortgages and loans to Bank clients	**51**	**23**	**74**	**31**
Other financial assets	**12**	**26**	**38**	**1**
Total	**$ 372**	**$ 50**	**$ 422**	**$ 161**
As at December 31, 2014				
Debt securities				
FVTPL	$ 7	$ –	$ 7	$ 48
AFS	–	6	6	10
Private placements	88	5	93	117
Mortgages and loans to Bank clients	53	25	78	48
Other financial assets	35	18	53	1
Total	$ 183	$ 54	$ 237	$ 224

The following table summarizes the Company's loans that are considered impaired.

As at December 31, 2015	Gross carrying value	Allowances for losses	Net carrying value
Private placements	**$ 186**	**$ 72**	**$ 114**
Mortgages and loans to Bank clients	**60**	**29**	**31**
Total	**$ 246**	**$ 101**	**$ 145**
As at December 31, 2014			
Private placements	$ 189	$ 72	$ 117
Mortgages and loans to Bank clients	85	37	48
Total	$ 274	$ 109	$ 165

Allowance for loan losses

For the years ended December 31,	2015 Private placements	2015 Mortgages and loans to Bank clients	2015 Total	2014 Private placements	2014 Mortgages and loans to Bank clients	2014 Total
Balance, January 1	**$ 72**	**$ 37**	**$ 109**	$ 81	$ 25	$ 106
Provisions	**46**	**5**	**51**	24	24	48
Recoveries	**(9)**	**(4)**	**(13)**	(15)	(8)	(23)
Write-offs[1]	**(37)**	**(9)**	**(46)**	(18)	(4)	(22)
Balance, December 31	**$ 72**	**$ 29**	**$ 101**	$ 72	$ 37	$ 109

[1] Includes disposals and impact of changes in foreign exchange rates.

(b) Securities lending, repurchase and reverse repurchase transactions

The Company engages in securities lending to generate fee income. Collateral, which exceeds the market value of the loaned securities, is retained by the Company until the underlying security has been returned to the Company. The market value of the loaned securities is monitored on a daily basis with additional collateral obtained or refunded as the market value of the underlying loaned securities fluctuates. As at December 31, 2015, the Company had loaned securities (which are included in invested assets) with a market value of $648 (2014 – $1,004). The Company holds collateral with a current market value that exceeds the value of securities lent in all cases.

The Company engages in reverse repurchase transactions to generate fee income and to take possession of securities to cover short positions in similar instruments and undertakes repurchase transactions for short-term funding purposes. As at December 31, 2015, the Company had engaged in reverse repurchase transactions of $547 (2014 – $1,183) which are recorded as short-term receivables. There were outstanding repurchase agreements of $269 as at December 31, 2015 (2014 – $481) which are recorded as payables.

(c) Credit default swaps

The Company replicates exposure to specific issuers by selling credit protection via credit default swaps ("CDSs") in order to complement its cash debt securities investing. The Company will not write CDS protection in excess of its government bond holdings. A CDS is a derivative instrument representing an agreement between two parties to exchange the credit risk of a single specified entity or an index based on the credit risk of a group of entities (all commonly referred to as the "reference entity" or a portfolio of "reference entities"), in return for a periodic premium. CDS contracts typically have a five year term.

The following table provides details of the credit default swap protection sold by type of contract and external agency rating for the underlying reference security.

As at December 31, 2015	Notional amount[2]	Fair value	Weighted average maturity (in years)[3]
Single name CDSs[1]			
Corporate debt			
AAA	**$ 49**	**$ 1**	**2**
AA	**131**	**1**	**1**
A	**424**	**7**	**3**
BBB	**144**	**1**	**4**
Total single name CDSs	**$ 748**	**$ 10**	**3**
Total CDS protection sold	**$ 748**	**$ 10**	**3**

As at December 31, 2014			
Single name CDSs[1]			
Corporate debt			
AAA	$ 41	$ 1	2
AA	110	2	2
A	263	5	3
BBB	63	1	5
Total single name CDSs	$ 477	$ 9	3
Total CDS protection sold	$ 477	$ 9	3

[1] The rating agency designations are based on S&P where available followed by Moody's, DBRS, and Fitch. If no rating is available from a rating agency, then an internally developed rating is used.
[2] Notional amounts represent the maximum future payments the Company would have to pay its counterparties assuming a default of the underlying credit and zero recovery on the underlying issuer obligation.
[3] The weighted average maturity of the CDS is weighted based on notional amounts.

The Company holds no purchased credit protection as at December 31, 2015 and 2014.

(d) Derivatives

The Company's point-in-time exposure to losses related to credit risk of a derivative counterparty is limited to the amount of any net gains that may have accrued with a particular counterparty. Gross derivative counterparty exposure is measured as the total fair value (including accrued interest) of all outstanding contracts in a gain position excluding any offsetting contracts in a loss position and the impact of collateral on hand. The Company seeks to limit the risk of credit losses from derivative counterparties by: using investment grade counterparties; entering into master netting arrangements which permit the offsetting of contracts in a loss position in the case of a counterparty default; and entering into Credit Support Annex agreements, whereby collateral must be provided when the exposure exceeds a certain threshold. All contracts are held with counterparties rated BBB- or higher. As at December 31, 2015, the percentage of the Company's derivative exposure which was with counterparties rated AA- or higher amounted to 21 per cent (2014 – 15 per cent). The Company's exposure to credit risk was mitigated by $12,940 fair value of collateral held as security as at December 31, 2015 (2014 – $10,400).

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 (2014 – $3,436). The net exposure to this counterparty, after taking into account master netting agreements and the fair value of collateral held, was nil (2014 – $5). 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 (2014 – $20,126).

(e) Offsetting financial assets and financial liabilities

Certain derivatives, securities lending and repurchase agreements have conditional offset rights. The Company does not offset these financial instruments in the Consolidated Statements of Financial Position, as the rights of offset are conditional.

In the case of derivatives, collateral is collected from and pledged to counterparties and clearing houses to manage credit risk exposure in accordance with Credit Support Annexes to swap agreements and clearing agreements. Under master netting agreements, the Company has a right of offset in the event of default, insolvency, bankruptcy or other early termination.

In the case of reverse repurchase and repurchase transactions, additional collateral may be collected from or pledged to counterparties to manage credit exposure according to bilateral reverse repurchase or repurchase agreements. In the event of default by a counterparty, the Company is entitled to liquidate the assets the Company holds as collateral to offset against obligations to the same counterparty.

The following table presents the effect of conditional master netting and similar arrangements. Similar arrangements may include global master repurchase agreements, global master securities lending agreements, and any related rights to financial collateral.

		Related amounts not set off in the Consolidated Statements of Financial Position			
As at December 31, 2015	Gross amounts of financial instruments presented in the Consolidated Statements of Financial Position[1]	Amounts subject to an enforceable master netting arrangement or similar agreements	Financial and cash collateral pledged (received)[2]	Net amount including financing trusts[3]	Net amounts excluding financing trusts
Financial assets					
Derivative assets	**$ 25,332**	**$ (13,004)**	**$ (12,260)**	**$ 68**	**$ 68**
Securities lending	**648**	**–**	**(648)**	**–**	**–**
Reverse repurchase agreements	**547**	**(33)**	**(514)**	**–**	**–**
Total financial assets	**$ 26,527**	**$ (13,037)**	**$ (13,422)**	**$ 68**	**$ 68**
Financial liabilities					
Derivative liabilities	**$ (16,003)**	**$ 13,004**	**$ 2,711**	**$ (288)**	**$ (49)**
Repurchase agreements	**(269)**	**33**	**236**	**–**	**–**
Total financial liabilities	**$ (16,272)**	**$ 13,037**	**$ 2,947**	**$ (288)**	**$ (49)**
As at December 31, 2014					
Financial assets					
Derivative assets	$ 20,126	$ (9,688)	$ (10,161)	$ 277	$ 277
Securities lending	1,004	–	(1,004)	–	–
Reverse repurchase agreements	1,183	(481)	(702)	–	–
Total financial assets	$ 22,313	$ (10,169)	$ (11,867)	$ 277	$ 277
Financial liabilities					
Derivative liabilities	$ (11,996)	$ 9,688	$ 2,044	$ (264)	$ (34)
Repurchase agreements	(481)	481	–	–	–
Total financial liabilities	$ (12,477)	$ 10,169	$ 2,044	$ (264)	$ (34)

[1] Financial assets and liabilities in the above table include accrued interest of $1,062 and $953, respectively (2014 – $814 and $713, respectively).

(2) Financial and cash collateral excludes over-collateralization. As at December 31, 2015, the Company was over-collateralized on OTC derivative assets, OTC derivative liabilities, securities lending and reverse purchase agreements and repurchase agreements in the amounts of $680, $498, $43 and nil, respectively (2014 – $239, $280, $55 and nil, respectively). As at December 31, 2015, collateral pledged (received) does not include collateral in transit on OTC instruments or include initial margin on exchange traded contracts or cleared contracts.

(3) The net amount includes derivative contracts entered into between the Company and its financing trusts which it does not consolidate. The Company does not exchange collateral on derivative contracts entered into with these trusts.

(f) Risk concentrations

The Company establishes enterprise-wide investment portfolio level targets and limits with the objective of ensuring that portfolios are diversified across asset classes and individual investment risks. The Company monitors actual investment positions and risk exposures for concentration risk and reports such findings to the Executive Risk Committee and the Risk Committee of the Board of Directors.

As at December 31,	2015	2014
Debt securities and private placements rated as investment grade BBB or higher[1]	**97%**	97%
Government debt securities as a per cent of total debt securities	**44%**	43%
Government private placements as a per cent of total private placements	**11%**	10%
Highest exposure to a single non-government debt security and private placement issuer	**$ 998**	$ 1,017
Largest single issuer as a per cent of the total equity portfolio	**2%**	2%
Income producing commercial office properties (2015 – 70% of real estate, 2014 – 70%)	**$ 10,803**	$ 7,077
Largest concentration of mortgages and real estate[2] – Ontario Canada (2015 – 24%, 2014 – 26%)	**$ 14,209**	$ 12,809

(1) Investment grade debt securities and private placements include 40% rated A, 14% rated AA and 23% rated AAA (2014 – 32%, 20% and 25%) investments based on external ratings where available.

(2) Mortgages and real estate are diversified geographically and by property type.

The following table shows the distribution of the debt securities and private placements portfolio by sector and industry.

Debt securities and private placements

	2015		2014	
As at December 31,	Carrying value	% of total	Carrying value	% of total
Government and agency	**$ 72,432**	**39**	$ 60,195	38
Utilities	**34,890**	**19**	28,826	18
Financial	**24,518**	**13**	21,684	14
Energy	**13,422**	**7**	11,979	8
Consumer (non-cyclical)	**10,832**	**6**	9,190	6
Industrial	**11,454**	**6**	8,537	5
Consumer (cyclical)	**4,425**	**2**	3,739	2
Basic materials	**3,338**	**2**	4,015	3
Securitized	**3,215**	**2**	3,439	2
Telecommunications	**3,059**	**2**	2,577	2
Technology	**1,931**	**1**	1,800	1
Media and internet	**1,233**	**1**	1,329	1
Diversified and miscellaneous	**656**	**–**	420	–
Total	**$ 185,405**	**100**	$ 157,730	100

(g) Insurance risk

Insurance risk is the risk of loss due to actual experience differing from the experience assumed when a product was designed and priced with respect to mortality and morbidity claims, policyholder behaviour and expenses. A variety of assumptions are made related to the future level of claims, policyholder behaviour, expenses and sales levels when products are designed and priced as well as in the determination of insurance contract liabilities. Assumptions for future claims are generally based on Company and industry experience and assumptions for policyholder behaviours are generally based on Company experience. Such assumptions require a significant amount of professional judgment and, therefore, actual experience may be materially different than the assumptions made by the Company. Claims may be impacted by the unusual onset of disease or illness, natural disasters, large-scale man-made disasters and acts of terrorism. Policyholder premium payment patterns, policy renewal, withdrawal and surrender activity is influenced by many factors including market and general economic conditions, and the availability and price of other products in the marketplace.

The Company manages insurance risk through global policies, standards and best practices with respect to product design, pricing, underwriting and claim adjudication, and a global life underwriting manual. Each business unit has underwriting procedures, including criteria for approval of risks and claims adjudication procedures. The Company has a global retention limit of US$30 and US$35, respectively, for individual and survivorship life insurance. Lower limits are applied in some markets and jurisdictions. The Company further reduces exposure to claims concentrations by applying geographical aggregate retention limits for certain covers.

(h) Concentration risk

The geographic concentration of the Company's insurance and investment contract liabilities, including embedded derivatives, is shown below. The disclosure is based on the countries in which the business is written.

As at December 31, 2015	Gross liabilities	Reinsurance assets	Net liabilities
U.S. and Canada	**$ 237,877**	**$ (35,408)**	**$ 202,469**
Asia and Other	**52,976**	**(18)**	**52,958**
Total	**$ 290,853**	**$ (35,426)**	**$ 255,427**

As at December 31, 2014			
U.S. and Canada	$ 193,554	$ (18,436)	$ 175,118
Asia and Other	38,910	(89)	38,821
Total	$ 232,464	$ (18,525)	$ 213,939

(i) Reinsurance risk

In the normal course of business, the Company limits the amount of loss on any one policy by reinsuring certain levels of risk with other insurers. In addition, the Company accepts reinsurance from other reinsurers. Reinsurance ceded does not discharge the Company's liability as the primary insurer. Failure of reinsurers to honour their obligations could result in losses to the Company; consequently, allowances are established for amounts deemed uncollectible. In order to minimize losses from reinsurer insolvency, the Company monitors the concentration of credit risk both geographically and with any one reinsurer. In addition, the Company selects reinsurers with high credit ratings.

As at December 31, 2015, the Company had $35,426 (2014 – $18,525) of reinsurance assets. Of this, 93 per cent (2014 – 89 per cent) were ceded to reinsurers with Standard and Poor's ratings of A- or above. The Company's exposure to credit risk was mitigated by $16,721 fair value of collateral held as security as at December 31, 2015 (2014 – $8,269). Net exposure after taking into account offsetting agreements and the benefit of the fair value of collateral held was $18,705 as at December 31, 2015 (2014 – $10,256).

Note 11 Long-Term Debt

(a) Carrying value of long term debt instruments

As at December 31,	Issue date	Maturity date	Par value	2015	2014
4.90% Senior notes[(1)]	September 17, 2010	September 17, 2020	US$ 500	**$ 689**	$ 577
7.768% Medium term notes[(2)]	April 8, 2009	April 8, 2019	$ 600	**599**	599
5.505% Medium term notes[(2)]	June 26, 2008	June 26, 2018	$ 400	**399**	399
Promissory note to Manulife Finance (Delaware), L.P. ("MFLP")[(3)]	November 30, 2010	December 15, 2016	$ 150	**150**	150
3.40% Senior notes[(4)]	September 17, 2010	September 17, 2015	US$ 600	**–**	695
4.079% Medium term notes[(5)]	August 20, 2010	August 20, 2015	$ 900	**–**	900
5.161% Medium term notes[(6)]	June 26, 2008	June 26, 2015	$ 550	**–**	550
Other notes payable	n/a	n/a	n/a	**16**	15
Total				**$ 1,853**	$ 3,885

(1) US$ senior notes have been designated as a hedge of the Company's net investment in its U.S. operations to reduce the earnings volatility that would otherwise arise from the translation of the U.S. denominated debt into Canadian dollars. The senior notes may be redeemed in whole or in part at the option of MFC at any time, at a redemption price equal to the greater of par and a price based on the yield of a corresponding U.S. Treasury bond plus 35 basis points.

(2) The medium term notes may be redeemed in whole or in part at the option of MFC at any time, at a redemption price equal to the greater of par and price based on the yield of a corresponding Government of Canada bond plus a specified number of basis points. The number of basis points for the 7.768% and 5.505% medium term notes are 125 and 39 respectively.

(3) The note bears interest at the 90-day Bankers' Acceptance rate plus 2.33%, payable quarterly.

(4) On September 17, 2015, the 3.40% senior notes that were issued on September 17, 2010 matured.

(5) On August 20, 2015, the 4.079% medium term notes that were issued on August 20, 2010 matured.

(6) On June 26, 2015, the 5.161% medium term notes that were issued on June 26, 2008 matured.

The cash amount of interest paid during the year ended December 31, 2015 was $183 (2014 – $214). Issue costs are amortized over the term of the debt.

(b) Fair value measurement

Fair value of a long-term debt instrument is determined using quoted market prices where available (Level 1). When quoted market prices are not available, fair value is determined with reference to quoted prices of a debt instrument with similar characteristics or estimated using discounted cash flows using observable market rates (Level 2).

Long-term debt is measured at amortized cost in the Consolidated Statements of Financial Position. Fair value of long-term debt as at December 31, 2015 was $2,066 (2014 – $4,162). Long-term debt was categorized in Level 2 of the fair value hierarchy (2014 – Level 2).

(c) Aggregate maturities of long-term debt

As at December 31,	2015	2014
Less than one year	$ 150	$ 2,145
One to two years	15	150
Two to three years	400	14
Three to four years	599	399
Four to five years	689	599
Greater than five years	–	578
Total	**$ 1,853**	$ 3,885

Note 12 Liabilities for Preferred Shares and Capital Instruments

(a) Carrying value of liabilities for preferred shares and capital instruments

As at December 31,	Issue date	Maturity date	Par value	2015	2014
Senior debenture notes – 7.535% fixed/floating[1]	July 10, 2009	December 31, 2108	$ 1,000	$ 1,000	$ 1,000
Subordinated note – floating[2]	December 14, 2006	December 15, 2036	$ 650	646	647
Subordinated debentures – 3.181% fixed/floating[3]	November 20, 2015	November 22, 2027	$ 1,000	995	–
Subordinated debentures – 2.389% fixed/floating[4]	June 1, 2015	January 5, 2026	$ 350	348	–
Subordinated debentures – 2.10% fixed/floating[5]	March 10, 2015	June 1, 2025	$ 750	747	–
Subordinated debentures – 2.64% fixed/floating[6]	December 1, 2014	January 15, 2025	$ 500	498	498
Subordinated debentures – 2.811% fixed/floating[7]	February 21, 2014	February 21, 2024	$ 500	498	498
Surplus notes – 7.375% U.S. dollar[8]	February 25, 1994	February 15, 2024	US$ 450	649	545
Subordinated debentures – 2.926% fixed/floating[9]	November 29, 2013	November 29, 2023	$ 250	249	249
Subordinated debentures – 2.819% fixed/floating[10]	February 25, 2013	February 26, 2023	$ 200	200	199
Subordinated debentures – 3.938% fixed/floating[11]	September 21, 2012	September 21, 2022	$ 400	417	–
Subordinated debentures – 4.165% fixed/floating[12]	February 17, 2012	June 1, 2022	$ 500	499	498
Subordinated note – floating[13]	December 14, 2006	December 15, 2021	$ 400	400	399
Subordinated debentures – 4.21% fixed/floating[14]	November 18, 2011	November 18, 2021	$ 550	549	549
Preferred shares – Class A Shares, Series 1[15]	June 19, 2003	n/a	$ 350	–	344
Total				**$ 7,695**	$ 5,426

(1) Issued by MLI to Manulife Financial Capital Trust II, interest is payable semi-annually. On December 31, 2019 and on every fifth anniversary after December 31, 2019 (the "Interest Reset Date"), the rate of interest will be reset to the yield on five year Government of Canada bonds plus 5.2%. On or after December 31, 2014, with regulatory approval, MLI may redeem the debenture, in whole or in part, at the greater of par or the fair value of the debt based on the yield on uncallable Government of Canada bonds to the next Interest Reset Date plus (a) 1.0325% if the redemption date is prior to December 31, 2019, or (b) 2.065% if the redemption date is after December 31, 2019, together with accrued and unpaid interest.

(2) Issued by Manulife Holdings (Delaware) LLC ("MHDLL"), now John Hancock Financial Corporation ("JHFC"), a wholly owned subsidiary of MFC, to Manulife Finance (Delaware) LLC ("MFLLC"), a subsidiary of Manulife Finance (Delaware) L.P. ("MFLP"). MFLP and its subsidiaries are non-consolidated related parties to the Company. The note bears interest at the 90-day Bankers' Acceptance rate plus 0.72% and is payable semi-annually. With regulatory approval, JHFC may redeem the note, in whole or in part, at any time, at par, together with accrued and unpaid interest.

(3) Issued by MLI, interest is payable semi-annually. After November 22, 2022 the interest rate is the 90-day Bankers' Acceptance rate plus 1.57% and is payable quarterly. With regulatory approval, MLI may redeem the debentures, in whole or in part, on or after November 22, 2022, at par, together with accrued and unpaid interest.

(4) Issued by MLI, interest is payable semi-annually. After January 5, 2021 the interest rate is the 90-day Bankers' Acceptance rate plus 0.83% and is payable quarterly. With regulatory approval, MLI may redeem the debentures, in whole or in part, on or after January 5, 2021, at par, together with accrued and unpaid interest.

(5) Issued by MLI, interest is payable semi-annually. After June 1, 2020 the interest rate is the 90-day Bankers' Acceptance rate plus 0.72% and is payable quarterly. With regulatory approval, MLI may redeem the debentures, in whole or in part, on or after June 1, 2020, at par, together with accrued and unpaid interest.

(6) Issued by MLI, interest is payable semi-annually. After January 15, 2020 the interest rate is the 90-day Bankers' Acceptance rate plus 0.73% and is payable quarterly. With regulatory approval, MLI may redeem the debentures, in whole or in part, on or after January 15, 2020, at par, together with accrued and unpaid interest.

(7) Issued by MLI, interest is payable semi-annually. After February 21, 2019 the interest rate is the 90-day Bankers' Acceptance rate plus 0.80% and is payable quarterly. With regulatory approval, MLI may redeem the debentures, in whole or in part, on or after February 21, 2019, at par, together with accrued and unpaid interest.

(8) Issued by John Hancock Mutual Life Insurance Company, now John Hancock Life Insurance Company (U.S.A.). Any payment of interest or principal on the surplus notes requires prior approval from the Commissioner of the Office of Financial and Insurance Regulation of the State of Michigan. The carrying value of the surplus notes reflects an unamortized fair value increment of US$29 (2014 – US$32), which arose as a result of the acquisition of John Hancock Financial Services, Inc. The amortization of the fair value adjustment is recorded in interest expense.

(9) Issued by MLI, interest is payable semi-annually. After November 29, 2018 the interest rate is the 90-day Bankers' Acceptance rate plus 0.85% and is payable quarterly. With regulatory approval, MLI may redeem the debentures, in whole or in part, on or after November 29, 2018, at par, together with accrued and unpaid interest.

(10) Issued by MLI, interest is payable semi-annually. After February 26, 2018 the interest rate is the 90-day Bankers' Acceptance rate plus 0.95% and is payable quarterly. With regulatory approval, MLI may redeem the debentures, in whole or in part, on or after February 26, 2018, at par, together with accrued and unpaid interest.

(11) Issued by the Standard Life Assurance Company of Canada ("SCDA"), which was acquired by MLI on January 30, 2015 as part of the Standard Life acquisition, the subordinated debt was assumed by MLI on July 1, 2015 as a result of SCDA's wind-up into MLI. Interest is payable semi-annually. After September 21, 2017 the interest rate is the 90-day Bankers' Acceptance rate plus 2.10% and is payable quarterly. With regulatory approval, MLI may redeem the debentures, in whole or in part, on or after September 21, 2017, at par, together with accrued and unpaid interest.

(12) Issued by MLI, interest is payable semi-annually. After June 1, 2017 the interest rate is the 90-day Bankers' Acceptance rate plus 2.45% and is payable quarterly. With regulatory approval, MLI may redeem the debentures, in whole or in part, on or after June 1, 2017, at par, together with accrued and unpaid interest.

(13) Issued by MHDLL, now JHFC, a wholly owned subsidiary of MFC, to MFLLC, a subsidiary of MFLP. MFLP and its subsidiaries are non-consolidated related parties to the Company. The original note bore interest at the 90-day Bankers' Acceptance rate plus 0.552% and was payable semi-annually. With regulatory approval, JHFC may redeem the note, in whole or in part, at any time, at par, together with accrued and unpaid interest. On March 28, 2014, MHDLL and JHFC agreed to extend the maturity of the subordinated note to December 15, 2021 from January 15, 2019, while increasing the interest to 3-month Bankers' Acceptance rate plus 0.74%.

(14) Issued by MLI, interest is payable semi-annually. After November 18, 2016 the interest rate is the 90-day Bankers' Acceptance rate plus 2.65% and is payable quarterly. With regulatory approval, MLI may redeem the debentures, in whole or in part, on or after November 18, 2016, at par, together with accrued and unpaid interest.

(15) On June 19, 2015, MFC redeemed in full the $350 of Class A Shares, Series 1 Preferred Shares at par.

(b) Fair value measurement

Fair value of preferred shares and capital instruments is determined using quoted market prices where available (Level 1). When quoted market prices are not available fair value is determined with reference to quoted prices of a debt instrument with similar characteristics or estimated using discounted cash flows using observable market rates (Level 2).

The following table discloses fair value information categorized by the fair value hierarchy. These amounts are measured at amortized cost in the Consolidated Statements of Financial Position.

As at December 31,	2015	2014
Fair value hierarchy:		
Level 1	**$ –**	$ 355
Level 2	**7,916**	5,390
Total fair value	**$ 7,916**	$ 5,745

Note 13 Share Capital and Earnings Per Share

The authorized capital of MFC consists of:

- an unlimited number of common shares without nominal or par value; and
- an unlimited number of Class A, Class B and Class 1 preferred shares without nominal or par value, issuable in series.

(a) Preferred shares

The changes in issued and outstanding preferred shares are as follows.

	2015		2014	
For the years ended December 31,	Number of shares (in millions)	Amount	Number of shares (in millions)	Amount
Balance, January 1	**110**	**$ 2,693**	110	$ 2,693
Issued, Class 1 shares, Series 15	–	–	8	200
Issued, Class 1 shares, Series 17	–	–	14	350
Issued, Class 1 shares, Series 19	–	–	10	250
Redeemed, Class A, Series 4	–	–	(18)	(450)
Redeemed, Class 1, Series 1	–	–	(14)	(350)
Par redemption value in excess of carrying value for preferred shares redeemed	–	–	–	16
Issuance costs, net of tax	–	–	–	(16)
Balance, December 31	**110**	**$ 2,693**	110	$ 2,693

Further information on the preferred shares outstanding is as follows.

As at December 31, 2015	Issue date	Annual dividend rate	Earliest redemption date(1)	Number of shares (in millions)	Face amount	Net amount(2)
Class A preferred shares						
Series 2	February 18, 2005	4.65%	n/a	14	$ 350	**$ 344**
Series 3	January 3, 2006	4.50%	n/a	12	300	**294**
Class 1 preferred shares						
Series 3(3),(4)	March 11, 2011	4.20%	June 19, 2016	8	200	**196**
Series 5(3),(4)	December 6, 2011	4.40%	December 19, 2016	8	200	**195**
Series 7(3),(4)	February 22, 2012	4.60%	March 19, 2017	10	250	**244**
Series 9(3),(4)	May 24, 2012	4.40%	September 19, 2017	10	250	**244**
Series 11(3),(4)	December 4, 2012	4.00%	March 19, 2018	8	200	**196**
Series 13(3),(4)	June 21, 2013	3.80%	September 19, 2018	8	200	**196**
Series 15(3),(4)	February 25, 2014	3.90%	June 19, 2019	8	200	**195**
Series 17(3),(4)	August 15, 2014	3.90%	December 19, 2019	14	350	**343**
Series 19(3),(4)	December 3, 2014	3.80%	March 19, 2020	10	250	**246**
Total				110	$ 2,750	**$ 2,693**

(1) Redemption of all preferred shares is subject to regulatory approval. With the exception of Class A Series 2 and Series 3 preferred shares, MFC may redeem each series in whole or in part at par, on the earliest redemption date or every five years thereafter. Class A Series 2 and Series 3 preferred shares are past their respective earliest redemption date and MFC may redeem these shares, in whole or in part, at par at any time, subject to regulatory approval, as noted.

(2) Net of after-tax issuance costs.

(3) For all Class 1 preferred shares, on the earliest redemption date and every five years thereafter, the annual dividend rate will be reset to the five year Government of Canada bond yield plus a yield specified for each series. The specified yield for Class 1 shares is: Series 3 – 1.41%, Series 5 – 2.90%, Series 7 – 3.13%, Series 9 – 2.86%, Series 11 – 2.61%, Series 13 – 2.22%, Series 15 – 2.16%, Series 17 – 2.36% and Series 19 – 2.30%.

(4) On the earliest date and every five years thereafter, Class 1 preferred shares are convertible at the option of the holder into a new series that is one number higher than their existing series, and the holders are entitled to non-cumulative preferential cash dividends, payable quarterly if and when declared by the Board of Directors, at a rate equal to the three month Government of Canada treasury bill yield plus the rate specified in footnote 3 above.

(b) Common shares

The changes in common shares issued and outstanding are as follows.

	2015		2014	
For the years ended December 31,	Number of shares (in millions)	Amount	Number of shares (in millions)	Amount
Balance, January 1	**1.864**	**$ 20.556**	1,848	$ 20,234
Issued on exercise of stock options and deferred share units	**2**	**37**	3	43
Issued under dividend reinvestment and share purchase plans	**–**	**–**	13	279
Issued in exchange for subscription receipts[1]	**106**	**2,206**	–	–
Total	**1,972**	**$ 22,799**	1,864	$ 20,556

[1] On September 15, 2014, as part of the financing of the transaction related to the purchase of Standard Life, MFC issued 105,647,334 subscription receipts through a combination of a public offering and a private placement with the Caisse de dépôt et placement du Québec. The net cash proceeds from the sale of the subscription receipts were held by an escrow agent, in a restricted account, until closing of the transaction on January 30, 2015. Each subscription receipt entitled the holder to automatically receive, without payment of additional consideration or further action, one common share of the Company together with an amount equal to the per share dividends the Company declared on its common shares for record dates which occur in the period from September 15, 2014 up to January 29, 2015, net of any applicable withholding taxes. Refer to note 3 for further details.

(c) Earnings per share

The following table presents basic and diluted earnings per share of the Company.

For the years ended December 31,	2015	2014
Basic earnings per common share[1]	**$ 1.06**	$ 1.82
Diluted earnings per common share[1]	**1.05**	1.80

[1] As at December 31, 2014 the subscription receipts were not included in the calculation of basic or diluted earnings per share as the conditions required to exchange the receipts to common shares were not met until January 30, 2015. Refer to note 3 for further details.

The following is a reconciliation of the denominator (number of shares) in the calculation of basic and diluted earnings per share.

For the years ended December 31,	2015	2014
Weighted average number of common shares (in millions)	**1,962**	1,857
Dilutive stock-based awards[1] (in millions)	**7**	7
Dilutive convertible instruments (in millions)	**8**	17
Weighted average number of diluted common shares (in millions)	**1,977**	1,881

[1] The dilutive effect of stock-based awards was calculated using the treasury stock method. This method calculates the number of incremental shares by assuming the outstanding stock-based awards are (i) exercised and (ii) then reduced by the number of shares assumed to be repurchased from the issuance proceeds, using the average market price of MFC common shares for the year. Excluded from the calculation was an average of 31 million (2014 – 31 million) anti-dilutive stock-based awards.

(d) Quarterly dividend declaration subsequent to year end

On February 11, 2016, the Company's Board of Directors approved a quarterly dividend of $0.185 per share on the common shares of MFC, payable on or after March 21, 2016 to shareholders of record at the close of business on February 24, 2016.

The Board also declared dividends on the following non-cumulative preferred shares, payable on or after March 21, 2016 to shareholders of record at the close of business on February 24, 2016.

Class A Shares Series 2 – $0.29063 per share
Class A Shares Series 3 – $0.28125 per share
Class 1 Shares Series 3 – $0.2625 per share
Class 1 Shares Series 5 – $0.275 per share
Class 1 Shares Series 7 – $0.2875 per share
Class 1 Shares Series 9 – $0.275 per share
Class 1 Shares Series 11 – $0.25 per share
Class 1 Shares Series 13 – $0.2375 per share
Class 1 Shares Series 15 – $0.24375 per share
Class 1 Shares Series 17 – $0.24375 per share
Class 1 Shares Series 19 – $0.2375 per share

Note 14 Capital Management

(a) Capital Management

Manulife Financial 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.

The capital management framework takes into account the requirements of the Company as a whole as well as the needs of each of the Company's subsidiaries. The 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 the Company's peers. The Company sets its internal capital targets above the regulatory requirements, monitors against these internal targets and initiates actions appropriate to achieving its business objectives.

The following measure of consolidated capital serves as the foundation of the Company's capital management activities at the MFC level.

Consolidated capital

As at December 31,	2015	2014
Total equity	**$ 41,938**	$ 33,926
AOCI loss on cash flow hedges	**264**	211
Total equity excluding AOCI loss on cash flow hedges	**42,202**	34,137
Liabilities for preferred shares and qualifying capital instruments	**7,695**	5,426
Total capital	**$ 49,897**	$ 39,563

(b) Restrictions on dividends and capital distributions

Dividends and capital distributions are restricted under the Insurance Company Act ("ICA"). These restrictions apply to both the Company and its primary operating subsidiary MLI. The ICA prohibits the declaration or payment of any dividend on shares of an insurance company if there are reasonable grounds for believing a company does not have adequate capital and adequate and appropriate forms of liquidity or 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. The ICA also requires an insurance company to notify the Superintendent of the declaration of a dividend at least 15 days prior to the date fixed for its payment. Similarly, the ICA prohibits the purchase for cancellation of any shares issued by an insurance company or the redemption of any redeemable shares or other similar capital transactions, if there are reasonable grounds for believing that the company does not have adequate capital and adequate and appropriate forms of liquidity or the payment 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 any direction made to the company by the Superintendent. These latter transactions would require the prior approval of the Superintendent.

The ICA requires Canadian non-operating insurance companies to maintain, at all times, adequate levels of capital which are assessed by comparing capital available to a risk metric in accordance with Capital Regime for Regulated Insurance Holding Companies and Non-Operating Life Companies, issued by OSFI. OSFI expects holding companies to manage their capital in a manner commensurate with the group risk profile and control environment.

Since the Company is a holding company that conducts all of its operations through regulated insurance subsidiaries (or companies owned directly or indirectly by these subsidiaries), its ability to pay future dividends will depend on the receipt of sufficient funds from its regulated insurance subsidiaries. These subsidiaries are also subject to certain regulatory restrictions under laws in Canada, the United States and certain other countries that may limit their ability to pay dividends or make other upstream distributions.

The Company and MLI have covenanted for the benefit of holders of the outstanding Trust II Notes – Series I (the "Notes") that, if interest is not paid in full in cash on the Notes on any interest payment date or if MLI elects that holders of Notes invest interest payable on the Notes on any interest payment date in a new series of Manufacturers Life Class 1 Shares, MLI will not declare or pay cash dividends on any MLI Public Preferred Shares (as defined below), if any are outstanding, and if no MLI Public Preferred Shares are outstanding, MFC will not declare or pay cash dividends on its Preferred Shares and Common Shares, in each case, until the sixth month following such deferral date. "MLI Public Preferred Shares" means, at any time, preferred shares of MLI which at that time: (a) have been issued to the public (excluding any preferred shares of MLI held beneficially by affiliates of MLI); (b) are listed on a recognized stock exchange; and (c) have an aggregate liquidation entitlement of at least $200, however, if at any time, there is more than one class of MLI Public Preferred Shares outstanding, then the most senior class or classes of outstanding MLI Public Preferred Shares shall, for all purposes, be the MLI Public Preferred Shares.

Note 15 Stock-Based Compensation

(a) Stock options plans

Under MFC's Executive Stock Option Plan ("ESOP"), deferred share units and stock options are granted to selected individuals. Options provide the holder with the right to purchase common shares of MFC at an exercise price equal to the higher of the prior day or prior five day average closing market price of common shares on the Toronto Stock Exchange on the date the options were granted. The options vest over a period not exceeding four years and expire not more than 10 years from the grant date. Effective with the 2015 grant, options may only be exercised after the fifth year anniversary. A total of 73,600,000 common shares have been reserved for issuance under the ESOP.

Options outstanding

	2015		2014	
For the years ended December 31,	Number of options (in millions)	Weighted average exercise price	Number of options (in millions)	Weighted average exercise price
Outstanding, January 1	**30**	**$ 20.82**	32	$ 21.14
Granted	**4**	**22.01**	3	21.20
Exercised	**(2)**	**15.33**	(2)	16.49
Expired	**(2)**	**30.43**	(2)	28.06
Forfeited	**–**	**23.06**	(1)	26.33
Outstanding, December 31	**30**	**$ 20.72**	30	$ 20.82
Exercisable, December 31	**20**	**$ 21.45**	21	$ 22.67

	Options outstanding			Options exercisable		
For the year ended December 31, 2015	Number of options (in millions)	Weighted average exercise price	Weighted average remaining contractual life (in years)	Number of options (in millions)	Weighted average exercise price	Weighted average remaining contractual life (in years)
$11.08 – $20.99	**18**	**$ 16.18**	**4.55**	**15**	**$ 16.58**	**4.22**
$21.00 – $29.99	**8**	**21.68**	**8.18**	**1**	**21.52**	**5.84**
$30.00 – $40.38	**4**	**38.24**	**1.14**	**4**	**38.24**	**1.14**
Total	**30**	**$ 20.72**	**4.95**	**20**	**$ 21.45**	**3.67**

The weighted average fair value of each option granted in 2015 has been estimated at $4.84 (2014 – $4.83) using the Black-Scholes option-pricing model. The pricing model uses the following assumptions for these options: risk-free interest rate of 1.75% (2014 – 2.00%), dividend yield of 3.00% (2014 – 3.00%), expected volatility of 29.5% (2014 – 30.0%) and expected life of 6.7 (2014 – 6.7) years. Expected volatility is estimated by evaluating a number of factors including historical volatility of the share price over multi-year periods.

Compensation expenses related to stock options was $16 for the year ended December 31, 2015 (2014 – $14).

(b) Deferred share units plans

In 2000, MFC granted deferred share units ("DSUs") to certain employees under the ESOP. These DSUs vest over a three year period and each DSU entitles the holder to receive one common share on retirement or termination of employment. When dividends are paid on common shares, holders of DSUs are deemed to receive dividends at the same rate, payable in the form of additional DSUs. The number of DSUs outstanding was 690,000 as at December 31, 2015 (2014 – 837,000).

In addition, for certain employees and pursuant to the Company's deferred compensation program, MFC grants DSUs under the ESOP which entitle the holder to receive payment in cash equal to the value of the same number of common shares plus credited dividends on retirement or termination of employment. In 2015, the Company granted 315,000 DSUs (2014 – 101,000) to certain employees of which 143,000 units vest after four years and 172,000 units vested on the day they were granted. In 2015, 34,000 DSUs (2014 – 34,000) were granted to certain employees who elected to defer receipt of all or part of their annual bonus. These DSUs vested immediately. Also, in 2015, 85,000 DSUs (2014 – 126,000) were granted to certain employees to defer payment of all or part of their Restricted Share Units ("RSUs") and/or Performance Share Units ("PSUs"). These DSUs also vested immediately.

The fair values of the 546,000 DSUs issued in the year were $20.74 per unit, as at December 31, 2015 (354,000 issued at $22.18 per unit on December 31, 2014).

Under the Stock Plan for Non-Employee Directors, each eligible director may elect to receive his or her annual director's retainer and fees in DSUs or common shares in lieu of cash. Upon termination of Board service, an eligible director who has elected to receive DSUs will be entitled to receive cash equal to the value of the DSUs accumulated in his or her account, or at his or her direction, an equivalent number of common shares. A total of one million common shares have been reserved for issuance under this plan.

For the years ended December 31, Number of DSUs (in thousands)	2015	2014
Outstanding, January 1	**2,332**	2,780
Issued	**546**	354
Reinvested	**75**	63
Redeemed	**(411)**	(865)
Outstanding, December 31	**2,542**	2,332

Of the DSUs outstanding as at December 31, 2015, 690,000 (2014 – 837,000) entitle the holder to receive common shares, 1,195,000 (2014 – 858,000) entitle the holder to receive payment in cash and 657,000 (2014 – 637,000) entitle the holder to receive payment in cash or common shares, at the option of the holder.

Compensation expenses related to DSUs was $5 for the year ended December 31, 2015 (2014 – $2).

The carrying amount of the liability relating to the DSU as at December 31, 2015 is $22 (2014 – $20) and is included within other liabilities.

(c) Restricted share units and performance share units plans

For the year ended December 31, 2015, 5.6 million RSUs (2014 – 4.5 million) and 0.8 million PSUs (2014 – 0.7 million) were granted to certain eligible employees under MFC's Restricted Share Unit Plan. The fair values of the RSUs and PSUs granted in the year were $20.74 per unit as at December 31, 2015 (2014 – $22.18 per unit). Each RSU/PSU entitles the recipient to receive payment equal to the market value of one common share, plus credited dividends, at the time of vesting, subject to any performance conditions.

RSUs and PSUs granted in February 2015 vest on the date that is 34 months from the grant date (December 15, 2017), and the related compensation expense is recognized over this period, except where the employee is eligible to retire prior to a vesting date, in which case the cost is recognized over the period between the grant date and the date on which the employee is eligible to retire. Compensation expense related to RSUs and PSUs was $93 and $15, respectively, for the year ended December 31, 2015 (2014 – $78 and $16, respectively).

The carrying amount of the liability relating to the RSU and PSU as at December 31, 2015 is $164 (2014 – $188) and is included within other liabilities.

(d) Global share ownership plan

MFC's Global Share Ownership Plan ("GSOP") allows qualifying employees to choose to apply up to five per cent of their annual base earnings toward the purchase of common shares. The Company matches a percentage of the employee's eligible contributions up to a maximum amount. The Company's contributions vest immediately. All contributions are used to purchase common shares in the open market.

Note 16 Employee Future Benefits

The Company maintains defined contribution and defined benefit pension plans and other post-employment plans for employees and agents including registered (tax qualified) pension plans 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.

(a) Plan characteristics

To reduce the financial risk associated with final average pay defined benefit pension plans and retiree welfare plans, the Company has over time closed all these plans to new members and, in the case of pension plans, has replaced them with capital accumulation plans. The latter include defined benefit cash balance plans, 401(k) plans and/or defined contribution plans, depending on the country of employment. The result is that final average pay pension plans account for less than 50 per cent of the Company's global pension obligations and the number of employees who accrue these pensions declines each year.

In 2015, the Company acquired the Canadian-based operations of Standard Life plc and the plans for their employees, including closed final average pay defined benefit pension plans, a closed retiree welfare plan and defined contribution pension plans. Also in 2015, the Company further reduced its exposure to defined benefit pension plans by fully insuring the pension obligations for all U.K. plan members through the purchase of annuities from a third-party insurer.

All pension arrangements are governed by local pension committees or management but significant plan changes require approval from the Company's Board of Directors.

The Company's funding policy for remaining defined benefit pension plans is to make the minimum annual contributions required by regulations in the countries in which the plans are offered. Assumptions and methods prescribed for regulatory funding purposes typically differ from those used for accounting purposes.

The Company's remaining defined benefit pension and/or retiree welfare plan obligations are for plans in the U.S., Canada, Japan, and Taiwan. There are also disability welfare plans in Canada and the U.S.

The largest of these pension and retiree welfare plans are the primary defined benefit plans for employees in the U.S. and Canada. These, along with the registered defined benefit pension plan acquired from Standard Life, are considered to be the material plans that are the subject of the disclosures in the balance of this note. The Company measures its defined benefit obligations and fair value of plan assets for accounting purposes as at December 31 each year.

U.S. defined benefit and retiree welfare plans

The Company operates a qualified cash balance plan that is open to new members, a non-qualified cash balance plan, under which benefit accruals ceased as of December 31, 2011, and a retiree welfare plan that was closed in 2005.

Actuarial valuations to determine the Company's minimum funding contributions for the qualified cash balance plan are required annually. Deficits revealed in the funding valuations must generally be funded over a period of up to seven years. It is expected that there will be no required funding for this plan in 2016. There are no plan assets set aside for the non-qualified cash balance plan.

The retiree welfare plan subsidizes the cost of life insurance and medical benefits. The majority of those who retired after 1991 receive a fixed-dollar subsidy from the Company based on service. The plan was closed to all employees hired after 2004. While assets have been set aside in a qualified trust to pay a portion of future retiree welfare benefits, this funding is optional. Retiree welfare benefits offered under the plan coordinate with the U.S. Medicare program to make optimal use of available federal financial support.

The qualified pension and retiree welfare plans are governed by the U.S. Benefits Committee, while the non-qualified pension plan is governed by the U.S. Non-Qualified Plans Subcommittee.

Canadian defined benefit and retiree welfare plans

The Company's defined benefit plans in Canada include two registered final average pay pension plans, a non-registered supplemental final average pay pension plan and a retiree welfare plan. The registered and supplemental Manulife pension programs were closed to new members in 1998 while the retiree welfare plan was closed in 2005. The plan acquired from Standard Life was closed in 2014.

Actuarial valuations to determine the Company's minimum funding contributions for the registered plans are required at least once every three years. Deficits revealed in the funding valuation must generally be funded over a period of not less than five years. For 2016, the required funding for these plans is expected to be $31. The supplemental non-registered pension plan is not funded.

The retiree welfare plan subsidizes the cost of life insurance, medical and dental benefits. In 2013, the Company subsidies were changed to a fixed dollar amount for those who retire after April 30, 2013 and will be eliminated for those who retire after 2019. There are no assets set aside for this plan.

The registered pension plans are governed by Pension Committees, while the supplemental non-registered plan is governed by the Board of Directors. The retiree welfare plan is governed by management.

(b) Risks

In final average pay pension plans and retiree welfare plans, the Company generally bears the material risks which include interest rate, investment, longevity and health care cost inflation risks. In defined contribution plans, these risks are typically borne by the employee. In cash balance plans, the interest rate, investment (where applicable) and longevity risks are partially transferred to the employee.

Material sources of risk to the Company for all plans include:

- A decline in discount rates that increases the defined benefit obligations by more than the change in value of plan assets;
- Lower than expected rates of mortality; and
- For retiree welfare plans, higher than expected health care costs.

The Company has managed these risks through plan design and eligibility changes that have limited the size and growth of the defined benefit obligations. Investment risks for funded plans are managed through strategies aimed at improving the alignment between movements in the invested assets and movements in the obligations.

In the U.S., delegated committee representatives and management review the financial status of the qualified defined benefit pension plan at least monthly, and steps are taken in accordance with an established dynamic investment policy to reduce the risk in the plan as the funded status improves. As at December 31, 2015, the target asset allocation for the plan was 35% return-seeking assets and 65% liability-hedging assets.

In Canada, internal committees and management review the financial status of the registered defined benefit pension plans on at least a quarterly basis. As at December 31, 2015, the target asset allocation for the plan was 25% return-seeking assets and 75% liability-hedging assets with an ultimate target of 20% return-seeking assets and 80% liability-hedging assets by 2017. The asset allocation for the plan acquired from Standard Life is 64% return-seeking assets and 36% liability-hedging assets as at December 31, 2015.

(c) Pension and retiree welfare plans

For the years ended December 31,	Pension plans 2015	Pension plans 2014	Retiree welfare plans 2015	Retiree welfare plans 2014
Changes in defined benefit obligation:				
Ending balance prior year	**$ 4,089**	$ 3,567	**$ 648**	$ 600
Acquisitions (refer to note 3)	**483**	–	**–**	–
Current service cost	**54**	32	**1**	1
Past service cost	**–**	–	**–**	–
Interest cost	**183**	167	**27**	27
Plan participants' contributions	**1**	–	**5**	4
Actuarial losses (gains) due to:				
Experience	**–**	19	**(2)**	(26)
Demographic assumption changes	**(4)**	36	**–**	(8)
Economic assumption changes	**(202)**	292	**(10)**	56
Curtailment (gains) losses	**(9)**	–	**–**	–
Benefits paid	**(342)**	(256)	**(52)**	(47)
Impact of changes in foreign exchange rates	**570**	232	**96**	41
Defined benefit obligation, December 31	**$ 4,823**	$ 4,089	**$ 713**	$ 648

For the years ended December 31,	Pension plans 2015	Pension plans 2014	Retiree welfare plans 2015	Retiree welfare plans 2014
Change in plan assets:				
Fair value of plan assets, ending balance prior year	**$ 3,442**	$ 2,990	**$ 538**	$ 467
Acquisitions (refer to note 3)	**406**	–	**–**	–
Interest income	**156**	141	**23**	22
Employer contributions	**119**	77	**26**	31
Plan participants' contributions	**1**	–	**5**	4
Benefits paid	**(342)**	(256)	**(52)**	(47)
Administration costs	**(6)**	(4)	**(1)**	–
Actuarial gains	**(167)**	285	**(7)**	17
Impact of changes in foreign exchange rates	**513**	209	**103**	44
Fair value of plan assets, December 31	**$ 4,122**	$ 3,442	**$ 635**	$ 538

(d) Amounts recognized in the Consolidated Statements of Financial Position

As at December 31,	Pension plans 2015	Pension plans 2014	Retiree welfare plans 2015	Retiree welfare plans 2014
Development of net defined benefit liability				
Defined benefit obligation	**$ 4,823**	$ 4,089	**$ 713**	$ 648
Fair value of plan assets	**4,122**	3,442	**635**	538
Deficit	**701**	647	**78**	110
Effect of asset limit[(1)]	**–**	–	**–**	–
Deficit and net defined benefit liability[(1)]	**$ 701**	$ 647	**$ 78**	$ 110
Deficit is comprised of:				
Funded or partially funded plans	**$ (133)**	$ (156)	**$ (61)**	$ (29)
Unfunded plans	**834**	803	**139**	139
Deficit and net defined benefit liability	**$ 701**	$ 647	**$ 78**	$ 110

[(1)] No reconciliation has been provided for the effect of the asset limit since there was no effect in either year. For the funded pension plans, the present value of the economic benefits available in the form of reductions in future contributions to the plans is significantly greater than the surplus that would be expected to develop.

(e) Disaggregation of defined benefit obligation

	U.S. Plans				Canadian Plans			
	Pension plans		Retiree welfare plans		Pension plans		Retiree welfare plans	
As at December 31,	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014
Active members	**$ 649**	$ 636	**$ 35**	$ 34	**$ 441**	$ 193	**$ 24**	$ 24
Inactive and retired members	**2,685**	2,367	**540**	475	**1,048**	893	**114**	115
Total	**$ 3,334**	$ 3,003	**$ 575**	$ 509	**$ 1,489**	$ 1,086	**$ 138**	$ 139

(f) Fair value measurements

The major categories of plan assets and the actual per cent allocation to each category are as follows.

	U.S. Plans(1)				Canadian Plans(2)			
	Pension plans		Retiree welfare plans		Pension plans		Retiree welfare plans	
As at December 31, 2015	Fair value	% of total	Fair value	% of total	Fair value	% of total	Fair value	% of total
Cash and cash equivalents	**$ 25**	**1%**	**$ 21**	**4%**	**$ 16**	**1%**	**$ –**	**–**
Equity securities(3)	**838**	**28%**	**161**	**25%**	**424**	**36%**	**–**	**–**
Debt securities	**1,866**	**63%**	**446**	**70%**	**678**	**58%**	**–**	**–**
Other investments(4)	**218**	**8%**	**7**	**1%**	**57**	**5%**	**–**	**–**
Total	**$ 2,947**	**100%**	**$ 635**	**100%**	**$ 1,175**	**100%**	**$ –**	**–**

	U.S. Plans(1)				Canadian Plans(2)			
	Pension plans		Retiree welfare plans		Pension plans		Retiree welfare plans	
As at December 31, 2014	Fair value	% of total	Fair value	% of total	Fair value	% of total	Fair value	% of total
Cash and cash equivalents	$ 31	1%	$ 7	1%	$ –	–	$ –	–
Equity securities(3)	752	28%	251	47%	206	28%	–	–
Debt securities	1,744	64%	274	51%	523	71%	–	–
Other investments(4)	179	7%	6	1%	7	1%	–	–
Total	$ 2,706	100%	$ 538	100%	$ 736	100%	$ –	–

(1) All of the U.S. pension and retiree welfare plan assets have daily quoted prices in active markets, except for the private equity, timber and agriculture assets. In the aggregate, the latter assets represent approximately 6% and 6% of all U.S. pension and retiree welfare plan assets as at December 31, 2015 and 2014, respectively.
(2) All of the Canadian pension plan assets have daily quoted prices in active markets.
(3) Equity securities include direct investments in MFC common shares of $1.0 (2014 – $1.1) in the U.S. retiree welfare plan and nil (2014 – nil) in Canada.
(4) Other U.S. plan assets include investment in private equity, timberland and agriculture.

(g) Net benefit cost recognized in the Consolidated Statements of Income

Components of the net benefit cost for the pension plans and retiree welfare plans were as follows.

	Pension plans		Retiree welfare plans	
For the years ended December 31,	**2015**	2014	**2015**	2014
Defined benefit current service cost	**$ 54**	$ 32	**$ 1**	$ 1
Defined benefit administrative expenses	**6**	4	**1**	–
Past service cost – curtailments(1)	**(9)**	–	**–**	–
Service cost	**51**	36	**2**	1
Interest on net defined benefit (asset) liability	**27**	26	**4**	5
Defined benefit cost	**78**	62	**6**	6
Defined contribution cost	**68**	55	**–**	–
Net benefit cost	**$ 146**	$ 117	**$ 6**	$ 6

(1) Past service cost of ($9) relates to the curtailment recognized under the Standard Life plan due to employees whose plan membership ceased during the period.

(h) Re-measurement effects recognized in Other Comprehensive Income

	Pension plans		Retiree welfare plans	
For the years ended December 31,	**2015**	2014	**2015**	2014
Actuarial gains (losses) on defined benefit obligations:				
Experience	**$ –**	$ (19)	**$ 2**	$ 26
Demographic assumption changes	**4**	(36)	**–**	8
Economic assumption changes	**202**	(292)	**10**	(56)
Return on plan assets greater (less) than discount rate	**(167)**	285	**(7)**	17
Total re-measurement effects	**$ 39**	$ (62)	**$ 5**	$ (5)

(i) Assumptions

The key assumptions used by the Company to determine the defined benefit obligation and net benefit cost for the defined benefit pension plans and retiree welfare plans were as follows.

	U.S. Plans				Canadian Plans			
	Pension plans		Retiree welfare plans		Pension plans		Retiree welfare plans	
For the years ended December 31,	2015	2014	2015	2014	2015	2014	2015	2014
To determine the defined benefit obligation at end of year[(1)]:								
Discount rate	**4.4%**	4.0%	**4.3%**	3.9%	**4.1%**	3.9%	**4.1%**	4.0%
Initial health care cost trend rate[(2)]	**n/a**	n/a	**9.0%**	8.3%	**n/a**	n/a	**6.1%**	6.3%
To determine the defined benefit cost for the year[(1)]:								
Discount rate[(3)]	**4.0%**	4.7%	**3.9%**	4.7%	**3.8%**	4.8%	**4.0%**	4.9%
Initial health care cost trend rate[(2)]	**n/a**	n/a	**8.3%**	8.5%	**n/a**	n/a	**6.3%**	6.5%

(1) Inflation and salary increase assumptions are not shown as they do not materially affect obligations and cost.

(2) The health care cost trend rate used to measure the U.S. based retiree welfare obligation was 9.0% grading to 5.0% for 2032 and years thereafter (2014 – 8.3% grading to 5.0% for 2028) and to measure the net benefit cost was 8.3% grading to 5.0% for 2028 and years thereafter (2014 – 8.5% grading to 5.0% for 2028). In Canada, the rate used to measure the retiree welfare obligation was 6.1% grading to 4.8% for 2026 and years thereafter (2014 – 6.3% grading to 4.8% for 2026) and to measure the net benefit cost was 6.3% grading to 4.8% for 2026 and years thereafter (2014 – 6.5% grading to 4.8% for 2026).

(3) 2015 Canadian pension plans includes the discount rate used for the Standard Life plan.

Assumptions regarding the future mortality are based on published statistics and mortality tables. The current life expectancies underlying the values of the obligations in the defined benefit pension and retiree welfare plans are as follows.

As at December 31, 2015	U.S.	Canada
Life expectancy (in years) for those currently age 65		
Males	**23.2**	**22.7**
Females	**25.0**	**24.6**
Life expectancy (in years) at age 65 for those currently age 45		
Males	**24.8**	**23.7**
Females	**26.5**	**25.5**

(j) Sensitivity of assumptions on obligation

Assumptions used can have a significant effect on the obligations reported for defined benefit pension and retiree welfare plans. The potential impact on the obligations arising from changes in the key assumptions is set out in the following table. The sensitivities assume all other assumptions are held constant. In actuality, interrelationships with other assumptions may exist.

As at December 31, 2015	Pension plans	Retiree welfare plans
Discount rate:		
Impact of a 1% increase	**$ (473)**	**$ (68)**
Impact of a 1% decrease	**566**	**83**
Health care cost trend rate:		
Impact of a 1% increase	**n/a**	**29**
Impact of a 1% decrease	**n/a**	**(25)**
Mortality rates[(1)]:		
Impact of a 10% decrease	**112**	**17**

(1) If the actuarial estimates of mortality are adjusted in the future to reflect unexpected decreases in mortality, the effect of a 10% decrease in mortality rates at each future age would be an increase in life expectancy at age 65 of 0.9 and 0.9 years for U.S. males and females, respectively, and 0.7 and 0.8 years for Canadian males and females, respectively.

(k) Maturity profile

The weighted average duration (in years) of the defined benefit obligations is as follows.

	Pension plans		Retiree welfare plans	
As at December 31,	2015	2014	2015	2014
U.S. plans	**9.4**	10.0	**9.0**	9.6
Canadian plans[(1)]	**13.6**	11.3	**14.2**	14.2

(1) 2015 pension plans include the longer duration for the Standard Life pension plan.

(l) Cash flows – contributions

Total cash payments for all employee future benefits, comprised of cash contributed by the Company to funded defined benefit pension and retiree welfare plans, cash payments directly to beneficiaries in respect of unfunded pension and retiree welfare plans, and cash contributed to defined contribution pension plans, were as follows.

	Pension plans		Retiree welfare plans	
For the years ended December 31,	**2015**	2014	**2015**	2014
Defined benefit plans	**$ 119**	$ 77	**$ 26**	$ 31
Defined contribution plans	**68**	55	**–**	–
Total	**$ 187**	$ 132	**$ 26**	$ 31

The Company's best estimate of expected cash payments for employee future benefits for the year ending December 31, 2016 is $99 for defined benefit pension plans, $73 for defined contribution pension plans and $19 for retiree welfare plans.

Note 17 Interests in Structured Entities

In its capacities as an investor and as an investment manager, the Company has relationships with various types of entities designed to generate investment returns and/or fees. The Company also has relationships with entities that are used to facilitate financing for the Company. Some of these entities may have some or all of the following features: control is not readily identified based on voting rights; restricted activities designed to achieve a narrow objective; high amount of leverage; and/or highly structured capital. Such entities are identified as structured entities (individually "SE" or collectively "SEs").

In assessing the significance of a SE for disclosure purposes, the Company considers the nature of its relationship with the SEs including whether they are sponsored by the Company (i.e. initially organized and managed by the Company). In addition, the significance of the relationship with the SE to the Company is assessed including consideration of factors such as the Company's investment in the SE as a percentage of the Company's total investments, returns from it as a percentage of total net investment income, its size as a percentage of total funds under management and the Company's exposure to any other risks from its involvement with the SE.

The Company does not provide financial or other support to its SEs, without having a contractual obligation to do so.

The Company does not disclose its interests in Mezzanine Funds and Collateralized Debt Obligations within this note as these interests are not significant.

(a) Consolidated SEs

Investment SEs

The Company acts as an investment manager of timberlands and timber companies. The Company's general fund and segregated funds invest in many of them. The Company has control over one timberland company which it manages, Hancock Victoria Plantations Holdings PTY Limited ("HVPH"). HVPH is a SE primarily because the Company's employees exercise voting rights over it on behalf of other investors. As at December 31, 2015, the Company's consolidated timber assets relating to HVPH was $891 (2014 – $832). The Company does not provide guarantees to other parties against the risk of loss from HVPH.

Financing SEs

The Company securitizes certain insured and variable rate commercial and residential mortgages and HELOC. This activity is facilitated by consolidated entities that are SEs because their operations are limited to issuing and servicing the Company's capital. Further information regarding the Company's mortgage securitization program is included in note 4.

(b) Unconsolidated SEs

Investment SEs

The table below presents the Company's investment and maximum exposure to loss related to significant unconsolidated investment SEs, some of which are sponsored by the Company. The Company does not provide guarantees to other parties against the risk of loss from these SEs.

	Company's investment(1)		Company's maximum exposure to loss(2)	
As at December 31,	**2015**	2014	**2015**	2014
Leveraged leases(3)	**$ 3,549**	$ 2,925	**$ 3,549**	$ 2,925
Timberland companies(4)	**648**	548	**677**	611
Affordable housing companies(5)	**46**	244	**47**	245
Total	**$ 4,243**	$ 3,717	**$ 4,273**	$ 3,781

(1) The Company's investments in these unconsolidated SEs are included in invested assets and the Company's returns from them are included in net investment income and AOCI.

(2) The Company's maximum exposure to loss from each SE is limited to amounts invested in each, plus unfunded capital commitments, if any. The Company's investment commitments are disclosed in note 18. The maximum loss is expected to occur only upon the entity's bankruptcy/liquidation, or as a result of a natural disaster in the case of the timber companies, or foreclosure in the case of affordable housing companies.

(3) These entities are statutory business trusts which use capital provided by the Company and senior debt provided by other parties to finance the acquisition of assets. These assets are leased to third-party lessees under long-term leases. The Company owns equity capital in these business trusts. The Company does not consolidate any of the trusts that are party to the lease arrangements because the Company does not have decision-making power over them.

(4) These entities own and operate timberlands. The Company invests in their equity and debt. The Company's returns include investment income, investment advisory fees, forestry management fees and performance advisory fees. The Company does not control these entities because it either does not have the power to govern their financial and operating policies or does not have significant variable returns from them, or both.

(5) These entities own and manage residential and commercial real estate that qualifies for affordable housing and/or historical tax credits. The Company's investments are in limited partner or investor member units and the Company's returns include investment income, tax credits and other tax benefits. The Company does not control these entities because the Company does not have power to govern their financial and operating policies.

Financing SEs

The following table presents the Company's interests and maximum exposure to loss from significant unconsolidated financing SEs.

	Company's interests(1)	
As at December 31,	**2015**	2014
Manulife Finance (Delaware), L.P.(2)	**$ 1,438**	$ 1,412
Manulife Financial Capital Trust II(3)	**1,000**	1,000
John Hancock Global Funding II, Ltd.(4)	**–**	357
Total	**$ 2,438**	$ 2,769

(1) The Company's interests include amounts borrowed from the SEs and the Company's investment in their subordinate capital, if any, and foreign currency and interest swaps with them, if any.

(2) This entity is a wholly-owned partnership used to facilitate the Company's financing and group risk management. Refer to notes 11, 12 and 18.

(3) This entity is an open-ended trust that is used to facilitate the Company's financing. Refer to note 12.

(4) This entity, a Delaware Trust used to facilitate the issuance of medium-term notes, was dissolved on December 11, 2015. Refer to note 9.

(i) Other invested assets

The Company has investment relationships with a variety of other entities ("Other Entities"), which result from its direct investment in their debt and/or equity and which have been assessed for control. This category includes, but is not limited to, investments in power and infrastructure, oil and gas, private equity, real estate and agriculture, organized as limited partnerships and limited liability companies. The majority of these Other Entities are not sponsored by the Company. The Company believes that its relationships with these Other Entities are not individually significant. As such, the Company neither provides summary financial data for these entities nor individually assesses whether they are SEs. The Company's maximum exposure to losses as a result of its relationships with Other Entities is limited to its investment in them and amounts committed to be invested but not yet funded. The income that the Company generates from these entities is recorded in net investment income and other comprehensive income. The Company does not provide guarantees to other parties against the risk of loss from these Other Entities.

(ii) Interest in securitized assets

The Company invests in mortgage/asset-backed securities issued by numerous securitization vehicles sponsored by other parties, including private issuers and government sponsored issuers, in order to generate investment returns which are recorded in net investment income. The Company does not own a controlling financial interest in any of the issuers. These securitization vehicles are SEs based on their narrow scope of activities and highly leveraged capital structures. Investments in mortgage/asset-backed securities are reported on the Consolidated Statements of Financial Position as debt securities and private placements, and their fair value and carrying value are disclosed in note 4. The Company's maximum loss from these investments is limited to amounts invested.

Commercial mortgage-backed securities ("CMBS") are secured by commercial mortgages and residential mortgage-backed securities ("RMBS") are secured by residential mortgages. Asset-backed securities ("ABS") may be secured by various underlying assets including credit card receivables, automobile loans and aviation leases. The mortgage/asset-backed securities that the Company invests in primarily originate in North America.

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

	2015				2014
As at December 31,	CMBS	RMBS	ABS	Total	Total
AAA	**$ 703**	**$ 56**	**$ 1,424**	**$ 2,183**	$ 2,286
AA	**21**	**4**	**85**	**110**	70
A	**53**	**4**	**662**	**719**	567
BBB	**29**	**–**	**108**	**137**	233
BB and below	**35**	**12**	**19**	**66**	283
Total company exposure	**$ 841**	**$ 76**	**$ 2,298**	**$ 3,215**	$ 3,439

(iii) Mutual funds

The Company sponsors and may invest in a range of public mutual funds with a broad range of investment styles. As sponsor, the Company organizes mutual funds that implement investment strategies on behalf of current and future investors. The Company earns fees which are at market rates for providing advisory and administrative services to these mutual funds. Generally, the Company does not control its sponsored mutual funds because either the Company does not have power to govern their financial and operating policies, or its returns in the form of fees and ownership interests are not significant, or both. Certain mutual funds are SEs because their decision-making rights are not vested in voting equity interests and their investors are provided with redemption rights.

The Company believes that its relationships with these mutual funds are not individually significant. As such, the Company neither provides summary financial data for these mutual funds nor individually assesses whether they are SEs. The Company's interest in mutual funds is limited to its investment and fees earned, if any. The Company's investments in mutual funds are recorded as part of its investment in public equities within the Consolidated Statements of Financial Position. For information regarding the Company's invested assets, refer to note 4. The Company does not provide guarantees to other parties against the risk of loss from these mutual funds.

As sponsor, the Company's investment in startup capital of mutual funds as at December 31, 2015 was $1,582 (2014 – $1,305). The Company's retail mutual fund assets under management as at December 31, 2015 were $160,020 (2014 – $119,593).

Note 18 Commitments and Contingencies

(a) Legal 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 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 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 Company believes that its disclosure satisfied applicable disclosure requirements and intends to vigorously defend itself against any claims based on these allegations. Due to the nature and status of these proceedings, it is not practicable to provide an estimate of the financial effect of these proceedings, an indication of the uncertainties relating to the amount or timing of any outflow, nor the possibility of any reimbursement.

(b) Investment commitments

In the normal course of business, various investment commitments are outstanding which are not reflected in the Consolidated Financial Statements. There were $5,680 (2014 – $5,663) of outstanding investment commitments as at December 31, 2015, of which $172 (2014 – $280) mature in 30 days, $1,743 (2014 – $2,176) mature in 31 to 365 days and $3,765 (2014 – $3,207) mature after one year.

(c) Letters of credit

In the normal course of business, third-party relationship banks issue letters of credit on the Company's behalf. The Company's businesses utilize letters of credit for which third parties are the beneficiaries, as well as for affiliate reinsurance transactions between its subsidiaries. As at December 31, 2015, letters of credit for which third parties are beneficiary, in the amount of $109 (2014 – $65), were outstanding.

(d) Guarantees

(i) Guarantees regarding Manulife Finance (Delaware), L.P. ("MFLP")

MFC has guaranteed the payment of amounts on the $550 senior debentures due on December 15, 2026 and the $650 subordinated debentures due on December 15, 2041 issued by MFLP, a wholly owned unconsolidated partnership.

(ii) Guarantees regarding The Manufacturers Life Insurance Company

On January 29, 2007, MFC provided a subordinated guarantee of Class A and Class B Shares of MLI and any other class of preferred shares that rank on a parity with Class A Shares or Class B Shares of MLI. For the following subordinated debentures issued by MLI, MFC has provided a subordinated guarantee on the day of issuance: $550 issued on November 18, 2011; $500 issued on February 17, 2012; $200 issued on February 25, 2013; $250 issued on November 29, 2013; $500 issued on February 21, 2014; $500 issued on December 1, 2014; $750 issued on March 10, 2015, $350 issued on June 1, 2015, and $1,000 issued on November 20, 2015.

On July 1, 2015, MFC provided a subordinated guarantee of $400 for the subordinated debentures assumed by MLI as part of the Standard Life acquisition on the wind up of SCDA on that date. SCDA was acquired by MLI on January 30, 2015 (refer to note 3).

The following table sets forth certain condensed consolidated financial information for MFC and MFLP.

Condensed Consolidated Statement of Income Information

For the year ended December 31, 2015	MFC (Guarantor)	MFLP[(1)]	MLI consolidated	Other subsidiaries of MFC on a combined basis	Consolidating adjustments[(1)]	Total consolidated amounts[(1)]
Total revenue	**$ 401**	**$ 100**	**$ 33,877**	**$ 1,491**	**$ (1,439)**	**$ 34,430**
Net income (loss) attributed to shareholders	**2,191**	**28**	**1,983**	**118**	**(2,129)**	**2,191**
For the year ended December 31, 2014						
Total revenue	$ 418	$ 77	$ 53,301	$ 4,163	$ (3,571)	$ 54,388
Net income (loss) attributed to shareholders	3,501	13	3,657	(354)	(3,316)	3,501

[(1)] Since MFLP is not consolidated, its results have been eliminated in the consolidating adjustments column.

Condensed Consolidated Statements of Financial Position Information

As at December 31, 2015	MFC (Guarantor)	MFLP[(1)]	MLI consolidated	Other subsidiaries of MFC on a combined basis	Consolidating adjustments[(1)]	Total consolidated amounts[(1)]
Invested assets	**$ 122**	**$ 5**	**$ 303,406**	**$ 5,739**	**$ (5)**	**$ 309,267**
Total other assets	**43,248**	**1,651**	**97,936**	**15,491**	**(76,199)**	**82,127**
Segregated funds net assets	**–**	**–**	**313,249**	**–**	**–**	**313,249**
Insurance contract liabilities	**–**	**–**	**286,418**	**18,197**	**(17,556)**	**287,059**
Investment contract liabilities	**–**	**–**	**3,497**	**–**	**–**	**3,497**
Segregated funds net liabilities	**–**	**–**	**313,249**	**–**	**–**	**313,249**
Total other liabilities	**2,211**	**1,447**	**69,334**	**1,445**	**(15,537)**	**58,900**
As at December 31, 2014						
Invested assets	$ 2,260	$ 2	$ 262,406	$ 4,644	$ (2)	$ 269,310
Total other assets	37,825	1,598	67,422	13,338	(66,619)	53,564
Segregated funds net assets	–	–	256,532	–	–	256,532
Insurance contract liabilities	–	–	229,087	15,526	(15,100)	229,513
Investment contract liabilities	–	–	2,644	–	–	2,644
Segregated funds net liabilities	–	–	256,532	–	–	256,532
Total other liabilities	6,780	1,419	61,009	1,393	(13,810)	56,791

[(1)] Since MFLP is not consolidated, its results have been eliminated in the consolidating adjustments column.

(iii) Guarantees regarding John Hancock Life Insurance Company (U.S.A.) ("JHUSA")

Details of guarantees regarding certain securities issued or to be issued by JHUSA are outlined in note 23.

(e) Pledged assets

In the normal course of business, the Company pledges its assets in respect of liabilities incurred, strictly for the purpose of providing collateral for the counterparty. In the event of the Company's default, the counterparty is entitled to apply the collateral in order to settle the liability. The pledged assets are returned to the Company if the underlying transaction is terminated or, in the case of derivatives, if there is a decrease in the net exposure due to market value changes.

The amounts pledged were as follows.

	2015		2014	
As at December 31,	Debt securities	Other	Debt securities	Other
In respect of:				
Derivatives	**$ 4,619**	**$ 20**	$ 2,920	$ 16
Regulatory requirements	**445**	**82**	401	77
Real estate	**–**	**41**	–	54
Repurchase agreements	**268**	**–**	480	–
Non-registered retirement plans in trust	**–**	**455**	–	385
Other	**2**	**139**	2	114
Total	**$ 5,334**	**$ 737**	$ 3,803	$ 646

(f) Lease obligations

The Company has a number of operating lease obligations, primarily for the use of office space. The aggregate future minimum lease payments under non-cancelable operating leases are $1,056 (2014 – $803). Payments by year are included in the "Risk Management" section of the Company's 2015 MD&A under Liquidity Risk.

(g) Participating business

In some territories where the Company maintains participating accounts, there are regulatory restrictions on the amounts of profit that can be transferred to shareholders. Where applicable, these restrictions generally take the form of a fixed percentage of policyholder dividends. For participating businesses operating as separate "closed blocks", transfers are governed by the terms of MLI's and John Hancock Mutual Life Insurance Company's plans of demutualization.

Note 19 Segmented Information

The Company's reporting segments are Asia, Canadian and U.S. Divisions and the Corporate and Other segment. Each division has profit and loss responsibility and develops products, services and distribution strategies based on the profile of its business and the needs of its market. The significant product and service offerings of each segment are as follows:

Protection (Asia, Canadian and U.S. Divisions). Offers a variety of individual life insurance and individual and group long-term care insurance. Products are distributed through multiple distribution channels, including insurance agents, brokers, banks, financial planners and direct marketing.

Wealth and Asset Management (Asia, Canadian and U.S. Divisions). Offers pension contracts and mutual fund products and services. These businesses also offer a variety of retirement products to group benefit plans. These businesses distribute products through multiple distribution channels, including insurance agents and brokers affiliated with the Company, securities brokerage firms, financial planners, pension plan sponsors, pension plan consultants and banks.

Other Wealth (Asia, Canadian and U.S. Divisions). Includes annuities, single premium and banking products. Manulife Bank offers a variety of deposit and credit products to Canadian customers. Annuity contracts provide non-guaranteed, partially guaranteed and fully guaranteed investment options through general and separate account products. These businesses distribute products through multiple distribution channels, including insurance agents and brokers affiliated with the Company, financial planners and banks.

Corporate and Other Segment. Comprised of investment performance on assets backing capital, net of amounts allocated to operating division and financing costs; External asset management business; Property and Casualty ("P&C") Reinsurance Business; as well as run-off reinsurance operations including variable annuities and accident and health.

Certain allocation methodologies are employed in the preparation of segmented financial information. Indirect expenses are allocated to business segments using allocation formulas applied on a consistent basis, while capital is apportioned to the Company's business segments using a risk based methodology. The Consolidated Statements of Income impact of changes in actuarial methods and assumptions (refer to note 8) is reported in the Corporate and Other segment.

As at and for the year ended December 31, 2015	Asia Division	Canadian Division[1]	U.S. Division	Corporate and Other[1]	Total
Revenue					
Premium income					
Life and health insurance	$ 8,706	$ 3,926	$ 6,997	$ 90	$ 19,719
Annuities and pensions	2,789	504	913	–	4,206
Premium ceded, net of commission and additional consideration relating to Closed Block reinsurance transaction (note 3)	–	–	(7,996)	–	(7,996)
Net premium income	11,495	4,430	(86)	90	15,929
Net investment income (loss)	1,149	2,519	4,795	(60)	8,403
Other revenue	1,434	3,124	5,349	191	10,098
Total revenue	14,078	10,073	10,058	221	34,430
Contract benefits and expenses					
Life and health insurance	6,724	4,202	(124)	624	11,426
Annuities and pensions	2,487	584	2,844	–	5,915
Net benefits and claims	9,211	4,786	2,720	624	17,341
Interest expense	124	471	59	447	1,101
Other expenses	3,273	4,056	5,273	768	13,370
Total contract benefits and expenses	12,608	9,313	8,052	1,839	31,812
Income (loss) before income taxes	1,470	760	2,006	(1,618)	2,618
Income tax recovery (expense)	(178)	(281)	(475)	606	(328)
Net income (loss)	1,292	479	1,531	(1,012)	2,290
Less net income (loss) attributed to:					
Non-controlling interests	77	–	–	(8)	69
Participating policyholders	39	(7)	–	(2)	30
Net income (loss) attributed to shareholders	$ 1,176	$ 486	$ 1,531	$ (1,002)	$ 2,191
Total assets	$ 83,701	$ 201,865	$ 386,208	$ 32,869	$ 704,643

As at and for the year ended December 31, 2014	Asia Division	Canadian Division[1]	U.S. Division	Corporate and Other[1]	Total
Revenue					
Premium income					
Life and health insurance	$ 6,473	$ 3,325	$ 5,984	$ 77	$ 15,859
Annuities and pensions	802	403	749	–	1,954
Net premium income	7,275	3,728	6,733	77	17,813
Net investment income (loss)	3,349	7,434	17,469	(416)	27,836
Other revenue	1,334	2,611	4,531	263	8,739
Total revenue	11,958	13,773	28,733	(76)	54,388
Contract benefits and expenses					
Life and health insurance	6,951	4,984	14,980	470	27,385
Annuities and pensions	1,057	3,673	6,250	–	10,980
Net benefits and claims	8,008	8,657	21,230	470	38,365
Interest expense	95	486	80	470	1,131
Other expenses	2,370	3,358	4,417	483	10,628
Total contract benefits and expenses	10,473	12,501	25,727	1,423	50,124
Income (loss) before income taxes	1,485	1,272	3,006	(1,499)	4,264
Income tax recovery (expense)	(126)	(301)	(859)	615	(671)
Net income (loss)	1,359	971	2,147	(884)	3,593
Less net income (loss) attributed to:					
Non-controlling interests	56	–	–	15	71
Participating policyholders	56	(32)	–	(3)	21
Net income (loss) attributed to shareholders	$ 1,247	$ 1,003	$ 2,147	$ (896)	$ 3,501
Total assets	$ 67,733	$ 146,321	$ 333,726	$ 31,626	$ 579,406

[1] Standard Life's results are included in the Canadian Division and in Corporate and Other. Refer to note 3.

The results of the Company's business segments differ from geographic segmentation primarily as a consequence of segmenting the results of the Company's Corporate and Other segment into the different geographic segments to which its businesses pertain.

By geographic location

For the year ended December 31, 2015	Asia	Canada[1]	U.S.	Other	Total
Revenue					
Premium income					
Life and health insurance	**$ 8,775**	**$ 3,454**	**$ 6,999**	**$ 491**	**$ 19,719**
Annuities and pensions	**2,789**	**504**	**913**	**–**	**4,206**
Premium ceded, net of commission and additional consideration relating to Closed Block reinsurance transaction (note 3)	**–**	**–**	**(7,996)**	**–**	**(7,996)**
Net premium income	**11,564**	**3,958**	**(84)**	**491**	**15,929**
Net investment income (loss)	**1,128**	**2,885**	**4,273**	**118**	**8,404**
Other revenue	**1,455**	**2,891**	**5,738**	**14**	**10,098**
Total revenue	**$ 14,147**	**$ 9,734**	**$ 9,927**	**$ 623**	**$ 34,431**

For the year ended December 31, 2014	Asia	Canada[1]	U.S.	Other	Total
Revenue					
Premium income					
Life and health insurance	$ 6,538	$ 2,862	$ 5,987	$ 472	$ 15,859
Annuities and pensions	802	403	749	–	1,954
Net premium income	7,340	3,265	6,736	472	17,813
Net investment income (loss)	3,336	7,547	16,775	178	27,836
Other revenue	1,352	2,512	4,852	23	8,739
Total revenue	$ 12,028	$ 13,324	$ 28,363	$ 673	$ 54,388

[1] Standard Life's results are included in Canada. Refer to note 3.

Note 20 Related Parties

(a) Transactions with related parties

Related party transactions have been in the normal course of business and taken place at terms that would exist in arm's-length transactions.

(b) Transactions with certain related parties

Transactions with MFLP, a wholly owned unconsolidated partnership, and MFCT, a wholly owned unconsolidated trust, are described in note 17.

(c) Compensation of key management personnel

The Company's key management personnel are those personnel who have the authority and responsibility for planning, directing and controlling the activities of the Company. Directors (both executive and non-executive) and senior management are considered key personnel. Accordingly, the summary of compensation of key management personnel is as follows.

For the years ended December 31,	2015	2014
Short-term employee benefits	**$ 34**	$ 25
Post-employment benefits	**3**	3
Share-based payments	**44**	30
Termination benefits	**1**	–
Other long-term benefits	**3**	2
Total	**$ 85**	$ 60

Note 21 Subsidiaries

The following is a list of Manulife's directly and indirectly held major operating subsidiaries.

As at December 31, 2015 (100% owned unless otherwise noted in brackets beside company name)	Address	Description
The Manufacturers Life Insurance Company	Toronto, Canada	Leading Canadian-based financial services company that offers a diverse range of financial protection products and wealth management services
Manulife Holdings (Alberta) Limited	Calgary, Canada	Holding company
John Hancock Financial Corporation	Wilmington, Delaware, U.S.A.	Holding company
The Manufacturers Investment Corporation	Michigan, U.S.A.	Holding company
Guide Financial, Inc.	San Francisco, California, U.S.A.	Provides an aggregation and goals based planning software platform that enables financial advisors and institutions to help clients make financial planning decisions
John Hancock Life Insurance Company (U.S.A.)	Michigan, U.S.A.	U.S. life insurance company licensed in all states, except New York
John Hancock Subsidiaries LLC	Wilmington, Delaware, U.S.A.	Holding company
John Hancock Financial Network, Inc.	Boston, Massachusetts, U.S.A.	Financial services distribution organization
The Berkeley Financial Group, LLC	Boston, Massachusetts, U.S.A.	Holding company
John Hancock Advisers, LLC	Boston, Massachusetts, U.S.A.	Investment advisor
John Hancock Funds, LLC	Boston, Massachusetts, U.S.A.	Broker-dealer
Hancock Natural Resource Group, Inc.	Boston, Massachusetts, U.S.A.	Manager of globally diversified timberland and agricultural portfolios
John Hancock Life Insurance Company of New York	New York, U.S.A.	U.S. life insurance company licensed in New York
John Hancock Investment Management Services, LLC	Boston, Massachusetts, U.S.A.	Investment advisor
John Hancock Life & Health Insurance Company	Boston, Massachusetts, U.S.A.	U.S. life insurance company licensed in all states
John Hancock Distributors LLC	Wilmington, Delaware, U.S.A.	Broker-dealer
John Hancock Insurance Agency, Inc.	Wilmington, Delaware, U.S.A.	Insurance agency
John Hancock Insurance Company of Vermont	Vermont, U.S.A.	Captive insurance subsidiary
Manulife Reinsurance Limited	Hamilton, Bermuda	Provides life and financial reinsurance to affiliates
Manulife Reinsurance (Bermuda) Limited	Hamilton, Bermuda	Provides life and annuity reinsurance to affiliates
Manulife Bank of Canada	Waterloo, Canada	Provides integrated banking products and service options not available from an insurance company
Manulife Asset Management Holdings (Canada) Inc.	Toronto, Canada	Holding company
Manulife Asset Management Limited	Toronto, Canada	Provides investment counseling, portfolio and mutual fund management in Canada
First North American Insurance Company	Toronto, Canada	Property and casualty insurance company
NAL Resources Management Limited	Calgary, Canada	Management company for oil and gas properties

As at December 31, 2015 (100% owned unless otherwise noted in brackets beside company name)	Address	Description
Manulife Resources Limited	Calgary, Canada	Holds oil and gas properties
Manulife Property Limited Partnership	Toronto, Canada	Holds oil and gas royalties and European equities
Manulife Western Holdings Limited Partnership	Calgary, Canada	Holds oil and gas properties
Manulife Securities Investment Services Inc.	Oakville, Canada	Mutual fund dealer for Canadian operations
Manulife Holdings (Bermuda) Limited	Hamilton, Bermuda	Holding company
Manufacturers P & C Limited	St. Michael, Barbados	Provides property, casualty and financial reinsurance
Manulife Financial Asia Limited	Hong Kong, China	Holding company
Manulife (Cambodia) PLC	Phnom Penh, Cambodia	Life insurance company
Manufacturers Life Reinsurance Limited	St. Michael, Barbados	Provides life and annuity reinsurance to affiliates
Manulife (Vietnam) Limited	Ho Chi Minh City, Vietnam	Life insurance company
Manulife Asset Management (Vietnam) Company Limited	Ho Chi Minh City, Vietnam	Fund management company
Manulife International Holdings Limited	Hong Kong, China	Holding company
Manulife (International) Limited	Hong Kong, China	Life insurance company
Manulife-Sinochem Life Insurance Co. Ltd. (51%)	Shanghai, China	Life insurance company
Manulife Asset Management International Holdings Limited	Hong Kong, China	Holding company
Manulife Asset Management (Hong Kong) Limited	Hong Kong, China	Investment management and advisory company marketing mutual funds
Manulife Asset Management (Taiwan) Co., Ltd.	Taipei, Taiwan	Asset management company
Manulife Life Insurance Company	Tokyo, Japan	Life insurance company
Manulife Asset Management (Japan) Limited	Tokyo, Japan	Investment management and advisory company
Manulife Investments Japan Limited	Tokyo, Japan	Investment management and mutual fund business
Manulife Insurance (Thailand) Public Company Limited (91.8%)[(1)]	Bangkok, Thailand	Life insurance company
Manulife Asset Management (Thailand) Company Limited (93.4%)[(1)]	Bangkok, Thailand	Investment management company
Manulife Holdings Berhad (59.5%)	Kuala Lumpur, Malaysia	Holding company
Manulife Insurance Berhad (59.5%)	Kuala Lumpur, Malaysia	Life insurance company
Manulife Asset Management Services Berhad (59.5%)	Kuala Lumpur, Malaysia	Asset management company
Manulife (Singapore) Pte. Ltd.	Singapore	Life insurance company
Manulife Asset Management (Singapore) Pte. Ltd.	Singapore	Asset management company
The Manufacturers Life Insurance Co. (Phils.), Inc.	Makati City, Philippines	Life insurance company
Manulife Chinabank Life Assurance Corporation (60%)	Makati City, Philippines	Life insurance company
PT Asuransi Jiwa Manulife Indonesia	Jakarta, Indonesia	Life insurance company
PT Manulife Aset Manajemen Indonesia	Jakarta, Indonesia	Investment management company marketing mutual funds and discretionary funds
Manulife Asset Management (Europe) Limited	London, England	Investment management company for Manulife Financial's international funds
Manulife Assurance Company of Canada	Toronto, Canada	Life insurance company
EIS Services (Bermuda) Limited	Hamilton, Bermuda	Investment holding company
Berkshire Insurance Services Inc.	Toronto, Canada	Investment holding company
JH Investments (Delaware) LLC	Boston, Massachusetts, U.S.A.	Investment holding company
Manulife Securities Incorporated	Oakville, Canada	Investment dealer
Manulife Asset Management (North America) Limited	Toronto, Canada	Investment advisor
Regional Power Inc.	Mississauga, Canada	Developer and operator of hydro-electric power projects
John Hancock Reassurance Company Ltd.	Hamilton, Bermuda	Provides life, annuity and long-term care reinsurance to affiliates

(1) MFC voting rights percentages are the same as the ownership percentages except for Manulife Insurance (Thailand) Public Company Limited and Manulife Asset Management (Thailand) Company Limited where MFC's voting rights are 97.8% and 98.2% respectively.

Note 22 Segregated Funds

The Company manages a number of segregated funds on behalf of policyholders, which generate fee revenue. Policyholders are provided the opportunity to invest in different categories of segregated funds that respectively hold a range of underlying investments. The Company retains legal title to the underlying investments; however, returns from these investments belong to the policyholders. Accordingly, the Company does not bear the risk associated with these assets outside of guarantees offered on certain variable life and annuity products. The "Risk Management" section of the Company's 2015 MD&A provides information regarding variable annuity and segregated fund guarantees.

The composition of net assets by categories of segregated funds was within the following ranges for the years ended December 31, 2015 and 2014.

	Ranges in per cent	
Type of fund	**2015**	2014
Money market funds	**2 to 3%**	2 to 3%
Fixed income funds	**12 to 16%**	12 to 13%
Balanced funds	**23 to 27%**	27 to 30%
Equity funds	**56 to 59%**	55 to 58%

Money market funds consist of investments that have a term to maturity of less than one year. Fixed income funds primarily consist of investments in fixed grade income securities and may contain smaller investments in diversified equities or high-yield bonds. Relative to fixed income funds, balanced funds consist of fixed income securities and a larger equity investment component. The types of equity funds available to policyholders range from low volatility equity funds to aggressive equity funds. Equity funds invest in a varying mix of Canadian, U.S. and global equities.

The underlying investments of the segregated funds consist of both individual securities and mutual funds (collectively "net assets"), some of which may be considered to be structured entities. The carrying value and change in segregated funds net assets are as follows.

Segregated funds net assets

As at December 31,	2015	2014
Investments at market value		
Cash and short-term securities	**$ 4,370**	$ 2,790
Debt securities	**15,269**	7,246
Equities	**13,079**	7,386
Mutual funds	**277,015**	236,880
Other investments	**4,538**	2,695
Accrued investment income	**205**	127
Other liabilities, net	**(729)**	(390)
Total segregated funds net assets	**$ 313,747**	$ 256,734
Composition of segregated funds net assets		
Held by policyholders	**$ 313,249**	$ 256,532
Held by the Company	**498**	202
Total segregated funds net assets	**$ 313,747**	$ 256,734

Total segregated funds net assets are presented separately on the Consolidated Statements of Financial Position. Fair value related information of segregated funds is disclosed in note 4(g).

Changes in segregated funds net assets

For the years ended December 31,	2015	2014
Net policyholder cash flow		
Deposits from policyholders	**$ 32,785**	$ 24,112
Net transfers to general fund	**(798)**	(602)
Payments to policyholders	**(41,174)**	(35,636)
	(9,187)	(12,126)
Investment related		
Interest and dividends	**17,487**	10,743
Net realized and unrealized investment gains	**(16,080)**	6,481
	1,407	17,224
Other		
Management and administration fees	**(4,337)**	(3,897)
Acquired through Standard Life (note 3)	**32,171**	–
Impact of changes in foreign exchange rates	**36,959**	15,487
	64,793	11,590
Net additions (deductions)	**57,013**	16,688
Segregated funds net assets, beginning of year	**256,734**	240,046
Segregated funds net assets, end of year	**$ 313,747**	$ 256,734

Segregated funds net assets may be exposed to a variety of financial and other risks. These risks are primarily mitigated by investment guidelines that are actively monitored by professional and experienced portfolio advisors. The Company is not exposed to these risks beyond the liabilities related to the guarantees associated with certain variable life and annuity products. Accordingly, the Company's exposure to loss from segregated fund products is limited to the value of these guarantees.

These guarantee liabilities are recorded within the Company's insurance contract liabilities. Assets supporting these guarantees are recognized in invested assets according to their investment type. The "Risk Management" section of the Company's 2015 MD&A provides information regarding the risks associated with variable annuity and segregated fund guarantees.

Note 23 Information Provided in Connection with Investments in Deferred Annuity Contracts and *Signature*Notes Issued or Assumed by John Hancock Life Insurance Company (U.S.A.)

The following condensed consolidating financial information, presented in accordance with IFRS, and the related disclosure have been included in these Consolidated Financial Statements with respect to JHUSA in compliance with Regulation S-X and Rule 12h-5 of the United States Securities and Exchange Commission (the "Commission"). These financial statements are incorporated by reference in the MFC and its subsidiaries registration statements that are described below and which relate to MFC's guarantee of certain securities to be issued by its subsidiaries.

JHUSA sells deferred annuity contracts that feature a market value adjustment and are registered with the Commission. The deferred annuity contracts contain variable investment options and fixed investment period options. The fixed investment period options enable the participant to invest fixed amounts of money for fixed terms at fixed interest rates, subject to a market value adjustment if the participant desires to terminate a fixed investment period before its maturity date. The annuity contract provides for the market value adjustment to keep the parties whole with respect to the fixed interest bargain for the entire fixed investment period. These fixed investment period options that contain a market value adjustment feature are referred to as "MVAs".

JHUSA may also sell medium-term notes to retail investors under its *Signature*Notes program.

Effective December 31, 2009, John Hancock Variable Life Insurance Company (the "Variable Company") and John Hancock Life Insurance Company (the "Life Company") merged with and into JHUSA. In connection with the mergers, JHUSA assumed the Variable Company's rights and obligations with respect to the MVAs issued by the Variable Company and the Life Company's rights and obligations with respect to the *Signature*Notes issued by the Life Company.

MFC fully and unconditionally guaranteed the payment of JHUSA's obligations under the MVAs and under the *Signature*Notes (including the MVAs and *Signature*Notes assumed by JHUSA in the merger), and such MVAs and the *Signature*Notes were registered with the Commission. The *Signature*Notes and MVAs assumed or issued by JHUSA are collectively referred to in this note as the "Guaranteed Securities". JHUSA is, and each of the Variable Company and the Life Company was, a wholly owned subsidiary of MFC.

MFC's guarantees of the Guaranteed Securities are unsecured obligations of MFC, and are subordinated in right of payment to the prior payment in full of all other obligations of MFC, except for other guarantees or obligations of MFC which by their terms are designated as ranking equally in right of payment with or subordinate to MFC's guarantees of the Guaranteed Securities.

The laws of the State of New York govern MFC's guarantees of the *Signature*Notes issued or assumed by JHUSA and the laws of the Commonwealth of Massachusetts govern MFC's guarantees of the MVAs issued or assumed by JHUSA. MFC has consented to the jurisdiction of the courts of New York and Massachusetts. However, because a substantial portion of MFC's assets are located outside the United States, the assets of MFC located in the United States may not be sufficient to satisfy a judgment given by a federal or state court in the United States to enforce the subordinate guarantees. In general, the federal laws of Canada and the laws of the

Province of Ontario, where MFC's principal executive offices are located, permit an action to be brought in Ontario to enforce such a judgment provided that such judgment is subsisting and unsatisfied for a fixed sum of money and not void or voidable in the United States and a Canadian court will render a judgment against MFC in a certain dollar amount, expressed in Canadian dollars, subject to customary qualifications regarding fraud, violations of public policy, laws limiting the enforcement of creditor's rights and applicable statutes of limitations on judgments. There is currently no public policy in effect in the Province of Ontario that would support avoiding the recognition and enforcement in Ontario of a judgment of a New York or Massachusetts court on MFC's guarantees of the *Signature*Notes issued or assumed by JHUSA or a Massachusetts court on guarantees of the MVAs issued or assumed by JHUSA.

MFC is a holding company. MFC's assets primarily consist of investments in its subsidiaries. MFC's cash flows primarily consist of dividends and interest payments from its operating subsidiaries, offset by expenses and shareholder dividends and MFC stock repurchases. As a holding company, MFC's ability to meet its cash requirements, including, but not limited to, paying any amounts due under its guarantees, substantially depends upon dividends from its operating subsidiaries.

These subsidiaries are subject to certain regulatory restrictions under laws in Canada, the United States and certain other countries, which may limit their ability to pay dividends or make contributions or loans to MFC. For example, some of MFC's subsidiaries are subject to restrictions prescribed by the ICA on their ability to declare and pay dividends. The restrictions related to dividends imposed by the ICA are described in note 14.

In the United States, insurance laws in Michigan, New York, Massachusetts and Vermont, the jurisdictions in which certain of MFC's U.S. insurance company subsidiaries are domiciled, impose general limitations on the payment of dividends and other upstream distributions or loans by these insurance subsidiaries. These limitations are described in note 14.

In Asia, the insurance laws of the jurisdictions in which MFC operates either provide for specific restrictions on the payment of dividends or other distributions or loans by subsidiaries or impose solvency or other financial tests, which could affect the ability of subsidiaries to pay dividends in certain circumstances.

There can be no assurance that any current or future regulatory restrictions in Canada, the United States or Asia will not impair MFC's ability to meet its cash requirements, including, but not limited to, paying any amounts due under its guarantee.

The following condensed consolidating financial information, presented in accordance with IFRS, reflects the effects of the mergers and is provided in compliance with Regulation S-X and in accordance with Rule 12h-5 of the Commission.

Condensed Consolidating Statement of Financial Position

As at December 31, 2015	MFC (Guarantor)	JHUSA (Issuer)	Other subsidiaries	Consolidation adjustments	Consolidated MFC
Assets					
Invested assets	$ 122	$ 110,404	$ 199,124	$ (383)	$ 309,267
Investments in unconsolidated subsidiaries	42,919	6,684	17,653	(67,256)	–
Reinsurance assets	–	52,027	9,579	(26,180)	35,426
Other assets	329	30,282	39,026	(22,936)	46,701
Segregated funds net assets	–	178,421	136,753	(1,925)	313,249
Total assets	$ 43,370	$ 377,818	$ 402,135	$ (118,680)	$ 704,643
Liabilities and equity					
Insurance contract liabilities	$ –	$ 149,079	$ 165,021	$ (27,041)	$ 287,059
Investment contract liabilities	–	1,324	2,177	(4)	3,497
Other liabilities	524	30,132	40,939	(22,243)	49,352
Long-term debt	1,687	–	16	150	1,853
Liabilities for preferred shares and capital instruments	–	1,209	7,185	(699)	7,695
Segregated funds net liabilities	–	178,421	136,753	(1,925)	313,249
Shareholders' equity	41,159	17,653	49,266	(66,919)	41,159
Participating policyholders' equity	–	–	187	–	187
Non-controlling interests	–	–	591	1	592
Total liabilities and equity	$ 43,370	$ 377,818	$ 402,135	$ (118,680)	$ 704,643

Condensed Consolidating Statement of Financial Position

As at December 31, 2014	MFC (Guarantor)	JHUSA (Issuer)	Other subsidiaries	Consolidation adjustments	Consolidated MFC
Assets					
Invested assets	$ 2,260	$ 104,295	$ 163,115	$ (360)	$ 269,310
Investments in unconsolidated subsidiaries	37,545	5,570	15,013	(58,128)	–
Reinsurance assets	–	34,001	6,062	(21,538)	18,525
Other assets	280	28,251	31,062	(24,554)	35,039
Segregated funds net assets	–	160,789	97,204	(1,461)	256,532
Total assets	$ 40,085	$ 332,906	$ 312,456	$ (106,041)	$ 579,406
Liabilities and equity					
Insurance contract liabilities	$ –	$ 127,358	$ 124,406	$ (22,251)	$ 229,513
Investment contract liabilities	–	1,494	1,155	(5)	2,644
Other liabilities	495	27,080	41,182	(23,497)	45,260
Long-term debt	3,720	–	15	150	3,885
Liabilities for preferred shares and capital instruments	344	1,173	4,652	(743)	5,426
Liabilities for subscription receipts	2,220	–	–	–	2,220
Segregated funds net liabilities	–	160,789	97,204	(1,461)	256,532
Shareholders' equity	33,306	15,012	43,223	(58,235)	33,306
Participating policyholders' equity	–	–	156	–	156
Non-controlling interests	–	–	463	1	464
Total liabilities and equity	$ 40,085	$ 332,906	$ 312,456	$ (106,041)	$ 579,406

Condensed Consolidating Statement of Income

For the year ended December 31, 2015	MFC (Guarantor)	JHUSA (Issuer)	Other subsidiaries	Consolidation adjustments	Consolidated MFC
Revenue					
Net premium income prior to Closed Block reinsurance	**$ –**	**$ 3,161**	**$ 20,764**	**$ –**	**$ 23,925**
Premiums ceded, net of commission and additional consideration relating to Closed Block reinsurance transaction	**–**	**(6,813)**	**(1,766)**	**583**	**(7,996)**
Net premium income	**–**	**(3,652)**	**18,998**	**583**	**15,929**
Net investment income (loss)	**476**	**4,014**	**4,827**	**(914)**	**8,403**
Net other revenue	**(75)**	**2,110**	**11,069**	**(3,006)**	**10,098**
Total revenue	**401**	**2,472**	**34,894**	**(3,337)**	**34,430**
Contract benefits and expenses					
Net benefits and claims	**–**	**(840)**	**19,234**	**(1,053)**	**17,341**
Commissions, investment and general expenses	**19**	**3,158**	**11,949**	**(2,114)**	**13,012**
Other expenses	**185**	**267**	**1,177**	**(170)**	**1,459**
Total contract benefits and expenses	**204**	**2,585**	**32,360**	**(3,337)**	**31,812**
Income (loss) before income taxes	**197**	**(113)**	**2,534**	**–**	**2,618**
Income tax (expense) recovery	**(57)**	**276**	**(547)**	**–**	**(328)**
Income after income taxes	**140**	**163**	**1,987**	**–**	**2,290**
Equity in net income (loss) of unconsolidated subsidiaries	**2,051**	**80**	**243**	**(2,374)**	**–**
Net income (loss)	**$ 2,191**	**$ 243**	**$ 2,230**	**$ (2,374)**	**$ 2,290**
Net income (loss) attributed to:					
Non-controlling interests	**$ –**	**$ –**	**$ 69**	**$ –**	**$ 69**
Participating policyholders	**–**	**(306)**	**31**	**305**	**30**
Shareholders	**2,191**	**549**	**2,130**	**(2,679)**	**2,191**
	$ 2,191	**$ 243**	**$ 2,230**	**$ (2,374)**	**$ 2,290**

Condensed Consolidating Statement of Income

For the year ended December 31, 2014	MFC (Guarantor)	JHUSA (Issuer)	Other subsidiaries	Consolidation adjustments	Consolidated MFC
Revenue					
Net premium income	$ –	$ 4,910	$ 12,908	$ (5)	$ 17,813
Net investment income (loss)	422	14,046	14,481	(1,113)	27,836
Net other revenue	(4)	2,228	13,010	(6,495)	8,739
Total revenue	418	21,184	40,399	(7,613)	54,388
Contract benefits and expenses					
Net benefits and claims	–	17,730	25,342	(4,707)	38,365
Commissions, investment and general expenses	10	2,803	9,345	(1,817)	10,341
Other expenses	263	272	1,972	(1,089)	1,418
Total contract benefits and expenses	273	20,805	36,659	(7,613)	50,124
Income before income taxes	145	379	3,740	–	4,264
Income tax (expense) recovery	(43)	143	(771)	–	(671)
Income (loss) after income taxes	102	522	2,969	–	3,593
Equity in net income (loss) of unconsolidated subsidiaries	3,399	603	1,125	(5,127)	–
Net income (loss)	$ 3,501	$ 1,125	$ 4,094	$ (5,127)	$ 3,593
Net income (loss) attributed to:					
Non-controlling interests	$ –	$ –	$ 71	$ –	$ 71
Participating policyholders	–	(67)	21	67	21
Shareholders	3,501	1,192	4,002	(5,194)	3,501
	$ 3,501	$ 1,125	$ 4,094	$ (5,127)	$ 3,593

Consolidating Statement of Cash Flows

For the year ended December 31, 2015	MFC (Guarantor)	JHUSA (Issuer)	Other subsidiaries	Consolidation adjustments	Consolidated MFC
Operating activities					
Net income (loss)	**$ 2,191**	**$ 243**	**$ 2,230**	**$(2,374)**	**$ 2,290**
Adjustments for non-cash items in net income (loss)					
Equity in net income of unconsolidated subsidiaries	**(2,051)**	**(80)**	**(243)**	**2,374**	**–**
Increase (decrease) in insurance contract liabilities	**–**	**(2,917)**	**10,369**	**–**	**7,452**
Increase (decrease) in investment contract liabilities	**–**	**59**	**144**	**–**	**203**
(Increase) decrease in reinsurance assets, excluding the impact of Closed Block reinsurance transaction	**–**	**830**	**561**	**–**	**1,391**
Amortization of (premium) discount on invested assets	**–**	**–**	**90**	**–**	**90**
Other amortization	**2**	**105**	**473**	**–**	**580**
Net realized and unrealized (gains) losses and impairment on assets	**(191)**	**606**	**3,072**	**–**	**3,487**
Deferred income tax expense (recovery)	**5**	**150**	**(498)**	**–**	**(343)**
Stock option expense	**–**	**–**	**16**	**–**	**16**
Cash provided by operating activities before undernoted items	**(44)**	**(1,004)**	**16,214**	**–**	**15,166**
Dividends from unconsolidated subsidiary	**4,000**	**398**	**291**	**(4,689)**	**–**
Cash decrease due to Closed Block reinsurance transaction	**–**	**(1,336)**	**(687)**	**–**	**(2,023)**
Changes in policy related and operating receivables and payables	**38**	**1,392**	**(4,239)**	**–**	**(2,809)**
Cash provided by (used in) operating activities	**3,994**	**(550)**	**11,579**	**(4,689)**	**10,334**
Investing activities					
Purchases and mortgage advances	**–**	**(31,061)**	**(46,048)**	**–**	**(77,109)**
Disposals and repayments	**179**	**29,930**	**36,841**	**–**	**66,950**
Changes in investment broker net receivables and payables	**–**	**31**	**71**	**–**	**102**
Investment in common shares of subsidiaries	**(2,392)**	**–**	**–**	**2,392**	**–**
Net cash decrease from sale and purchase of subsidiaries and businesses	**–**	**–**	**(3,808)**	**–**	**(3,808)**
Capital contribution to unconsolidated subsidiaries	**–**	**(447)**	**–**	**447**	**–**
Return of capital from unconsolidated subsidiaries	**–**	**59**	**–**	**(59)**	**–**
Notes receivable from parent	**–**	**–**	**(31)**	**31**	**–**
Notes receivable from subsidiaries	**30**	**–**	**180**	**(210)**	**–**
Cash provided by (used in) investing activities	**(2,183)**	**(1,488)**	**(12,795)**	**2,601**	**(13,865)**
Financing activities					
Increase (decrease) in repurchase agreements and securities sold but not yet purchased	**–**	**–**	**(212)**	**–**	**(212)**
Redemption of long-term debt	**(2,243)**	**–**	**–**	**–**	**(2,243)**
Issue of capital instruments, net	**–**	**–**	**2,089**	**–**	**2,089**
Redemption of capital instruments	**(350)**	**–**	**–**	**–**	**(350)**
Funds borrowed (repaid), net	**–**	**(39)**	**(7)**	**–**	**(46)**
Secured borrowing from securitization transactions	**–**	**–**	**436**	**–**	**436**
Changes in deposits from Bank clients, net	**–**	**–**	**(351)**	**–**	**(351)**
Shareholders' dividends paid in cash	**(1,427)**	**–**	**–**	**–**	**(1,427)**
(Distributions to) contributions from non-controlling interests, net	**–**	**–**	**61**	**–**	**61**
Common shares issued, net	**37**	**–**	**2,392**	**(2,392)**	**37**
Dividends paid to parent	**–**	**(291)**	**(4,398)**	**4,689**	**–**
Gain (loss) on intercompany transaction	**–**	**18**	**(18)**	**–**	**–**
Capital contributions by parent	**–**	**–**	**447**	**(447)**	**–**
Return of capital to parent	**–**	**–**	**(59)**	**59**	**–**
Notes payable to parent	**–**	**(180)**	**(30)**	**210**	**–**
Notes payable to subsidiaries	**31**	**–**	**–**	**(31)**	**–**
Cash provided by (used in) financing activities	**(3,952)**	**(492)**	**350**	**2,088**	**(2,006)**
Cash and short-term securities					
Increase (decrease) during the year	**(2,141)**	**(2,530)**	**(866)**	**–**	**(5,537)**
Effect of foreign exchange rate changes on cash and short-term securities	**3**	**1,056**	**1,043**	**–**	**2,102**
Balance, beginning of year	**2,260**	**5,918**	**12,259**	**–**	**20,437**
Balance, end of year	**122**	**4,444**	**12,436**	**–**	**17,002**
Cash and short-term securities					
Beginning of year					
Gross cash and short-term securities	**2,260**	**6,311**	**12,508**	**–**	**21,079**
Net payments in transit, included in other liabilities	**–**	**(393)**	**(249)**	**–**	**(642)**
Net cash and short-term securities, beginning of year	**2,260**	**5,918**	**12,259**	**–**	**20,437**
End of year					
Gross cash and short-term securities	**122**	**4,938**	**12,825**	**–**	**17,885**
Net payments in transit, included in other liabilities	**–**	**(494)**	**(389)**	**–**	**(883)**
Net cash and short-term securities, end of year	**$ 122**	**$ 4,444**	**$ 12,436**	**$ –**	**$ 17,002**
Supplemental disclosures on cash flow information:					
Interest received	**$ 11**	**$ 4,512**	**$ 5,422**	**$ (20)**	**$ 9,925**
Interest paid	**212**	**131**	**1,150**	**(407)**	**1,086**
Income taxes paid	**–**	**20**	**767**	**–**	**787**

Consolidating Statement of Cash Flows

For the year ended December 31, 2014	MFC (Guarantor)	JHUSA (Issuer)	Other subsidiaries	Consolidation adjustments	Consolidated MFC
Operating activities					
Net income (loss)	$ 3,501	$ 1,125	$ 4,094	$ (5,127)	$ 3,593
Adjustments for non-cash items in net income (loss)					
Equity in net income of unconsolidated subsidiaries	(3,399)	(603)	(1,125)	5,127	–
Increase (decrease) in insurance contract liabilities	–	13,102	11,083	–	24,185
Increase (decrease) in investment contract liabilities	–	53	12	–	65
(Increase) decrease in reinsurance assets	–	(5,461)	5,967	–	506
Amortization of (premium) discount on invested assets	–	4	(5)	–	(1)
Other amortization	3	99	360	–	462
Net realized and unrealized (gains) losses and impairment on assets	(56)	(9,497)	(7,759)	–	(17,312)
Deferred income tax expense (recovery)	38	710	(650)	–	98
Stock option expense	–	(2)	16	–	14
Cash provided by operating activities before undernoted items	87	(470)	11,993	–	11,610
Dividends from unconsolidated subsidiary	2,400	–	571	(2,971)	–
Changes in policy related and operating receivables and payables	113	2,969	(3,886)	–	(804)
Cash provided by (used in) operating activities	2,600	2,499	8,678	(2,971)	10,806
Investing activities					
Purchases and mortgage advances	–	(26,085)	(36,669)	–	(62,754)
Disposals and repayments	–	26,157	32,714	–	58,871
Changes in investment broker net receivables and payables	–	(54)	70	–	16
Investment in common shares of subsidiaries	(246)	–	–	246	–
Net cash decrease from purchase of subsidiaries and businesses	–	–	(199)	–	(199)
Capital contribution to unconsolidated subsidiaries	(361)	(40)	–	401	–
Return of capital from unconsolidated subsidiaries	–	79	–	(79)	–
Notes receivable from parent	–	–	171	(171)	–
Notes receivable from subsidiaries	73	3	–	(76)	–
Cash provided by (used in) investing activities	(534)	60	(3,913)	321	(4,066)
Financing activities					
Increase (decrease) in repurchase agreements and securities sold but not yet purchased	–	–	273	–	273
Redemption of long-term debt	(1,000)	–	–	–	(1,000)
Issue of capital instruments, net	–	–	995	–	995
Reinsurance treaty settlement	–	(39)	39	–	–
Funds borrowed (repaid), net	–	(2)	3	–	1
Changes in deposits from Bank clients, net	–	–	(1,526)	–	(1,526)
Shareholders' dividends paid in cash	(910)	–	–	–	(910)
(Distributions to) contributions from non-controlling interests, net	–	–	(59)	–	(59)
Common shares issued, net	43	–	246	(246)	43
Preferred shares issued, net	(16)	–	–	–	(16)
Dividends paid to parent	–	(571)	(2,400)	2,971	–
Issue of subscription receipts	2,220	–	–	–	2,220
Capital contributions by parent	–	–	401	(401)	–
Return of capital to parent	–	–	(79)	79	–
Notes payable to parent	–	–	(76)	76	–
Notes payable to subsidiaries	(171)	–	–	171	–
Cash provided by (used in) financing activities	166	(612)	(2,183)	2,650	21
Cash and short-term securities					
Increase (decrease) during the year	2,232	1,947	2,582	–	6,761
Effect of foreign exchange rate changes on cash and short-term securities	1	328	461	–	790
Balance, beginning of year	27	3,643	9,216	–	12,886
Balance, end of year	2,260	5,918	12,259	–	20,437
Cash and short-term securities					
Beginning of year					
Gross cash and short-term securities	28	4,091	9,511	–	13,630
Net payments in transit, included in other liabilities	(1)	(448)	(295)	–	(744)
Net cash and short-term securities, beginning of year	27	3,643	9,216	–	12,886
End of year					
Gross cash and short-term securities	2,260	6,311	12,508	–	21,079
Net payments in transit, included in other liabilities	–	(393)	(249)	–	(642)
Net cash and short-term securities, end of year	$ 2,260	$ 5,918	$ 12,259	$ –	$ 20,437
Supplemental disclosures on cash flow information:					
Interest received	$ 2	$ 4,060	$ 4,797	$ (25)	$ 8,834
Interest paid	265	127	1,432	(745)	1,079
Income taxes paid	–	213	541	–	754

Note 24 Comparatives

Certain comparative amounts have been reclassified to conform to the current year's presentation.

Additional Actuarial Disclosures

Source of Earnings

Manulife uses a Source of Earnings ("SOE") to identify the primary sources of gains or losses in each reporting period. It is one of the key tools the Company uses to understand and manage its business. The SOE is prepared following OSFI's regulatory guidelines, and in accordance with draft guidelines set out by the Canadian Institute of Actuaries ("CIA"). The SOE attributes each component of earnings to one of seven categories: expected profit from in-force business, the impact of new business, experience gains or losses (comparing actual to expected outcomes), the impact of management actions and changes in assumptions, earnings on surplus funds, other, and income taxes. In aggregate, these elements explain the $2,191 million of net income attributed to shareholders in 2015.

Each of these seven categories is described below:

Expected profit from in-force business represents the formula-driven release of Provisions for Adverse Deviation ("PfADs") on non-fee income insurance businesses, the expected net income on fee businesses, and the planned margins on one-year renewable businesses such as Group Benefits. PfADs are a requirement of the Canadian Actuarial Standards of Practice, and represent additional amounts held in excess of the expected cost of discharging policy obligations in order to provide a margin of conservatism. These amounts are released over time as the Company is released from the risks associated with the policy obligations. The increase in 2015 over 2014 was primarily due to favourable currency movement, the benefit of standardizing the methodology for attributing expected interest on assets supporting provisions for adverse deviation, the acquisition of Standard Life in Q1 2015 and higher fee income from wealth and asset management businesses due to higher assets under management.

For mutual fund and asset management businesses, all pre-tax income is reported in expected profit from in-force business except the non-capitalized acquisition expenses which are reported in "Impact of new business".

Impact of new business represents the financial impact of new business written in the period, including acquisition expenses. Writing new business creates economic value, which is offset by PfADs and other limits on capitalization of this economic value in actuarial liabilities. For businesses which do not have actuarial reserves, this represents the non-deferrable upfront cost of issuing the business. Consequently, the Company reported an overall loss in the Consolidated Statements of Income from new business in the first year. The new business loss in 2015 was lower than 2014, primarily due to higher insurance and other wealth volumes and improved product margins in Asia, partially offset by higher non-deferrable acquisition costs in wealth and asset management businesses due to higher sales.

Experience gains or losses arise from items such as claims, policy persistency, fee income, and expenses, where the actual experience in the current period differs from the expected results assumed in the insurance and investment contract liabilities. It also includes the experience gains or losses associated with actual investment returns and movements in investment markets differing from those expected on assets supporting insurance and investment contract liabilities. For the majority of businesses, the expected future investment returns underlying policy valuations are updated quarterly for investment market movements and this impact is also included in the experience gains and losses. This component also includes the impact of currency changes to the extent they are separately quantified. Experience gains do not include the impact of management actions or changes in assumptions during the reporting period, which are reported in "Management actions and changes in assumptions".

The experience losses in 2015 were primarily due to unfavourable investment-related experience on general fund liabilities driven by the impact of declines in commodity prices on our oil and gas related investments and unfavourable policyholder experience. The experience gains in 2014 were primarily driven by the favourable impact of interest rate movements and favourable investment-related experience on general fund liabilities.

Management actions and changes in assumptions reflect the income impact of changes to valuation methods and assumptions for insurance and investment contract liabilities and other management initiated actions in the year that are outside the normal course of business. All changes in the methods and assumptions impacting the insurance and investment contract liabilities are reported in the Corporate and Other ("Corporate") segment. The 2015 pre-tax shareholders' earnings impact of changes in methods and assumptions was a $590 million charge in 2015 and a $382 million charge in 2014. The major changes in methods and assumptions in 2015 included updates to lapse assumptions for JH Life Insurance products and a reduction to the margin for adverse deviations applied to the best estimate morbidity assumptions for certain medical insurance products in Japan, and a number of other refinements to both asset and liability cash flows. Note 8 of the Consolidated Financial Statements provides additional details of the changes in actuarial methods and assumptions.

Impacts from material management action items reported in the Corporate segment in 2015 included the expected cost of equity macro hedges. Impacts from material management action items reported in the Corporate segment in 2014 included the expected cost of equity macro hedges and losses from the sale of debt securities designated as available-for-sale ("AFS").

Management action items reported in business segments are primarily driven by specific business unit actions. Management action items in Canada in 2015 included integration and acquisition costs for the Standard Life acquisition. Management action items in the U.S. in 2015 included integration and acquisition costs for the New York Life RPS acquisition and Closed Block reinsurance transaction. Management action items in Canada in 2014 included the beneficial impact of reinsurance recaptures.

Earnings on surplus funds reflect the actual investment returns on assets supporting the Company's surplus (shareholders' equity). These assets comprise a diversified portfolio and returns will vary in harmony with the underlying asset categories.

Other represents pre-tax earnings items not included in any other line of the SOE, including the impact of non-controlling interests.

Income taxes represent tax charges to earnings based on the varying tax rates in the jurisdictions in which Manulife conducts business.

Manulife's net income attributed to shareholders for the full year 2015 decreased to $2,191 million from $3,501 million the previous year.

For the year ended December 31, 2015 (C$ millions)	Asia	Canadian	U.S.	Corporate and Other	Total
Expected profit on in-force business	**$ 1,062**	**$ 1,473**	**$ 2,043**	**$ 107**	**$ 4,685**
Impact of new business	**245**	**(168)**	**(136)**	**(43)**	**(102)**
Experience gains (losses)	**(176)**	**(741)**	**(411)**	**75**	**(1,253)**
Management actions and changes in assumptions	**(7)**	**(112)**	**(69)**	**(1,037)**	**(1,225)**
Earnings (loss) on surplus funds	**235**	**305**	**597**	**(721)**	**416**
Other	**(5)**	**10**	**(18)**	**11**	**(2)**
Income (loss) before income taxes	**1,354**	**767**	**2,006**	**(1,608)**	**2,519**
Income tax (expense) recovery	**(178)**	**(281)**	**(475)**	**606**	**(328)**
Net income (loss) attributed to shareholders	**$ 1,176**	**$ 486**	**$ 1,531**	**$ (1,002)**	**$ 2,191**

For the year ended December 31, 2014	Asia	Canadian	U.S.	Corporate and Other	Total
Expected profit on in-force business	$ 931	$ 1,161	$ 1,686	$ 31	$ 3,809
Impact of new business	(19)	(163)	(71)	(3)	(256)
Experience gains (losses)	222	40	869	(364)	767
Management actions and changes in assumptions	2	62	2	(687)	(621)
Earnings (loss) on surplus funds	213	261	512	(502)	484
Other	24	(57)	8	14	(11)
Income (loss) before income taxes	1,373	1,304	3,006	(1,511)	4,172
Income tax (expense) recovery	(126)	(301)	(859)	615	(671)
Net income (loss) attributed to shareholders	$ 1,247	$ 1,003	$ 2,147	$ (896)	$ 3,501

Embedded Value

The embedded value ("EV") as of December 31, 2015 will be disclosed with the first quarter of 2016 results.

Board of Directors

Current as at March 9, 2016

"Director Since" refers to the year of first election to the Board of Directors of The Manufacturers Life Insurance Company.

Richard B. DeWolfe
Chairman of the Board
Manulife Financial
Toronto, ON, Canada
Director Since: 2004

Donald A. Guloien
President and Chief Executive Officer
Manulife Financial
Toronto, ON, Canada
Director Since: 2009

Joseph P. Caron
President
Joseph Caron Incorporated
West Vancouver, BC, Canada
Director Since: 2010

John M. Cassaday
Corporate Director
Toronto, ON, Canada
Director Since: 1993

Susan F. Dabarno
Corporate Director
Bracebridge, ON, Canada
Director Since: 2013

Sheila S. Fraser
Corporate Director
Ottawa, ON, Canada
Director Since: 2011

Luther S. Helms
Managing Partner
Sonata Capital Group
Paradise Valley, AZ, U.S.A.
Director Since: 2007

Tsun-yan Hsieh
Chairman
Linhart Group Pte Ltd.
Singapore, Singapore
Director Since: 2011

P. Thomas Jenkins
Chairman of the Board
OpenText Corporation
Canmore, AB, Canada
Director Since: 2015

Pamela O. Kimmet
Chief Human Resources Officer
Coca-Cola Enterprises, Inc.
Atlanta, GA, U.S.A.
Director Since: 2016

Donald R. Lindsay
President and Chief Executive Officer
Teck Resources Limited
Vancouver, BC Canada
Director Since: 2010

John R.V. Palmer
Corporate Director
Toronto, ON, Canada
Director Since: 2009

C. James Prieur
Corporate Director
Chicago, IL, U.S.A.
Director Since: 2013

Andrea S. Rosen
Corporate Director
Toronto, ON, Canada
Director Since: 2011

Lesley D. Webster
President
Daniels Webster Capital Advisors
Naples, FL, U.S.A.
Director Since: 2012

Executive Committee

Current as of March 9, 2016

Donald A. Guloien
President and Chief Executive Officer

Craig R. Bromley
Senior Executive Vice President and General Manager, U.S. Division

Cindy L. Forbes
Executive Vice President and Chief Actuary

Gregory A. Framke
Executive Vice President, Chief Information Officer

Rocco (Roy) Gori
Senior Executive Vice President and General Manager, Asia

Marianne Harrison
Senior Executive Vice President and General Manager, Canadian Division

Scott S. Hartz
Executive Vice President, General Account Investments

Rahim Hirji
Executive Vice President and Chief Risk Officer

Stephani E. Kingsmill
Executive Vice President, Human Resources

Timothy W. Ramza
Executive Vice President and Chief Innovation Officer

Stephen B. Roder
Senior Executive Vice President and Chief Financial Officer

Paul L. Rooney
Senior Executive Vice President and Chief Operating Officer

Stephen P. Sigurdson
Executive Vice President and General Counsel

Kai R. Sotorp
Executive Vice President, Global Business Head, Wealth and Asset Management

Warren A. Thomson
Senior Executive Vice President and Chief Investment Officer

Office Listing

Corporate Headquarters

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Canadian Division

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Group Benefits
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Individual Insurance and Group Retirement Solutions
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1 800 809-3082 (U.S.A.)

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Canada
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Real Estate Division
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Hancock Natural Resource Group
99 High Street, 26th Floor
Boston, MA 02110-2320
U.S.A.
Tel: 617 747-1600

Glossary of Terms

Available-For-Sale (AFS) Financial Assets: Non-derivative financial assets that are designated as available-for-sale or that are not classified as loans and receivables, held-to-maturity investments, or held for trading.

Accumulated Other Comprehensive Income (AOCI): A separate component of shareholders' equity which includes net unrealized gains and losses on AFS securities, net unrealized gains and losses on derivative instruments designated within an effective cash flow hedge, and unrealized foreign currency translation gains and losses. These items have been recognized in other comprehensive income and may be subsequently reclassified to net income. AOCI also includes remeasurement of pension and other post-employment plans, which is recognized in other comprehensive income and will never be reclassified to net income.

Assets Under Management and Administration (AUMA): A 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.

Book Value per Share: Ratio obtained by dividing common shareholders' equity by the number of common shares outstanding at the end of the period.

Cash Flow Hedges: A hedge of the exposure to variability in cash flows associated with a recognized asset or liability, a forecasted transaction or a foreign currency risk in an unrecognized firm commitment that is attributable to a particular risk and could affect reported net income.

Constant Currency Basis: Amounts stated on a constant currency basis are calculated by applying the most recent quarter's exchange rates to all prior periods.

Core Earnings (Loss): A measure to help investors better understand the long-term earnings capacity and valuation of the business. Core earnings excludes the direct impact of equity markets and interest rates as well as a number of other items 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.

Deferred Acquisition Costs (DAC): Costs directly attributable to the acquisition of new business, principally agents' compensation, which are capitalized on the Company's Consolidated Statements of Financial Position and amortized into income over a specified period.

Embedded Value: A measure of shareholders' value embedded in the current balance sheet of the Company, excluding any value associated with future new business.

Guarantee Value: Typically within variable annuity products, the guarantee value refers to the level of the policyholder's protected account balance which is unaffected by market fluctuations.

Hedging: The practice of making an investment in a market or financial instrument for the purpose of offsetting or limiting potential losses from other investments or financial exposures.

> **Dynamic Hedging:** A hedging technique which seeks to limit an investment's market exposure by adjusting the hedge as the underlying security changes (hence, "dynamic").
>
> **Macro hedging:** An investment technique used to offset the risk of an entire portfolio of assets. A macro hedge reflects a more broad-brush approach which is not frequently adjusted to reflect market changes.

International Financial Reporting Standards (IFRS): Refers to the international accounting standards in Canada, effective January 1, 2011; this was a change from Canadian Generally Accepted Accounting Principles (CGAAP).

Impaired Assets: Mortgages, debt securities and other investment securities in default where there is no longer reasonable assurance of collection.

In-Force: Refers to the policies that are currently active.

Long-Term Care (LTC) Insurance: Insurance coverage available on an individual or group basis to provide reimbursement for medical and other services to the chronically ill, disabled, or mentally challenged.

Minimum Continuing Capital and Surplus Requirements (MCCSR): The ratio of the available capital of a life insurance company to its required capital, each as calculated under the Office of the Superintendent of Financial Institutions' (OSFI) published guidelines.

New Business Value (NBV): The change in shareholders' economic value as a result of sales in the 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.

New Business Strain: The initial expense of writing an insurance policy that is incurred when the policy is written, and has an immediate negative impact on the Company's financial position. Over the life of the contract, future income (premiums, investment income, etc.) is expected to repay this initial outlay.

Other than Temporary Impairment (OTTI): A write down that is made if the institution does not expect the fair value of the security to recover prior to its maturity or the expected time of sale.

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

Policyholder Experience: The actual cost in a reporting period from contingent events such as mortality, lapse and morbidity compared to the expected cost in that same reporting period using best estimate valuation assumptions.

Provisions for Adverse Deviation (PfAD): The amounts contained in the insurance and investment contract liabilities that represent conservatism against potential future deterioration of best estimate assumptions. These PfADs are released into income over time, and the release of these margins represents the future expected earnings stream.

Insurance and Investment Contract Liabilities: The amount of money set aside today, together with the expected future premiums and investment income, that will be sufficient to provide for future expected policyholder obligations and expenses while also providing some conservatism in the assumptions. Expected assumptions are reviewed and updated annually.

Return on Common Shareholders' Equity: A profitability measure that presents the net income available to common shareholders as a percentage of the average capital deployed to earn the income.

Sales, Gross Flows and Net Flows are measured according to product type:

> **Individual Insurance:** New annualized premiums reflect the annualized premiums expected in the first year of a policy that requires premium payments for more than one year. Sales are reported gross before the impact of reinsurance. Single premiums are weighted at 10% and consist of the lump sum premium from the sale of a single premium product, e.g. travel insurance.
>
> **Group Insurance:** Sales include new annualized premiums and ASO 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 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:** A 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.
>
> **Net Flows:** A measure for Manulife's WAM businesses and includes gross flows less redemptions for the Company's mutual funds, college savings 529 plans, group pension/retirement savings products, private wealth and institutional asset management products.

Total Capital: Capital funding that is both unsecured and permanent in nature. Comprises of total equity (excluding AOCI on cash flow hedges), liabilities for preferred shares, and capital instruments. For regulatory reporting purposes, the numbers are further adjusted for various additions or deductions to capital as mandated by the guidelines used by OSFI.

Universal Life Insurance: A form of permanent life insurance with flexible premiums. The customer may vary the premium payment and death benefit within certain restrictions. The contract is credited with a rate of interest based on the return of a portfolio of assets held by the Company, possibly with a minimum rate guarantee, which may be reset periodically at the discretion of the Company.

Variable Annuity: Funds are invested in segregated funds (also called separate accounts in the U.S.) and the return to the contract holder fluctuates according to the earnings of the underlying investments. In some instances, guarantees are provided.

Variable Universal Life Insurance: A form of permanent life insurance with flexible premiums in which the cash value and possibly the death benefit of the policy fluctuate according to the investment performance of segregated funds (or separate accounts).

Shareholder Information

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Toronto, ON M4W 1E5
Canada
Telephone 416 926-3000
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Web site: www.manulife.com

ANNUAL MEETING OF SHAREHOLDERS
Shareholders are invited to attend the annual meeting of Manulife Financial Corporation to be held on May 5, 2016 at 11:00 a.m. in the International Room at:
200 Bloor Street East,
Toronto, ON M4W 1E5
Canada

STOCK EXCHANGE LISTINGS
Manulife Financial Corporation's common shares are listed on:
Toronto Stock Exchange (MFC)
The New York Stock Exchange (MFC)
The Stock Exchange of Hong Kong (945)
Philippine Stock Exchange (MFC)

INVESTOR RELATIONS
Financial analysts, portfolio managers and other investors requiring financial information may contact our Investor Relations Department or access our Web site at www.manulife.com.
Fax: 416 926-6285
E-mail: investor_relations@manulife.com

SHAREHOLDER SERVICES
For information or assistance regarding your share account, including dividends, changes of address or ownership, lost certificates, to eliminate duplicate mailings or to receive shareholder material electronically, please contact our Transfer Agents in Canada, the United States, Hong Kong or the Philippines. If you live outside one of these countries please contact our Canadian Transfer Agent.

Direct Deposit of Dividends
Shareholders resident in Canada, the United States and Hong Kong may have their Manulife common share dividends deposited directly into their bank account. To arrange for this service please contact our Transfer Agents.

Dividend Reinvestment Program
Canadian and U.S. resident common shareholders may purchase additional common shares without incurring brokerage or administrative fees by reinvesting their cash dividend through participation in Manulife's Dividend Reinvestment and Share Purchase Programs. For more information please contact our stock transfer agents: in Canada – CST Trust Company; in the United States – Computershare Inc.

For other shareholder issues please contact Manulife's Shareholder Services department
Toll free (in North America):
1 800 795-9767, ext. 221022
Outside North America: 416 852-1022
Fax: 416 926-3503
E-mail: shareholder_services@manulife.com

More information
Information about Manulife Financial Corporation, including electronic versions of documents and share and dividend information is available online at ***www.manulife.com***

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AUDITORS
Ernst & Young LLP
Chartered Accountants
Licensed Public Accountants
Toronto, Canada

MFC DIVIDENDS

Common Share Dividends Paid for 2014 and 2015

	Record Date	Payment Date	Per Share Amount Canadian ($)
Year 2015			
Fourth Quarter	February 24, 2016	March 21, 2016	$ 0.185
Third Quarter	November 24, 2015	December 21, 2015	$ 0.17
Second Quarter	August 18, 2015	September 21, 2015	$ 0.17
First Quarter	May 20, 2015	June 19, 2015	$ 0.17
Year 2014			
Fourth Quarter	February 25,2015	March 19, 2015	$ 0.155
Third Quarter	November 25, 2014	December 19, 2014	$ 0.155
Second Quarter	August 19, 2014	September 19, 2014	$ 0.155
First Quarter	May 13, 2014	June 19, 2014	$ 0.13

Common and Preferred Share Dividend Dates in 2016*

* Dividends are not guaranteed and are subject to approval by the Board of Directors.

Record date	Payment date	
Common and Preferred Shares	Common Shares	Preferred Shares
February 24, 2016	March 21, 2016	March 19, 2016
May 17, 2016	June 20, 2016	June 19, 2016
August 16, 2016	September 19, 2016	September 19, 2016
November 22, 2016	December 19, 2016	December 19, 2016

About Manulife

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 approximately 34,000 employees, 63,000 agents, and thousands of distribution partners, serving 20 million customers. At the end of December 2015, we had $935 billion (US$676 billion) in assets under management and administration, and in the previous 12 months we paid our customers claims, cash surrender values, annuity payments and other benefits worth more than $24.6 billion. Our principal operations are in Asia, Canada and the United States where we have served customers for more than 100 years. With our global headquarters in Toronto, Canada, we trade as 'MFC' on the Toronto, New York, and the Philippine stock exchanges and under '945' in Hong Kong. Follow Manulife on Twitter @ManulifeNews or visit **www.manulife.com** or **www.johnhancock.com**.

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