

Manulife reports 1Q19 net income of \$2.2 billion and core earnings of \$1.5 billion with strong growth in Asia

Today, Manulife announced its 1Q19 results. Key highlights include:

- Net income attributed to shareholders of \$2.2 billion in 1Q19, up \$0.8 billion from 1Q18
- Core earnings¹ of \$1.5 billion in 1Q19, up 15%² from 1Q18
- Core ROE¹ of 14.2% in 1Q19 compared with 13.4% in 1Q18
- 2.1 percentage point improvement in our 1Q19 expense efficiency ratio1 to 49.9%
- NBV¹ of \$0.5 billion in 1Q19, up 31% from 1Q18
- APE sales¹ of \$1.7 billion in 1Q19, up 23% from 1Q18
- WAM net outflows¹ of \$1.3 billion in 1Q19 compared with net inflows of \$10.0 billion in 1Q18
- Strong LICAT ratio³ of 144%

"We delivered another quarter of strong core earnings and net income, both of which achieved solid double-digit growth over last year," said Manulife President & Chief Executive Officer Roy Gori. "New business value grew 31% with double-digit increases across all of our operating segments. And while net flows were negative, they improved significantly from the prior quarter."

"We continue to make progress in the execution of our digital customer-centric strategy, including the roll-out of our electronic claims systems in Asia, as well as an industry-first voice-enabled retirement product in the U.S.," added Mr. Gori.

Phil Witherington, Chief Financial Officer, said, "We continued to optimize our portfolio during the quarter, which included the cumulative release of over \$2 billion of capital from the sale of alternative long-duration assets, exceeding our target."

"Our efficiency initiatives are delivering bottom line benefits with expenses held at the same level as the prior year and our expense efficiency ratio improving to 49.9%. We are in a strong capital position and have redeemed debt in the quarter, contributing to the improvement in our leverage ratio to 27%," added Mr. Witherington.

BUSINESS HIGHLIGHTS:

We progressed our efforts to redefine insurance and how we interact with customers through our behavioural insurance offerings – Manulife and John Hancock Vitality in North America and ManulifeMOVE in Asia. Behavioural insurance is increasingly recognized as a differentiator as evident in our Customer Net Promoter Scores and number of enrollees.

In Asia, deployment and adoption of our electronic point of sale and claim systems are improving both the customer experience and our expense efficiency. New this quarter, in the U.S. we launched an industry-first voice-enabled retirement product on Amazon's Alexa.

¹ Core earnings, core return on common shareholders' equity ("core ROE"), expense efficiency ratio, annualized premium equivalent ("APE") sales, new business value ("NBV") and net flows are non-GAAP measures. See "Performance and non-GAAP measures" below and in our First Quarter 2019 Management's Discussion and Analysis ("1Q19 MD&A") for additional information.

² All percentage growth / declines in financial metrics in this news release are reported on a constant exchange rate basis. Constant exchange rate basis excludes the impact of currency fluctuations and is a non-GAAP measure. See "Performance and non-GAAP measures" below and in our 1Q19 MD&A for additional information.

³ Life Insurance Capital Adequacy Test ("LICAT") ratio of The Manufacturers Life Insurance Company ("MLI").

FINANCIAL HIGHLIGHTS:

| | Quarterly I | Result | s |
|---|-------------|--------|-------|
| (\$ millions, unless otherwise stated) | 1Q19 | | 1Q18 |
| Profitability: | | | |
| Net income attributed to shareholders | \$ 2,176 | \$ | 1,372 |
| Core earnings ⁽¹⁾ | \$ 1,548 | \$ | 1,303 |
| Diluted earnings per common share (\$) | \$ 1.08 | \$ | 0.67 |
| Diluted core earnings per common share (\$)(1) | \$ 0.76 | \$ | 0.64 |
| Return on common shareholders' equity ("ROE") | 20.1% | | 14.1% |
| Core ROE ⁽¹⁾ | 14.2% | | 13.4% |
| Expense efficiency ratio ⁽¹⁾ | 49.9% | | 52.0% |
| Growth: | | | |
| Asia new business value | \$ 411 | \$ | 325 |
| Canada new business value | \$ 62 | \$ | 49 |
| U.S. new business value | \$ 46 | \$ | 10 |
| Total new business value ⁽¹⁾ | \$ 519 | \$ | 384 |
| Asia APE sales | \$ 1,336 | \$ | 984 |
| Canada APE sales | \$ 261 | \$ | 290 |
| U.S. APE sales | \$ 143 | \$ | 113 |
| Total APE sales ⁽¹⁾ | \$ 1,740 | \$ | 1,387 |
| Wealth and asset management net flows (\$ billions)(1) | \$ (1.3) | \$ | 10.0 |
| Wealth and asset management gross flows (\$ billions)(1) | \$ 27.9 | \$ | 36.5 |
| Wealth and asset management assets under management and administration (\$ billions)(1) | \$ 648.1 | \$ | 626.8 |
| Financial Strength: | | | |
| MLI's LICAT ratio | 144% | | 129% |
| Financial leverage ratio | 27.0% | | 29.7% |
| Book value per common share (\$) | \$ 22.34 | \$ | 19.72 |
| Book value per common share excluding AOCI (\$) | \$ 19.06 | \$ | 17.28 |

⁽¹⁾ This item is a non-GAAP measure. See "Performance and non-GAAP measures" below and in our 1Q19 MD&A for additional information.

Reported net income attributed to shareholders of \$2.2 billion in 1Q19, up \$0.8 billion from 1Q18

The increase compared with 1Q18 was driven by higher gains from investment-related experience and from the direct impact of markets, and core earnings growth. Investment-related experience in 1Q19 reflected higher-than-expected returns (including fair value changes) on ALDA and strong credit experience. Gains related to the direct impact of markets were driven by a recovery in global equity markets, partially offset by the impact of narrowing corporate spreads.

Achieved core earnings of \$1.5 billion in 1Q19, an increase of 15% compared with 1Q18

The increase compared with 1Q18 was driven by the favourable impact of new business in Asia and the U.S., higher investment income in our surplus portfolio, including the favourable impact of equity markets on seed money investments¹, and improved expense efficiency. These increases were partially offset by both the impact of reinsurance transactions in 2018 and the sale of ALDA to improve the capital efficiency of our legacy businesses. Core earnings in 1Q19 included net policyholder experience gains of \$20 million post-tax compared with charges of \$3 million post-tax in 1Q18.

¹ Seed money investments include investments in new segregated and mutual funds.

BUSINESS GROWTH:

Achieved new business value ("NBV") of \$519 million in 1Q19, an increase of 31% compared with 1Q18 In Asia, NBV increased 23% to \$411 million driven by higher sales, partially offset by a less favourable business mix. In Canada, NBV increased 27% to \$62 million driven by the new Manulife Par product. In the U.S., NBV more than quadrupled

to \$46 million, primarily due to actions to improve margins and a more favourable product mix.

Reported annualized premium equivalent ("APE") sales of \$1.7 billion in 1Q19, an increase of 23% compared with 1Q18

In Asia, APE sales increased 32%, with growth across Japan, Hong Kong and Asia Other¹. APE sales in Japan increased 62%, driven by strong sales of the COLI product in advance of a potential change in tax regulations. Hong Kong sales increased 11%, driven by growth in our bancassurance channel. Asia Other APE sales increased 20% driven by growth in both the bancassurance and agency channels. In Canada, APE sales declined 10% due to lower large-case group insurance sales, partially offset by the continued success of our Manulife Par product. In the U.S., APE sales increased 20% as a result of higher universal life and international sales.

Reported negative Global Wealth and Asset Management net flows of \$1.3 billion in 1Q19 compared with positive net flows of \$10.0 billion in 1Q18

Net flows in Asia were \$0.6 billion in 1Q19, down \$1.4 billion from 1Q18, driven by lower gross flows in institutional asset management. Net flows in Canada were \$2.1 billion in 1Q19, a decrease of \$1.4 billion from 1Q18, which was also driven by lower gross flows in institutional asset management. Net flows in the U.S. were negative \$4.0 billion in 1Q19 compared with positive net flows of \$4.5 billion in 1Q18. This was primarily due to lower gross flows in retail and institutional asset management. Additionally, we reported higher redemptions, partly due to the rationalization of our investment management teams, designed to improve margins and to focus our line-up on our core capabilities where we can generate further scale, as well as portfolio rebalancing by a large advisor.

¹ Asia Other excludes Japan and Hong Kong.

MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis ("MD&A") is current as of May 1, 2019, unless otherwise noted. This MD&A should be read in conjunction with our unaudited Interim Consolidated Financial Statements for the three months ended March 31, 2019 and the MD&A and audited Consolidated Financial Statements contained in our 2018 Annual Report.

For further information relating to our risk management practices and risk factors affecting the Company, see "Risk Factors" in our 2018 Annual Information Form, "Risk Management", "Risk Factors" and "Critical Actuarial and Accounting Policies" in the MD&A in our 2018 Annual Report and the "Risk Management" note to the Consolidated Financial Statements in our most recent annual and interim reports.

In this MD&A, the terms "Company", "Manulife", "we" and "our" mean Manulife Financial Corporation ("MFC") and its subsidiaries. All amounts are reported in Canadian dollars, unless otherwise indicated.

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A TOTAL COMPANY PERFORMANCE

A1 Profitability

| Profitability Q | | | Quarterly Results | | | | | |
|--|----|-------|-------------------|-------|----|-------|--|--|
| _ (\$ millions, unless otherwise stated) | | 1Q19 | | 4Q18 | | 1Q18 | | |
| Net income attributed to shareholders | \$ | 2,176 | \$ | 593 | \$ | 1,372 | | |
| Core earnings ⁽¹⁾ | \$ | 1,548 | \$ | 1,337 | \$ | 1,303 | | |
| Diluted earnings per common share (\$) | \$ | 1.08 | \$ | 0.28 | \$ | 0.67 | | |
| Diluted core earnings per common share (\$)(1) | \$ | 0.76 | \$ | 0.65 | \$ | 0.64 | | |
| Return on common shareholders' equity ("ROE") | | 20.1% | | 5.3% | | 14.1% | | |
| Core ROE(1) | | 14.2% | | 12.5% | | 13.4% | | |
| Expense efficiency ratio ⁽¹⁾ | | 49.9% | | 55.2% | | 52.0% | | |

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

Manulife's net income attributed to shareholders was \$2,176 million in the first quarter of 2019 ("1Q19") compared with \$1,372 million in the first quarter of 2018 ("1Q18"). The increase compared with 1Q18 was driven by higher gains from investment-related experience and from the direct impact of markets, and core earnings¹ growth. 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 \$1,548 million in 1Q19 compared with \$1,303 million in 1Q18, and items excluded from core earnings, which amounted to a net gain of \$628 million in 1Q19 compared with a net gain of \$69 million in 1Q18.

Diluted earnings per common share were \$1.08 and return on common shareholders' equity ("ROE") was 20.1%, compared with \$0.67 and 14.1%, respectively, for 1Q18. Diluted core earnings per common share¹ were \$0.76 and core return on common shareholders' equity ("core ROE")¹ was 14.2%, compared with \$0.64 and 13.4%, respectively, for 1Q18.

The \$245 million or 15%² increase in core earnings was driven by the favourable impact of new business in Asia and the U.S., higher investment income in our surplus portfolio, including the favourable impact of equity markets on seed money investments in new segregated and mutual funds, and improved expense efficiency¹. These increases were partially offset by both the impact of reinsurance transactions in 2018 and the sale of alternative long-duration assets ("ALDA") to improve the capital efficiency of our legacy businesses. Core earnings in 1Q19 included net policyholder experience gains of \$20 million post-tax (\$18 million pre-tax) compared with charges of \$3 million post-tax (\$2 million pre-tax) in 1Q18.

| Core Earnings by Segment ⁽¹⁾ | Quarterly Results | | | | | | | |
|---|-----------------------|----|-------|----|-------|--|--|--|
| (\$ millions, unaudited) | 1Q19 | | 4Q18 | | 1Q18 | | | |
| Asia | \$ 520 | \$ | 463 | \$ | 431 | | | |
| Canada | 283 | | 305 | | 283 | | | |
| U.S. | 475 | | 454 | | 422 | | | |
| Global Wealth and Asset Management | 233 | | 231 | | 227 | | | |
| Corporate and Other (excluding core investment gains) | (63) | | (216) | | (156) | | | |
| Core investment gains ⁽²⁾ | 100 | | 100 | | 96 | | | |
| Total core earnings | \$ 1,548 | \$ | 1,337 | \$ | 1,303 | | | |

^{(1) 2018} comparatives for core earnings in each segment have been updated to reflect the 2019 methodology for allocating capital and interest on surplus to our insurance segments from the Corporate and Other segment.

⁽²⁾ This item is a non-GAAP measure. See "Performance and non-GAAP measures" below.

¹ This item is a non-GAAP measure. See "Performance and non-GAAP measures" below.

² Percentage growth / declines in core earnings, APE sales, gross flows, NBV, assets under management and administration, assets under management and core EBITDA are stated on a constant exchange rate basis. Constant exchange rate basis is a non-GAAP measure. See "Performance and non-GAAP measures" below.

Items excluded from core earnings were \$628 million in 1Q19 compared with \$69 million in 1Q18.

| ems excluded from core earnings | | Q | uarter | ly Results | 3 | |
|--|----|-------|--------|------------|----|-------|
| (\$ millions, unaudited) | | 1Q19 | | 4Q18 | | 1Q18 |
| Investment-related experience outside of core earnings ⁽¹⁾ | \$ | 327 | \$ | (130) | \$ | - |
| Direct impact of equity markets and interest rates and variable annuity guarantee liabilities(2) | | 249 | | (675) | | 50 |
| Direct impact of equity markets and variable annuity guarantee liabilities | | 367 | | (723) | | (187) |
| Fixed income reinvestment rates assumed in the valuation of policy liabilities | | (160) | | 112 | | 313 |
| Sale of AFS bonds and derivative positions in the Corporate and Other segment | | 42 | | (64) | | (76) |
| Restructuring charge | | - | | (63) | | - |
| Reinsurance transactions and other ⁽³⁾ | | 52 | | 124 | | 19 |
| Items excluded from core earnings | \$ | 628 | \$ | (744) | \$ | 69 |

⁽¹⁾ Investment-related experience gains in 1Q19 reflected higher-than-expected returns (including fair value changes) on ALDA and strong credit experience. Investment-related experience gains in 1Q18 reflected the favourable impact of fixed income reinvestment activities on the measurement of our policy liabilities and strong credit experience, partially offset by lower than expected returns (including fair value changes) on ALDA. Total investment-related experience gains in 1Q19 were \$427 million, compared with \$96 million in 1Q18, and in accordance with our definition of core earnings, we included \$100 million of investment-related experience gains in core earnings and \$327 million in items excluded from core earnings in 1Q19 (\$96 million and \$nil, respectively, in 1Q18).

A2 Growth

| Growth ⁽¹⁾ | Quarterly Results | | | | |
|--|-----------------------|----|-------|----|-------|
| (\$ millions, unaudited) | 1Q19 | | 4Q18 | | 1Q18 |
| Asia APE sales | \$ 1,336 | \$ | 1,040 | \$ | 984 |
| Canada APE sales | \$ 261 | \$ | 277 | \$ | 290 |
| U.S. APE sales | \$ 143 | \$ | 152 | \$ | 113 |
| Total APE sales | \$ 1,740 | \$ | 1,469 | \$ | 1,387 |
| Asia new business value | \$ 411 | \$ | 402 | \$ | 325 |
| Canada new business value | \$ 62 | \$ | 51 | \$ | 49 |
| U.S. new business value | \$ 46 | \$ | 48 | \$ | 10 |
| Total new business value | \$ 519 | \$ | 501 | \$ | 384 |
| Wealth and asset management gross flows (\$ billions) | \$ 27.9 | \$ | 26.3 | \$ | 36.5 |
| Wealth and asset management net flows (\$ billions) | \$ (1.3) | \$ | (9.0) | \$ | 10.0 |
| Wealth and asset management assets under management and administration (\$ billions) | \$ 648.1 | \$ | 608.8 | \$ | 626.8 |

⁽¹⁾ These items are non-GAAP measures. See "Performance and non-GAAP measures" below.

Annualized premium equivalent ("APE") sales¹ were \$1.7 billion in 1Q19, an increase of 23% compared with 1Q18. In Asia, APE sales increased 32%, with growth across Japan, Hong Kong and Asia Other². APE sales in Japan increased 62%, driven by strong sales of the corporate-owned life insurance ("COLI") product in advance of a potential change in tax regulations. Hong Kong sales increased 11%, driven by growth in our bancassurance channel. Asia Other APE sales increased 20% driven by growth in both the bancassurance and agency channels. In Canada, APE sales declined 10% due to lower large-case group insurance sales, partially offset by the continued success of our Manulife Par product. In the U.S., APE sales increased 20% as a result of higher universal life and international sales.

New business value ("NBV")¹ was \$519 million in 1Q19, an increase of 31% compared with 1Q18. In Asia, NBV increased 23% to \$411 million driven by higher sales, partially offset by a less favourable business mix. In Canada, NBV increased 27% to \$62 million driven by the new Manulife Par product. In the U.S., NBV more than quadrupled to \$46 million primarily due to actions to improve margins and a more favourable product mix.

⁽²⁾ The direct impact of markets was a net gain of \$249 million in 1Q19 reflecting the favourable impact of the recovery in global equity markets partially offset by the unfavourable impact of interest rates in the quarter, primarily from the narrowing corporate spreads. The direct impact of markets was a net gain of \$50 million in 1Q18 primarily due to widening corporate spreads and a rising and flattening of the yield curve in the U.S., partially offset by charges from unfavourable equity markets and the sale of available-for-sale ("AFS") bonds.

⁽³⁾ The \$52 million gain from reinsurance transactions and other in 1Q19 is related to reinsurance transactions in our legacy business in Canada and the U.S.

¹ This item is a non-GAAP measure. See "Performance and non-GAAP measures" below.

² Asia Other excludes Japan and Hong Kong.

Wealth and asset management ("WAM") gross flows¹ were \$27.9 billion in 1Q19, 26% lower than 1Q18, driven by lower institutional asset management and retail gross flows across all regions, partially offset by higher retirement gross flows in Canada from new plan sales and recurring contributions. In institutional asset management, lower gross flows were primarily due to the funding of large mandates in all regions in 1Q18. In retail, we experienced lower gross flows amid ongoing market volatility compared to strong 1Q18 results.

Wealth and asset management net flows¹ were negative \$1.3 billion in 1Q19 compared with positive net flows of \$10.0 billion in 1Q18. Net flows in Asia were \$0.6 billion in 1Q19, down \$1.4 billion from 1Q18, driven by lower gross flows in institutional asset management. Net flows in Canada were \$2.1 billion in 1Q19, a decrease of \$1.4 billion from 1Q18, which was also driven by lower gross flows in institutional asset management. Net flows in the U.S. were negative \$4.0 billion in 1Q19 compared with positive net flows of \$4.5 billion in 1Q18. This was primarily due to lower gross flows in retail and institutional asset management. Additionally, we reported higher redemptions, partly due to the rationalization of our investment management teams, designed to improve margins and to focus our line-up on our core capabilities where we can generate further scale, as well as portfolio rebalancing by a large advisor.

A3 Financial strength

| Financial strength | | Qua | rterly Resul | lts | 1Q18 129% 29.7% 52.5 | | | | |
|---|-------|-------|--------------|-----|-------------------------------|--|--|--|--|
| (unaudited) | 10 | 19 | 4Q18 | | 1Q18 | | | | |
| MLI's LICAT ratio | 14 | % | 143% | | 129% | | | | |
| Financial leverage ratio | 27.0 | % | 28.6% | | 29.7% | | | | |
| Total consolidated capital (\$ billions) ⁽¹⁾ | \$ 5 | .3 \$ | 56.0 | \$ | 52.5 | | | | |
| Book value per common share (\$) | \$ 22 | 34 \$ | 21.38 | \$ | 19.72 | | | | |
| Book value per common share excluding AOCI (\$) | \$ 19 | 06 \$ | 18.23 | \$ | 17.28 | | | | |

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

The Life Insurance Capital Adequacy Test ("LICAT") for The Manufacturers Life Insurance Company ("MLI") as at March 31, 2019 was 144%, compared with 129% as at March 31, 2018 and 143% as at December 31, 2018. The 1 percentage point increase compared with December 31, 2018 was primarily due to strong earnings and capital initiatives, which more than offset the impact of dividends and the redemption of subordinated debentures. Market impact overall was neutral, with a favourable reduction in risk-free rates and growth in equity markets, offset by a narrowing of corporate spreads.

In 1Q19, we entered into a reinsurance agreement in Canada and completed a previously-announced reinsurance transaction in the U.S., releasing \$85 million in capital. In addition, we released \$250 million in capital from the sale of ALDA as part of our decision announced in December 2017 to free up approximately \$2 billion in capital over 12-18 months. We have now exceeded our target, and have cumulatively released \$2.1 billion in capital from the program.

MFC's LICAT ratio was 133% as at March 31, 2019 compared with 132% as at December 31, 2018. The difference between the MLI and MFC ratios as at March 31, 2019 was largely due to the \$4.7 billion of MFC senior debt outstanding that does not gualify as available capital at the MFC level.

MFC's financial leverage ratio as at March 31, 2019 was 27.0%, a decrease of 1.6 percentage points from the December 31, 2018 ratio of 28.6%, as growth in retained earnings, the redemption of \$0.5 billion in subordinated debentures and the impact of lower interest rates on unrealized gains on AFS securities, more than offset the impact of a stronger Canadian dollar.

MFC's total consolidated capital¹ as at March 31, 2019 was \$57.3 billion, an increase of \$4.8 billion compared with March 31, 2018 consolidated capital of \$52.5 billion and an increase of \$1.3 billion compared with December 31, 2018 consolidated capital of \$56.0 billion. The increase from December 31, 2018 was primarily driven by net income attributed to shareholders over the last 3 months and an increase in the market value of AFS securities, partially offset by the impact of changes in foreign currency exchange rates as well as the redemption of subordinated debentures of \$0.5 billion and dividend payments over the last 3 months.

Book value per common share as at March 31, 2019 was \$22.34, an increase of 4% compared with \$21.38 as at December 31, 2018, and the book value per common share excluding accumulated other comprehensive income ("AOCI") was \$19.06 as at March 31, 2019, an increase of 5% compared with \$18.23 as at December 31, 2018. The increase in the book value per common share is due to the \$1.8 billion increase in equity which included a \$0.3 billion increase in AOCI.

¹ This item is a non-GAAP measure. See "Performance and non-GAAP measures" below.

The number of common shares outstanding was 1,970 million as at March 31, 2019 and 1,971 million as at December 31, 2018.

A4 Revenue

| (| S | | | |
|--------------|--|---|---|---|
| 1Q19 | | 4Q18 | | 1Q18 |
| \$ 10,187 | \$ | 9,990 | \$ | 9,466 |
| (1,873) | | (8,158) | | (1,141) |
| 8,314 | | 1,832 | | 8,325 |
| 3,747 | | 3,278 | | 3,235 |
| 2,562 | | 2,291 | | 2,502 |
| 14,623 | | 7,401 | | 14,062 |
| 8,926 | | 1,113 | | (5,316) |
| \$ 23,549 | \$ | 8,514 | \$ | 8,746 |
| \$ | 1Q19 \$ 10,187 (1,873) 8,314 3,747 2,562 14,623 8,926 | 1Q19 \$ 10,187 \$ (1,873) 8,314 3,747 2,562 14,623 8,926 | 1Q19 4Q18 \$ 10,187 \$ 9,990 (1,873) (8,158) 8,314 1,832 3,747 3,278 2,562 2,291 14,623 7,401 8,926 1,113 | \$ 10,187 \$ 9,990 \$ (1,873) (8,158) 8,314 1,832 3,747 3,278 2,562 2,291 14,623 7,401 8,926 1,113 |

Total revenue in 1Q19 was \$23.5 billion compared with \$8.7 billion in 1Q18. The amount of revenue reported in any fiscal period can be significantly affected by fair value accounting, which can materially impact the reported realized and unrealized gains or losses on assets supporting insurance and investment contract liabilities and on the macro hedge program, a component of revenue (see "Impact of fair value accounting" below). Accordingly, we discuss specific drivers of revenue in each segment before realized and unrealized investment gains and losses in section B "Performance by Segment" below.

1Q19 revenue before realized and unrealized investment gains and losses of \$14.6 billion increased \$0.6 billion compared with 1Q18, primarily due to business growth in Asia and higher investment income, partially offset by higher ceded premiums of \$0.7 billion from the 1Q19 reinsurance transactions related to our legacy businesses.

Net realized and unrealized gains and losses on assets supporting insurance and investment contract liabilities and on the macro hedge program was a gain of \$8.9 billion in 1Q19 compared with a charge of \$5.3 billion in 1Q18. The 1Q19 gain was primarily due to an overall decrease in interest rates and rising equity markets. The 1Q18 charge was due to an overall increase in interest rates.

A5 Assets under management and administration ("AUMA")¹

AUMA as at March 31, 2019 was \$1.1 trillion, an increase of 6% compared with December 31, 2018. The primary driver of the increase was the favourable impact of markets during the quarter.

A6 Impact of fair value accounting

Fair value accounting policies affect the measurement of both our assets and our liabilities. The impact on the measurement of both assets and liabilities of investment activities and market movements are reported as experience gains and losses on investments and the direct impact of equity markets and interest rates and variable annuity guarantees, each of which impacts net income attributed to shareholders (see "Profitability" section above for discussion of 1Q19 experience).

Net realized and unrealized gains on assets supporting insurance and investment contract liabilities and on the macro hedge program were \$8.9 billion for 1Q19 (1Q18 – losses of \$5.3 billion). See "Revenue" section above for discussion of results.

As outlined in the "Critical Actuarial and Accounting Policies" in the MD&A in our 2018 Annual Report, net insurance contract liabilities as permitted under IFRS 4 are determined using the Canadian Asset Liability Method ("CALM"), as required by the Canadian Institute of Actuaries ("CIA"). 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 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 policies will result in an investment-related experience gain (loss). See description of investment-related experience in "Performance and non-GAAP measures" below.

¹ This item is a non-GAAP measure. See "Performance and non-GAAP measures" below.

As noted in our 2018 Annual MD&A, IFRS 17, which is expected to be effective January 1, 2022, will replace IFRS 4 and therefore CALM. While there are many differences between IFRS 17 and IFRS 4, two items of note are the discount rate used to estimate the present value of insurance liabilities, and the reporting of new business gains. We reported \$225 million (post-tax) of new business gains in net income attributed to shareholders in 1Q19. Under IFRS 17, new business gains are recorded on the balance sheet and amortized into income as services are provided.

A7 Impact of foreign currency exchange rates

Changes in foreign currency exchange rates increased core earnings by \$54 million in 1Q19 compared with 1Q18 primarily due to a weaker Canadian dollar compared with the U.S. dollar. The impact of foreign currency exchange rates on items excluded from core earnings does not provide relevant information given the nature of these items.

A8 Business highlights

We progressed our efforts to redefine insurance and how we interact with customers through our behavioural insurance offerings – Manulife and John Hancock Vitality in North America and ManulifeMOVE in Asia. Behavioural insurance is increasingly recognized as a differentiator as evident in our Customer Net Promoter Scores and number of enrollees.

In Asia, deployment and adoption of our electronic point of sale and claim systems are improving both the customer experience and our expense efficiency. New this quarter, in the U.S. we launched an industry-first voice-enabled retirement product on Amazon's Alexa.

A9 Updates to the ultimate reinvestment rate

The Canadian Actuarial Standards Board issued an exposure draft on new assumptions with reductions to the Ultimate Reinvestment Rate ("URR") and updates to the calibration criteria for stochastic risk-free rates. The exposure draft recommends a reduction of 15 basis points in the URR, and a corresponding change to stochastic risk-free rate modeling. We expect the final standard to be issued in the third quarter of 2019, and assuming the changes are in accordance with the exposure draft, would reduce net income attributed to shareholders by approximately \$0.5 billion (post-tax).

B PERFORMANCE BY SEGMENT

B1 Asia

| (\$ millions, unless otherwise stated) | Quarterly Results | | | | | |
|---|-------------------|-------|------|-------|------|-------|
| Canadian dollars | | 1Q19 | | 4Q18 | | 1Q18 |
| Net income attributed to shareholders ⁽¹⁾ | \$ | 695 | \$ | 318 | \$ | 452 |
| Core earnings(1),(2) | | 520 | | 463 | | 431 |
| Annualized premium equivalent sales | | 1,336 | | 1,040 | | 984 |
| Revenue | | 8,752 | | 5,301 | | 4,311 |
| Revenue before realized and unrealized investment gains and losses ⁽³⁾ | | 6,061 | | 5,472 | | 5,271 |
| Assets under management (\$ billions) ⁽¹⁾ | | 111.0 | | 108.1 | | 97.5 |
| U.S. dollars | | | | | | |
| Net income attributed to shareholders ⁽¹⁾ | US\$ | 522 | US\$ | 240 | US\$ | 359 |
| Core earnings(1),(2) | | 391 | | 350 | | 342 |
| Annualized premium equivalent sales | | 1,005 | | 787 | | 778 |
| Revenue | | 6,584 | | 4,012 | | 3,409 |
| Revenue before realized and unrealized investment gains and losses ⁽³⁾ | | 4,560 | | 4,141 | | 4,168 |
| Assets under management (\$ billions) ⁽¹⁾ | | 83.0 | | 79.3 | | 75.6 |

⁽¹⁾ The 2018 comparatives for net income attributed to shareholders, core earnings and assets under management have been updated to reflect the 2019 methodology for allocating capital and interest on surplus to our insurance segments from the Corporate and Other segment.

Asia's net income attributed to shareholders was \$695 million in 1Q19 compared with \$452 million in 1Q18. Net income attributed to shareholders is comprised of core earnings, which was \$520 million in 1Q19 compared with \$431 million in 1Q18, and items excluded from core earnings, which amounted to a net gain of \$175 million in 1Q19 compared with a net gain of \$21 million in 1Q18. The changes in net income attributed to shareholders and core earnings expressed in Canadian dollars are due to the factors described below and, in addition, core earnings reflected a net \$22 million favourable impact due to changes in foreign currency exchange rates versus the Canadian dollar.

⁽²⁾ See "Performance and non-GAAP measures" for a reconciliation between IFRS net income attributed to shareholders and core earnings.

⁽³⁾ See section A6 "Impact of fair value accounting".

¹ See "Caution regarding forward-looking statements" above.

Expressed in U.S. dollars, the presentation currency of the segment, net income attributed to shareholders was US\$522 million in 1Q19 compared with US\$359 million in 1Q18 and core earnings were US\$391 million in 1Q19 compared with US\$342 million in 1Q18. Items excluded from core earnings were a net gain of US\$131 million in 1Q19 compared with a net gain of US\$17 million in 1Q18 (see a reconciliation of net income attributed to shareholders to core earnings in "Performance and non-GAAP measures" below).

Core earnings in 1Q19 increased 17% compared with 1Q18. The increase in core earnings was driven by the growth in new business which included strong sales of the COLI product in advance of a potential change in Japan's tax regulations.

APE sales in 1Q19 exceeded US\$1 billion for the first time, an increase of 32% compared with 1Q18 driven by growth in Japan, Hong Kong and Asia Other. NBV in 1Q19 was US\$309 million, a 23% increase compared with 1Q18, reflecting growth in Japan, Hong Kong and Asia Other. New business value margin ("NBV margin")¹ was 33.6% in 1Q19 compared with 35.9% in 1Q18.

- Japan APE sales in 1Q19 were US\$409 million, an increase of 62% compared with 1Q18 driven by strong sales of
 the COLI product reflecting an increase in customer purchases in anticipation of a potential change in tax
 regulations. We have temporarily suspended sales of our COLI product offering until the tax changes are clarified.
 Japan NBV in 1Q19 of US\$115 million increased 57% compared with 1Q18 due to higher sales volumes. Japan
 NBV margin was 28.2%, a decrease of 0.8 percentage points compared with 1Q18.
- Hong Kong APE sales in 1Q19 were US\$165 million, an 11% increase compared with 1Q18 driven by strong
 growth through our bank channel. Hong Kong NBV in 1Q19 of US\$98 million increased 7% compared with 1Q18,
 due to higher sales partially offset by a decline in interest rates. Hong Kong NBV margin was 59.5%, a decrease of
 2.3 percentage points compared with 1Q18.
- Asia Other APE sales in 1Q19 were US\$431 million, a 20% increase compared with 1Q18 driven by double-digit
 growth in both bancassurance and agency channels. Asia Other NBV in 1Q19 of US\$96 million increased 10%
 compared with 1Q18 due to higher sales, partially offset by the impact of changes in product mix. Asia Other NBV
 margin was 27.6%, a decrease of 1.5 percentage points compared with 1Q18.

Revenue was US\$6.6 billion in 1Q19 compared with US\$3.4 billion in 1Q18. Revenue before realized and unrealized investment gains and losses, was US\$4.6 billion in 1Q19, an increase of 9% compared with 1Q18, driven by recurring premium growth from in-force business and higher new business premiums.

Assets under management¹ were US\$83.0 billion as at March 31, 2019, an increase of US\$3.7 billion or 5% compared with December 31, 2018, driven by net customer inflows of US\$2.6 billion and an increase in the fair value of invested assets due to lower interest rates.

Business highlights - In 1Q19, we launched a full suite of tax-deductible insurance solutions tailored to enhance the health, well-being and retirement preparedness of Hong Kong people, under the Hong Kong Voluntary Health Insurance plans. In addition, we launched Manulife Financial Advisors Company, a wholly-owned independent agency in Japan, that will distribute Manulife insurance solutions as well as select products from other insurance providers.

B2 Canada

| | | zuarte | ny Results | suits | | | | | |
|--|-----------|--------|------------|-------|-------|--|--|--|--|
| (\$ millions, unless otherwise stated) | 1Q19 | | 4Q18 | | 1Q18 | | | | |
| Net income (loss) attributed to shareholders ⁽¹⁾ | \$ 751 | \$ | (74) | \$ | 452 | | | | |
| Core earnings ^{(1),(2)} | 283 | | 305 | | 283 | | | | |
| Annualized premium equivalent sales | 261 | | 277 | | 290 | | | | |
| Manulife Bank average net lending assets (\$ billions) | 21.7 | | 21.5 | | 20.6 | | | | |
| Revenue | 7,090 | | 3,830 | | 3,184 | | | | |
| Revenue before realized and unrealized investment income gains and losses ⁽³⁾ | 3,766 | | 3,546 | | 3,572 | | | | |
| Assets under management (\$ billions) ⁽¹⁾ | 146.6 | | 141.9 | | 143.4 | | | | |

⁽¹⁾ The 2018 comparatives for net income (loss) attributed to shareholders, core earnings and assets under management have been updated to reflect the 2019 methodology for allocating capital and interest on surplus to our insurance segments from the Corporate and Other segment.

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⁽²⁾ See "Performance and non-GAAP measures" below for a reconciliation between IFRS net income attributed to shareholders and core earnings.

⁽³⁾ See section A6 "Impact of fair value accounting".

¹ This item is a non-GAAP measure. See "Performance and non-GAAP measures" below.

Canada's 1Q19 net income attributed to shareholders was \$751 million compared with \$452 million in 1Q18. Net income attributed to shareholders is comprised of core earnings, which were \$283 million in 1Q19, in line with 1Q18, and items excluded from core earnings, which were a net gain of \$468 million in 1Q19 compared with a net gain of \$169 million in 1Q18 (see a reconciliation of net income attributed to shareholders to core earnings in "Performance and non-GAAP measures" below).

Core earnings were in line with 1Q18, reflecting the favourable impact of new business in individual insurance from sales of the Manulife Par product, offset by lower earnings as a result of reinsurance actions taken last year to free up capital on our legacy businesses and a number of other smaller items.

APE sales of \$261 million in 1Q19 decreased by \$29 million or 10% compared with 1Q18, driven by variability in the large-case group insurance market and lower annuities sales, partially offset by the introduction of Manulife Par.

- Individual insurance APE sales in 1Q19 of \$78 million increased \$24 million or 44% compared with 1Q18, driven by the introduction of Manulife Par in the second half of last year.
- Group insurance APE sales in 1Q19 of \$127 million decreased \$36 million or 22% compared with 1Q18, due to variability in the large-case group insurance market.
- Annuities APE sales in 1Q19 of \$56 million decreased \$17 million or 23% compared with 1Q18. We are focused on growth in lower risk segregated fund products, which in 1Q19 accounted for 77% of annuity APE sales.

Manulife Bank quarterly average net lending assets were \$21.7 billion as at March 31, 2019, up \$0.2 billion or 1% from December 31, 2018.

Revenue in 1Q19 was \$7.1 billion compared with \$3.2 billion in 1Q18. Revenue before realized and unrealized investment gains and losses was \$3.8 billion in 1Q19, an increase of \$0.2 billion compared with 1Q18.

Assets under management were \$146.6 billion as at March 31, 2019, an increase of \$4.7 billion or 3% from December 31, 2018, due to the favourable impact of markets.

Business highlights - In 1Q19, we entered into a reinsurance transaction on our legacy individual annuities block, reducing risk and freeing up \$65 million of capital. In addition, our Life Moments initiative won the 2018 International Service Excellence Award as the Customer Service Project of the Year for supporting Canadians during life's biggest events, and we continued to increase the number of robotics-processed transactions to 1.1 million in the quarter, making it easier for our customers to do business with us and improving our expense efficiency ratio. We also launched a new advertising campaign, "A little can do a lot" encouraging Canadians to improve their financial habits by taking little steps to achieve big goals.

B3 U.S.

| (\$ millions, unless otherwise stated) | Quarterly Results | | | | | |
|--|-------------------|-------|------|--------|------|-------|
| Canadian dollars | | 1Q19 | | 4Q18 | | 1Q18 |
| Net income attributed to shareholders ⁽¹⁾ | \$ | 441 | \$ | 513 | \$ | 528 |
| Core earnings ^{(1),(2)} | | 475 | | 454 | | 422 |
| Annualized premium equivalent sales | | 143 | | 152 | | 113 |
| Revenue | | 6,140 | (| 1,792) | | 7 |
| Revenue before realized and unrealized investment income gains and losses ⁽³⁾ | | 3,230 | (| 2,765) | | 3,968 |
| Assets under management (\$ billions) ⁽¹⁾ | | 224.3 | | 223.6 | | 228.3 |
| U.S. dollars | | | | | | |
| Net income attributed to shareholders ⁽¹⁾ | US\$ | 332 | US\$ | 389 | US\$ | 417 |
| Core earnings(1),(2) | | 357 | | 345 | | 333 |
| Annualized premium equivalent sales | | 108 | | 115 | | 90 |
| Revenue | | 4,618 | (| 1,358) | | 6 |
| Revenue before realized and unrealized investment income gains and losses ⁽³⁾ | | 2,429 | (| 2,095) | | 3,138 |
| Assets under management (\$ billions) ⁽¹⁾ | | 167.8 | | 163.9 | | 177.0 |

⁽¹⁾ The 2018 comparatives for net income attributed to shareholders, core earnings and assets under management have been updated to reflect the 2019 methodology for allocating capital and interest on surplus to our insurance segments from the Corporate and Other segment.

⁽²⁾ See "Performance and non-GAAP measures" below for a reconciliation between IFRS net income attributed to shareholders and core earnings.

⁽³⁾ See section A6 "Impact of fair value accounting".

U.S. 1Q19 net income attributed to shareholders was \$441 million compared with \$528 million in 1Q18. Net income attributed to shareholders is comprised of core earnings, which amounted to \$475 million in 1Q19 compared with \$422 million in 1Q18, and items excluded from core earnings, which amounted to a net charge of \$34 million in 1Q19 compared with a net gain of \$106 million in 1Q18. The changes in net income attributed to shareholders and core earnings expressed in Canadian dollars are due to the factors described below and, in addition, the change in core earnings reflected a net \$23 million favourable currency impact from the strengthening of the U.S. dollar compared with the Canadian dollar.

Expressed in U.S. dollars, the functional currency of the segment, 1Q19 net income attributed to shareholders was US\$332 million compared with US\$417 million in 1Q18, core earnings were US\$357 million in 1Q19 compared with US\$333 million in 1Q18, and items excluded from core earnings were a net charge of US\$25 million in 1Q19 compared with a net gain of US\$84 million in 1Q18 (see a reconciliation of net income attributed to shareholders to core earnings in "Performance and non-GAAP measures" below).

The US\$24 million increase in core earnings was primarily driven by the impact of higher sales volume and improved product margins, partially offset by the impact of the 2018 portfolio optimization activities on our legacy businesses. Long-term care policyholder experience was a net neutral in the quarter.

APE sales in 1Q19 of US\$108 million increased 20% compared with 1Q18, primarily due to enhanced features on the indexed universal life product offerings, heightened customer interest in international products, and continued ramp-up of product sales with the John Hancock Vitality PLUS feature which benefited multiple products in 1Q19. Term and protection universal life sales continue to be impacted by competitive pressures.

Revenue in 1Q19 was US\$4.6 billion compared with US\$6 million in 1Q18. Revenue before net realized and unrealized investment gains and losses was US\$2.4 billion in 1Q19, a decrease compared with US\$3.1 billion in 1Q18. The US\$0.7 billion decrease was primarily due to US\$0.5 billion of ceded premiums from the reinsurance of our legacy individual and group payout annuities business on policies originally sold in New York.

Assets under management as at March 31, 2019 were US\$167.8 billion, an increase of 2% from December 31, 2018. The increase was driven by the impact of favourable equity markets on the segregated fund assets and favourable mark-to-market movement on assets supporting our insurance business resulting from interest rate movements partially offset by the continued run-off of the annuities business including the reinsurance of the New York portion of the payout annuity block in 1Q19.

Business highlights - In 1Q19, we closed the reinsurance of the block of New York individual and group payout annuity policies releasing capital of US\$15 million. In addition, we improved the new business profitability in our brokerage life insurance business by improved pricing, reducing expenses and enhancing our focus on sales support and training.

B4 Global Wealth and Asset Management

| | Quarterly Results | | | | | | |
|--|-----------------------|----|---------|----|--------|--|--|
| (\$ millions, unless otherwise stated) | 1Q19 | | 4Q18 | | 1Q18 | | |
| Net income attributed to shareholders ⁽¹⁾ | \$ 233 | \$ | 218 | \$ | 223 | | |
| Core earnings ⁽¹⁾ | 233 | | 231 | | 227 | | |
| Core EBITDA ⁽²⁾ | 366 | | 362 | | 360 | | |
| Sales | | | | | | | |
| Wealth and asset management gross flows | 27,873 | | 26,306 | | 36,466 | | |
| Wealth and asset management net flows | (1,323) | | (8,954) | | 9,977 | | |
| Revenue | 1,334 | | 1,371 | | 1,347 | | |
| Assets under management and administration (\$ billions) | 648.1 | | 608.8 | | 626.8 | | |

⁽¹⁾ See "Performance and non-GAAP measures" below for a reconciliation between IFRS net income attributed to shareholders and core earnings.

Global Wealth and Asset Management's net income attributed to shareholders was \$233 million in 1Q19 compared with \$223 million in 1Q18. Net income attributed to shareholders is comprised of core earnings, which were \$233 million in 1Q19 compared with \$227 million in 1Q18 and items excluded from core earnings, which were Nil in 1Q19 compared with a net charge of \$4 million in 1Q18.

Core earnings were in line with 1Q18 as lower fee income was offset by lower expenses as we continued to make progress in leveraging our global scale and driving cost efficiencies.

⁽²⁾ Core EBITDA is a non-GAAP measure and is core earnings before interest, taxes, depreciation and amortization. See "Performance and non-GAAP measures" below.

Core EBITDA was \$366 million in 1Q19, a decrease of 2% compared with 1Q18, driven by the same factors as mentioned above.

Gross Flows and Net Flows - As noted above, gross flows were \$27.9 billion in 1Q19, a decrease of 26% compared with 1Q18, and net flows were negative \$1.3 billion in 1Q19, a decrease of \$11.3 billion compared with 1Q18. By geography the results were:

WAM Asia:

- Gross flows in Asia in 1Q19 were \$4.6 billion, a decrease of \$2.8 billion or 39% compared with 1Q18, driven by lower gross flows in institutional asset management due to large contributions in 1Q18 from existing and new clients and by lower retail flows.
- Net flows in 1Q19 were \$0.6 billion compared with net flows of \$2.0 billion in 1Q18, driven by lower gross flows as mentioned above, partially offset by lower redemptions in mainland China from retail money market funds.

WAM Canada:

- Gross flows in Canada in 1Q19 were \$6.4 billion, a decrease of \$1.7 billion or 21% compared with 1Q18, driven by
 the non-recurrence of a \$1.0 billion fixed income mandate in institutional asset management and lower retail flows
 compared to strong 1Q18 results. This was partially offset by higher new plan sales and recurring contributions in
 retirement.
- Net flows were \$2.1 billion in 1Q19 compared with net flows of \$3.5 billion in 1Q18, driven by lower gross flows as mentioned above.

WAM U.S.:

- Gross flows in the U.S. in 1Q19 were \$16.9 billion, a decrease of \$4.1 billion or 23% compared with 1Q18, driven
 by lower retail gross flows amid ongoing market volatility, and the non-recurrence of a \$1.0 billion funding from an
 existing client in institutional asset management in 1Q18. Retirement gross flows were in line with the prior year.
- Net flows in 1Q19 were negative \$4.0 billion compared with positive net flows of \$4.5 billion in 1Q18, driven by
 lower gross flows in retail and institutional asset management along with higher redemptions, partly due to the
 rationalization of our investment management teams, designed to improve margins and to focus our line-up on our
 core capabilities where we can generate further scale, as well as portfolio rebalancing by a large advisor.

Revenue in 1Q19 was \$1.3 billion, in line with 1Q18.

Assets under management and administration of \$648 billion as at March 31, 2019 increased 8% compared with December 31, 2018 driven by favourable investment performance, partially offset by negative net flows. Global WAM also manages \$189 billion in assets for the Company's non-WAM reporting segments, and including those managed assets, AUMA managed by Global WAM was \$837 billion as at March 31, 2019 compared with \$790 billion as at December 31, 2018.

Business highlights - In 1Q19, we continued to diversify our product offering with the launch of the Manulife Shariah Global REIT Fund in Malaysia, the first Shariah global REIT fund in the world available to retail investors, and launched our 15th ETF in the U.S., the John Hancock Multifactor Media and Communications fund. We furthered our commitment to enhancing our customers' digital experience in 1Q19 as we integrated Amazon's Alexa on our U.S. retirement platform, enabling our customers to access the most popular website queries through their Alexa-enabled devices, such as account balances, fund allocations, personal rate of return and more.

B5 Corporate and Other

| | Q | uarter | ly Results | |
|---|------------|--------|------------|-------------|
| (\$ millions, unless otherwise stated) | 1Q19 | | 4Q18 | 1Q18 |
| Net income (loss) attributed to shareholders ⁽¹⁾ | \$ 56 | \$ | (382) | \$ (283) |
| Core loss excluding core investment gains(1),(2) | \$ (63) | \$ | (216) | \$ (156) |
| Core investment gains | 100 | | 100 | 96 |
| Total core gain (loss) | \$ 37 | \$ | (116) | \$ (60) |
| Revenue | \$ 235 | \$ | (196) | \$ (101) |

⁽¹⁾ The 2018 comparatives for net income (loss) attributed to shareholders and core loss excluding core investment gains have been updated to reflect the 2019 methodology for allocating capital and interest on surplus to our insurance segments from the Corporate and Other segment.

⁽²⁾ See "Performance and non-GAAP measures" for a reconciliation between IFRS net income attributed to shareholders and core earnings.

Corporate and Other is composed of investment performance on assets backing capital, net of amounts allocated to operating segments; financing costs; costs incurred by the corporate office related to shareholder activities (not allocated to the operating segments); our Property and Casualty ("P&C") Reinsurance business; as well as run-off reinsurance operations including variable annuities and accident and health.

For segment reporting purposes, settlement costs for macro equity hedges and other non-operating items are included in Corporate and Other'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.

Corporate and Other reported a net gain attributed to shareholders of \$56 million in 1Q19 compared with a net loss attributed to shareholders of \$283 million in 1Q18. The core gain was \$37 million in 1Q19 compared with a core loss of \$60 million in 1Q18 and the items excluded from core gain/loss amounted to a net gain of \$19 million in 1Q19 compared with a net charge of \$223 million in 1Q18 (see a reconciliation of net income (loss) attributed to shareholders to core earnings in "Performance and non-GAAP measures" below).

The \$97 million improvement in core earnings was largely due to the favourable impact of markets on seed money investments in new segregated and mutual funds, higher investment income, lower withholding taxes on future U.S. remittances and lower expenses, partially offset by lower gains on AFS equities.

Revenue in 1Q19 was a gain of \$235 million compared with a loss of \$101 million in 1Q18. The variance was driven by realized gains on the sale of AFS bonds in 1Q19 compared with losses in 1Q18, the favourable impact of markets on seed money investments, and higher investment income, partially offset by lower realized gains on AFS equities.

C RISK MANAGEMENT AND RISK FACTORS UPDATE

This section provides an update to our risk management practices and risk factors outlined in the MD&A in our 2018 Annual Report. The shaded text and tables in this section of the MD&A represent our disclosure on market and liquidity risk in accordance with IFRS 7 "Financial Instruments – Disclosures". Accordingly, the following shaded text and tables represent an integral part of our unaudited Interim Consolidated Financial Statements.

C1 Variable annuity and segregated fund guarantees

As described in the MD&A in our 2018 Annual Report, 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 on 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 2019 to 2039.

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 section C3 "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

| | | Ма | rch 31, 2019 | | ı | Dece | mber 31, 2018 | 3 | |
|---|-----------------|----|--------------|-----------------------------------|-----------------|------|---------------|----|-----------------------------------|
| As at (\$ millions) | Guarantee value | | Fund value | Amount at risk ^{(4),(5)} | Guarantee value | | Fund value | | Amount at risk ^{(4),(5)} |
| Guaranteed minimum income benefit | \$ 5,059 | \$ | 3,860 | \$ 1,224 | \$ 5,264 | \$ | 3,675 | \$ | 1,593 |
| Guaranteed minimum withdrawal benefit | 58,437 | | 50,552 | 8,192 | 60,494 | | 49,214 | | 11,388 |
| Guaranteed minimum accumulation benefit | 18,287 | | 18,637 | 16 | 18,611 | | 18,720 | | 141 |
| Gross living benefits ⁽¹⁾ | 81,783 | | 73,049 | 9,432 | 84,369 | | 71,609 | | 13,122 |
| Gross death benefits(2),(3) | 10,221 | | 16,548 | 982 | 10,663 | | 14,654 | | 1,567 |
| Total gross of reinsurance | 92,004 | | 89,597 | 10,414 | 95,032 | | 86,263 | | 14,689 |
| Living benefits reinsured | 4,343 | | 3,337 | 1,023 | 4,515 | | 3,173 | | 1,343 |
| Death benefits reinsured | 2,249 | | 2,161 | 382 | 2,353 | | 2,070 | | 493 |
| Total reinsured | 6,592 | | 5,498 | 1,405 | 6,868 | | 5,243 | | 1,836 |
| Total, net of reinsurance | \$ 85,412 | \$ | 84,099 | \$ 9,009 | \$ 88,164 | \$ | 81,020 | \$ | 12,853 |

- (1) Where a policy includes both living and death benefits, the guarantee in excess of the living benefit is included in the death benefit category as outlined in footnote 3.
- (2) Contracts with guaranteed long-term care benefits are included in this 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 March 31, 2019 was \$9,009 million (December 31, 2018 \$12,853 million) of which: US\$5,100 million (December 31, 2018 US\$6,899 million) was on our U.S. business, \$1,699 million (December 31, 2018 \$2,654 million) was on our Canadian business, US\$185 million (December 31, 2018 US\$332 million) was on our Japan business and US\$186 million (December 31, 2018 US\$246 million) was related to Asia (other than Japan) and our run-off reinsurance business.

C2 Caution related to sensitivities

In this document, 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 LICAT total ratio will be as indicated. Market movements affect LICAT capital sensitivities both through income and other components of the regulatory capital framework. For example, LICAT is affected by changes to other comprehensive income.

C3 Publicly traded equity performance risk

As outlined in our 2018 Annual Report, our 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 (see pages 42 and 43 of our 2018 Annual Report).

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 section D2 "Sensitivity of policy liabilities to asset related 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 net income attributed to shareholders.

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.

The Standards of Practice for the valuation of insurance contract liabilities and guidance published by the CIA constrain the investment return assumptions for public equities and certain ALDA based on historical return benchmarks for public equities. The potential impact on net income attributed to shareholders does not take into account possible changes to investment return assumptions resulting from the impact of declines in public equity market values on these historical return benchmarks.

Potential immediate impact on net income attributed to shareholders arising from changes to public equity returns^{(1),(2),(3)}

| As at March 31, 2019 | | | | | | |
|--|------------|------------|------------|--------|----------|----------|
| (\$ millions) | -30% | -20% | -10% | 10% | 20% | 30% |
| Underlying sensitivity to net income attributed to shareholders ⁽⁴⁾ | | | | | | |
| Variable annuity guarantees | \$ (3,800) | \$ (2,280) | \$ (1,040) | \$ 810 | \$ 1,400 | \$ 1,820 |
| Asset based fees (annualized) | (540) | (360) | (180) | 180 | 360 | 540 |
| General fund equity investments(5) | (1,120) | (730) | (330) | 300 | 610 | 910 |
| Total underlying sensitivity before hedging | (5,460) | (3,370) | (1,550) | 1,290 | 2,370 | 3,270 |
| Impact of macro and dynamic hedge assets ⁽⁶⁾ | 3,200 | 1,930 | 860 | (730) | (1,290) | (1,700) |
| Net potential impact on net income attributed to shareholders after | | | | | | |
| impact of hedging | \$ (2,260) | \$ (1,440) | \$ (690) | \$ 560 | \$ 1,080 | \$ 1,570 |
| As at December 31, 2018 | | | | | | |
| (\$ millions) | -30% | -20% | -10% | 10% | 20% | 30% |
| Underlying sensitivity to net income attributed to shareholders ⁽⁴⁾ | | | | | | |
| Variable annuity guarantees | \$ (3,650) | \$ (2,240) | \$ (1,040) | \$ 890 | \$ 1,610 | \$ 2,170 |
| Asset based fees (annualized) | (480) | (320) | (160) | 160 | 320 | 480 |
| General fund equity investments ⁽⁵⁾ | (1,150) | (780) | (390) | 290 | 580 | 860 |
| Total underlying sensitivity before hedging | (5,280) | (3,340) | (1,590) | 1,340 | 2,510 | 3,510 |
| Impact of macro and dynamic hedge assets ⁽⁶⁾ | 3,110 | 1,940 | 910 | (820) | (1,450) | (1,930) |
| Net potential impact on net income attributed to shareholders after | | | | | | |
| impact of hedging | \$ (2,170) | \$ (1,400) | \$ (680) | \$ 520 | \$ 1,060 | \$ 1,580 |

⁽¹⁾ See "Caution related to sensitivities" above.

Changes in equity markets impact our available and required components of the LICAT total ratio. The following table shows the potential impact to MLI's LICAT total ratio resulting from changes in public equity market values.

Potential immediate impact on MLI's LICAT total ratio arising from public equity returns different than the expected return for policy liability valuation^{(1),(2),(3)}

| | | Impact on MLI's LICAT total ratio | | | | | | | | | | |
|-------------------|------|-----------------------------------|------|-----|-----|-----|--|--|--|--|--|--|
| Percentage points | -30% | -20% | -10% | 10% | 20% | 30% | | | | | | |
| March 31, 2019 | (5) | (3) | (2) | 1 | 6 | 7 | | | | | | |
| December 31, 2018 | (6) | (4) | (2) | 1 | 5 | 7 | | | | | | |

⁽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 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 section D2 "Sensitivity of policy liabilities to asset related 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.

⁽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.

⁽³⁾ The Office of the Superintendent of Financial Institutions ("OSFI") rules for segregated fund guarantees reflect full capital impacts of shocks over 20 quarters within a prescribed range. As such, the deterioration in equity markets could lead to further increases in capital requirements after the initial shock.

C4 Interest rate and spread risk sensitivities and exposure measures

As at March 31, 2019, 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 \$200 million, and to a 50 basis point increase in interest rates to be a benefit of \$200 million.

The table below shows the potential impact on net income attributed to shareholders from a 50 basis point parallel move in interest rates. This 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 where government rates are not currently negative, 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. Furthermore, our sensitivities are not consistent across all regions in which we operate, and the impact of yield curve changes will vary depending upon the geography where the change occurs. Reinvestment assumptions used in the valuation of policy liabilities tend to amplify the negative effects of a decrease in interest rates and dampen the positive effects of interest rate increases. This is because the reinvestment assumptions used in the valuation of our insurance liabilities are based on interest rate scenarios and calibration criteria set by the Canadian Actuarial Standards Board, while our interest rate hedges are valued using current market interest rates. Therefore, in any particular quarter, changes to the reinvestment assumptions are not fully aligned to changes in current market interest rates especially when there is a significant change in the shape of the interest rate curve. As a result, the impact from non-parallel movements may be materially different from the estimated impact of parallel movements. For example, if long-term interest rates increase more than short-term interest rates (sometimes referred to as a steepening of the yield curve) in North America, the decrease in the value of our swaps may be greater than the decrease in the value of our insurance liabilities. This could result in a charge to net income attributed to shareholders in the short-term even though the rising and steepening of the yield curve, if sustained, may have a positive long-term economic impact.

The potential impact on net income attributed to shareholders does not take into account any future potential changes to our ultimate reinvestment rate assumptions or calibration criteria for stochastic risk-free rates 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. The impact also does not reflect any unrealized gains or losses on AFS fixed income assets held in our Corporate and Other segment. Changes in the market value of these assets may provide a natural economic offset to the interest rate risk arising from our product liabilities. In order for there to also be an accounting offset, the Company would need to realize a portion of the AFS fixed income asset unrealized gains or losses. It is not certain we would crystallize any of the unrealized gains or losses available.

The impact does not reflect any potential effect of changing interest rates to the value of our ALDA. Rising interest rates could negatively impact the value of our ALDA (see "Critical Actuarial and Accounting Policies – Fair Value of Invested Assets", on page 65 of our 2018 Annual Report). More information on ALDA can be found in section C5 "Alternative long-duration asset performance risk".

Under LICAT, changes in unrealized gains or losses in our AFS bond portfolio resulting from interest rate shocks tend to dominate capital sensitivities. As a result, the reduction in interest rates improves LICAT total ratios and vice-versa.

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

Potential impact on net income attributed to shareholders and MLI's LICAT total ratio of an immediate parallel change in interest rates relative to rates assumed in the valuation of policy liabilities^{(1),(2),(3),(4)}

| | Ma | ch 31, 2 | 2019 | Decembe | er 31, | 2018 |
|--|--------|----------|---------|-------------|--------|---------|
| As at | -50bp | | +50bp | -50bp | | +50bp |
| Net income attributed to shareholders (\$ millions) | | | | | | |
| Excluding change in market value of AFS fixed income assets held in the Corporate and Other | | | | | | |
| segment | \$ (20 |)) \$ | 200 | \$ (100) | \$ | 100 |
| From fair value changes in AFS fixed income assets held in the Corporate and Other segment, if | | | | | | |
| realized | 1,60 |) | (1,500) | 1,600 | | (1,500) |
| MLI's LICAT total ratio (Percentage points) | | | | | | |
| LICAT total ratio change in percentage points(5) | ; | 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 Corporate and Other segment will depend on the aggregate amount of unrealized gain or loss.
- (4) Sensitivities are based on projected asset and liability cash flows and the impact of realizing fair value changes in AFS fixed income is based on the holdings at the end of the period.
- (5) Includes all LICAT impacts, including realized and unrealized fair value changes in AFS fixed income assets.

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 and MLI's LICAT total ratio arising from changes to corporate spreads and swap spreads^{(1),(2),(3)}

| Corporate spreads ^{(4),(5)} | | March 3 | 018 | | | | | |
|---|----------|---------|--|-------|----|---------------|---------|--------------|
| As at | | -50bp | (700) \$ 700 \$ (600) \$ (5) (5) 6 (5) March 31, 2019 December 31, 2018 20bp +20bp -20bp + | | | | +50bp | |
| Net income attributed to shareholders (\$ millions) | \$ | (700) | \$ | 700 | \$ | (600) | \$ | 600 |
| MIN 1104T1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | (E) | | c | | (E) | | - |
| MLI's LICAT total ratio (change percentage points) ⁽⁶⁾ | | (5) | | 0 | | (5) | | ວ |
| MLI'S LICAT total ratio (change percentage points)(*) Swap spreads | | | 31, 201 | • | | () | r 31, 2 | 018 |
| | _ | | 31, 201 | 9 | | Decembe | r 31, 2 | 018 +20bp |
| Swap spreads | <u> </u> | March (| 31, 201 \$ | +20bp | \$ | Decembe -20bp | | |

⁽¹⁾ See "Caution related to sensitivities" above.

C5 Alternative long-duration asset performance risk

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% they 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

⁽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 Corporate and Other segment and excludes the impact of changes in segregated fund bond values due to 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 and swap spreads.

⁽³⁾ Sensitivities are based on projected asset and liability cash flows.

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

⁽⁵⁾ 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.

⁽⁶⁾ Includes all LICAT impacts, including realized and unrealized fair value change in AFS fixed income assets. Under LICAT, spread movements are determined from a selection of investment grade bond indices with BBB and better bonds for each jurisdiction. For LICAT, we use the following indices: FTSE TMX Canada All Corporate Bond Index, Barclays USD Liquid Investment Grade Corporate Index, and Nomura-BPI (Japan).

considerably more than shown. Refer to section D2 "Sensitivity of policy liabilities to asset related 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.

Potential impact on net income attributed to shareholders arising from changes in ALDA returns(1),(2),(3),(4),(5),(6)

| As at | March : | 31, 20 ⁻ | 19 | Decembe | r 31, 2 | 018 |
|--|---------------|---------------------|-------|---------------|---------|-------|
| (\$ millions) | -10% | | +10% | -10% | | +10% |
| Real estate, agriculture and timber assets | \$ (1,200) | \$ | 1,200 | \$ (1,300) | \$ | 1,200 |
| Private equities and other ALDA | (1,600) | | 1,600 | (1,600) | | 1,600 |
| Alternative long-duration assets | \$ (2,800) | \$ | 2,800 | \$ (2,900) | \$ | 2,800 |

- (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; or (ii) any gains or losses on ALDA held in the Corporate and Other segment.
- (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 section D2 "Sensitivity of policy liabilities to asset related assumptions" for more information on the level of growth assumed and on the net income sensitivity to changes in these long-term assumptions.
- (6) The impact of changes to the portfolio asset mix supporting our North American legacy business are reflected in the sensitivities when the changes take place.

D CRITICAL ACTUARIAL AND ACCOUNTING POLICIES

D1 Critical actuarial and accounting policies

Our significant accounting policies are described in note 1 to our Consolidated Financial Statements for the year ended December 31, 2018. The critical accounting policies and the estimation processes relate to the determination of insurance and investment contract liabilities, assessment of control over other entities for consolidation, estimation of fair value of invested assets, evaluation of invested asset impairment, accounting for derivative financial instruments, determination of pension and other post-employment benefit obligations and expenses, accounting for income taxes and uncertain tax positions and valuation and impairment of goodwill and intangible assets as described on pages 58 to 69 of our 2018 Annual Report.

D2 Sensitivity of policy liabilities to asset related 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 updates to 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 policy 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 asset related assumptions supporting actuarial liabilities

Increase (decrease) in after-tax net income attributed to shareholders

| (\$ millions) | | March | 31, 2 | 2019 | Decembe | r 31, | 2018 |
|--|----|----------|-------|----------|-----------|-------|----------|
| Asset related assumptions updated periodically in valuation basis changes | | Increase | | Decrease | Increase | | Decrease |
| 100 basis point change in future annual returns for public equities(1) | \$ | 500 | \$ | (500) | \$ 500 | \$ | (500) |
| 100 basis point change in future annual returns for ALDA(2) | | 3,600 | | (4,000) | 3,500 | | (3,900) |
| 100 basis point change in equity volatility assumption for stochastic segregated fund modelling ⁽³⁾ | | (300) | | 300 | (300) | | 300 |

- (1) The sensitivity to public equity returns above includes the impact on both segregated fund guarantee reserves and on other policy liabilities. Expected long-term annual market growth assumptions for public equities are based on long-term historical observed experience and compliance with actuarial standards. As at March 31, 2019, the growth rates inclusive of dividends in the major markets used in the stochastic valuation models for valuing segregated fund guarantees are 9.3% per annum in Canada, 9.6% per annum in the U.S. and 6.2% per annum in Japan. Growth assumptions for European equity funds are market-specific and vary between 8.3% and 9.9%
- (2) ALDA includes commercial real estate, timber, farmland, direct oil and gas properties, and private equities, some of which relate to oil and gas. Expected long-term return assumptions for ALDA and public equity are set in accordance with the Standards of Practice for the valuation of insurance contract liabilities and guidance published by the CIA. Annual best estimate return assumptions for ALDA and public equity include market growth rates and annual income, such as rent, production proceeds and dividends, and will vary based on our holding period. Over a 20-year horizon, our best estimate return assumptions range between 5.25% and 11.65%, with an average of 9.5% based on the current asset mix backing our guaranteed insurance and annuity business as of March 31, 2019, adjusted to reflect our decision to reduce the allocation to ALDA in the portfolio asset mix supporting our North American legacy businesses. Our return assumptions including the margins for adverse deviations in our valuation, which take into account the uncertainty of achieving the returns, range between 2.5% and 7.5%, with an average of 6.3% based on the asset mix backing our guaranteed insurance and annuity business as of March 31, 2019, adjusted to reflect our decision to reduce the allocation to ALDA in the portfolio asset mix supporting our North American legacy businesses.
- (3) Volatility assumptions for public equities are based on long-term historical observed experience and compliance with actuarial standards. The resulting volatility assumptions are 16.95% per annum in Canada and 17.15% per annum in the U.S. for large-cap public equities, and 19.25% per annum in Japan. For European equity funds, the volatility varies between 16.5% and 18.4%.

D3 Accounting and reporting changes

For accounting and reporting changes during the quarter, refer to note 2 of our unaudited Interim Consolidated Financial Statements for the three months ended March 31, 2019.

E OTHER

As at

E1 Outstanding shares – selected information

Common shares

As at April 25, 2019 MFC had 1,968,394,229 common shares outstanding.

E2 Legal and regulatory proceedings

We are regularly involved in legal actions, both as a defendant and as a plaintiff. Information on legal and regulatory proceedings can be found in note 12 of the unaudited Interim Consolidated Financial Statements for the three months ended March 31, 2019.

E3 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"); core EBITDA margin; core investment gains, constant exchange rate basis (measures that are reported on a constant exchange rate basis include percentage growth/decline in core earnings, sales, APE sales, gross flows, core EBITDA, new business value ("NBV"), new business value margin, assets under management, and assets under management and administration ("AUMA")); assets under administration; expense efficiency ratio; assets under management and administration; assets under management; consolidated capital; embedded value; new business value; new business value margin; sales; APE 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 believe aids investors in better understanding the long-term earnings capacity and valuation of the business. Core earnings allows investors to focus on the Company's operating performance by excluding the direct impact of changes in equity markets and interest rates, changes in actuarial methods and assumptions as well as a number of other items, outlined below, that we believe are material, but do not reflect the underlying earnings capacity of the business. For example, due to the long-term nature of our business, the mark-to-market movements of equity markets, interest rates, foreign currency exchange rates and commodity prices from period-to-period can, and frequently do, have a substantial impact on the reported amounts of our assets, liabilities and net income attributed to shareholders. These reported amounts are not actually realized at the time and may never be realized if the markets move in the opposite direction in a subsequent period. This makes it very difficult for investors to evaluate how our businesses are performing from period-to-period and to compare our performance with other issuers.

We believe that core earnings better reflect the underlying earnings capacity and valuation of our business. We use core earnings as the basis for management planning and reporting and, along with net income attributed to shareholders, as a key metric used in our short and mid-term incentive plans at the total Company and operating segment level.

While core earnings 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. See "Quarterly financial information" below for reconciliation of core earnings to net income attributed to shareholders.

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

Items included in core earnings:

- 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 and gains.
- 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 of net 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 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, which reflects our expectation that investment-related experience will be positive through-the-business cycle. 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. Investment-related experience relates to fixed income investing, ALDA returns, credit experience and asset mix changes other than those related to a strategic change. An example of a strategic asset mix change is outlined below.
 - 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. We do not
 attribute specific components of investment-related experience to amounts included or excluded from core
 earnings.
 - The \$400 million threshold represents the estimated average annualized amount of net favourable investmentrelated experience that the Company reasonably expects to achieve through-the-business cycle based on historical experience. It is not a forecast of expected net favourable investment-related experience for any given fiscal year.
 - Our average net annualized investment-related experience calculated from the introduction of core earnings in 2012 to the end of 2018 was \$493 million (2012 to the end of 2017 was \$475 million).
 - The decision announced on December 22, 2017 to reduce the allocation to ALDA in the portfolio asset mix supporting our legacy businesses was the first strategic asset mix change since we introduced the core earnings metric in 2012. We refined our description of investment-related experience in 2017 to note that asset mix changes other than those related to a strategic change are taken into consideration in the investment-related experience component of core investment gains.

- While historical investment return time horizons may vary in length based on underlying asset classes generally
 exceeding 20 years, for purposes of establishing the threshold, we look at a business cycle that is five or more
 years and includes a recession. We monitor the appropriateness of the threshold as part of our annual five-year
 planning process and would adjust it, either to a higher or lower amount, in the future if we believed that our
 threshold was no longer appropriate.
- Specific criteria used for evaluating a potential adjustment to the threshold may include, but are not limited to, the
 extent to which actual investment-related experience differs materially from actuarial assumptions used in
 measuring insurance contract liabilities, material market events, material dispositions or acquisitions of assets, and
 regulatory or accounting changes.
- 7. Earnings on surplus other than mark-to-market items. Gains on available-for-sale ("AFS") equities and seed money investments included in new segregated and mutual funds 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 substantively enacted income tax rate changes.

Items excluded from core earnings:

- 1. The direct impact of equity markets and interest rates and variable annuity guarantee liabilities includes the items listed below.
 - 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.
 - 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 per annum or net unfavourable investment-related experience on a vear-to-date basis.
- 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. As noted in the "Critical actuarial and accounting policies" section above, policy liabilities for IFRS are valued in Canada under standards established by the Actuarial Standards Board. The standards require a comprehensive review of actuarial methods and assumptions to be 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 and 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. By excluding the results of the annual reviews, core earnings assist investors in evaluating our operational performance and comparing our operational performance from period to period with other global insurance companies because the associated gain or loss is not reflective of current year performance and not reported in net income in most actuarial standards outside of Canada.
- 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.

The following table summarizes for the past eight quarters core earnings and net income (loss) attributed to shareholders.

Total Company

| | | | | Quarter | ly Results | | | |
|---|----------|------------|---------------|----------|------------|--------------|-----------|----------|
| (\$ millions, unaudited) | 1Q19 | 4Q18 | 3Q18 | 2Q18 | 1Q18 | 4Q17 | 3Q17 | 2Q17 |
| Core earnings (loss) | | | | | | | | |
| Asia | \$ 520 | \$ 463 | \$ 461 | \$ 411 | \$ 431 | \$ 372 | \$ 374 | \$ 350 |
| Canada | 283 | 305 | 344 | 395 | 283 | 273 | 403 | 278 |
| U.S. | 475 | 454 | 467 | 446 | 422 | 463 | 346 | 359 |
| Global Wealth and Asset Management | 233 | 231 | 288 | 239 | 227 | 198 | 216 | 214 |
| Corporate and Other (excluding core investment gains) | (63) | (216) | (121) | (164) | (156) | (201) | (354) | (181) |
| Core investment gains | 100 | 100 | 100 | 104 | 96 | 100 | 100 | 154 |
| Total core earnings | 1,548 | 1,337 | 1,539 | 1,431 | 1,303 | 1,205 | 1,085 | 1,174 |
| Items to reconcile core earnings (loss) to net income (loss) attributed to shareholders: | | | | | | | | |
| Investment-related experience outside of core earnings | 327 | (130) | 312 | 18 | - | 18 | 11 | 138 |
| Direct impact of equity markets and interest rates and variable annuity guarantee liabilities Change in actuarial methods and assumptions | 249 | (675) - | (277) (51) | 45 - | 50 - | (68) (33) | 47 (2) | (37) |
| Charge related to decision to change portfolio asset mix supporting our legacy businesses | - | - | - | - | - | (1,032) | - | - |
| Impact related to U.S. Tax Reform | - | - | 124 | - | - | (1,777) | - | - |
| Restructuring charge | - | (63) | - | (200) | - | - | - | - |
| Reinsurance transactions and other | 52 | 124 | (74) | (32) | 19 | 81 | (36) | (20) |
| Net income (loss) attributed to shareholders | \$ 2,176 | \$ 593 | \$ 1,573 | \$ 1,262 | \$ 1,372 | \$(1,606) | \$ 1,105 | \$ 1,255 |

Asia

| | | | | Quarterl | y Results | | | |
|--|--------|--------|--------|----------|-----------|--------|--------|--------|
| (\$ millions, unaudited) Asia core earnings(1) Items to reconcile core earnings (loss) to net income (loss) attributed to | 1Q19 | 4Q18 | 3Q18 | 2Q18 | 1Q18 | 4Q17 | 3Q17 | 2Q17 |
| <u> </u> | \$ 520 | \$ 463 | \$ 461 | \$ 411 | \$ 431 | \$ 372 | \$ 374 | \$ 350 |
| Investment-related experience outside of core earnings | 116 | 99 | 91 | 46 | 48 | 62 | 48 | 62 |
| Direct impact of equity markets and interest rates and variable annuity guarantee liabilities | 59 | (244) | (18) | (86) | (27) | (140) | (62) | 96 |
| Change in actuarial methods and assumptions | - | - | 27 | - | - | 5 | 161 | - |
| Reinsurance transactions and other | - | - | 5 | (3) | - | (39) | - | - |
| Net income (loss) attributed to shareholders(1) | \$ 695 | \$ 318 | \$ 566 | \$ 368 | \$ 452 | \$ 260 | \$ 521 | \$ 508 |

^{(1) 2018} core earnings and net income (loss) attributed to shareholders have been updated to reflect the 2019 methodology for allocating capital and interest on surplus to our insurance segments from the Corporate and Other segment.

Canada

| | | | | | | Qu | arterly | / Re | sults | | | | | |
|---|--------|------|-------|----|-------|----|---------|------|-------|----|-------|-----------|----|-------|
| tems to reconcile core earnings (loss) to net income (loss) attributed to shareholders: Investment-related experience outside of core earnings Direct impact of equity markets and interest rates and variable annuity guarantee liabilities Change in actuarial methods and assumptions | 1Q19 |) | 4Q18 | 3 | 3Q18 | 2 | Q18 | | 1Q18 | 4 | 4Q17 | 3Q17 | 2 | 2Q17 |
| Canada core earnings ⁽¹⁾ Items to reconcile core earnings (loss) to net income (loss) attributed to shareholders: | \$ 283 | 3 \$ | 305 | \$ | 344 | \$ | 395 | \$ | 283 | \$ | 273 | \$ 403 | \$ | 278 |
| Investment-related experience outside of core earnings | 453 | 3 | (143) | | 155 | | 83 | | 145 | | 76 | (125) | | (12) |
| Direct impact of equity markets and interest rates and variable annuity guarantee liabilities | 11 | l | (234) | | (26) | | 13 | | (60) | | (21) | 115 | (| (238) |
| Change in actuarial methods and assumptions | , | - | - | (| (370) | | - | | - | | (7) | 43 | | - |
| Charge related to decision to change portfolio asset mix supporting our legacy businesses | | - | - | | - | | - | | - | | (343) | - | | - |
| Charge related to U.S. Tax Reform | | - | - | | (2) | | - | | - | | - | - | | - |
| Reinsurance transactions and other | 4 | ı | (2) | | 1 | | 11 | | 84 | | (7) | (4) | | (5) |
| Net income (loss) attributed to shareholders(1) | \$ 751 | I \$ | (74) | \$ | 102 | \$ | 502 | \$ | 452 | \$ | (29) | \$ 432 | \$ | 23 |

^{(1) 2018} core earnings and net income (loss) attributed to shareholders have been updated to reflect the 2019 methodology for allocating capital and interest on surplus to our insurance segments from the Corporate and Other segment.

U.S.

| | | | | (| Quarter | ly R | esults | | | | | |
|--|-----------|-----------|-----------|----|---------|------|--------|-------|--------|-----------|----|------|
| (\$ millions, unaudited) | 1Q19 | 4Q18 | 3Q18 | | 2Q18 | | 1Q18 | | 4Q17 | 3Q17 | : | 2Q17 |
| U.S. core earnings ⁽¹⁾ Items to reconcile core earnings (loss) to net income (loss) attributed to shareholders: | \$ 475 | \$ 454 | \$ 467 | \$ | 446 | \$ | 422 | \$ | 463 | \$ 346 | \$ | 359 |
| Investment-related experience outside of core earnings | (143) | 15 | 162 | | (59) | | (101) | | (33) | 181 | | 164 |
| Direct impact of equity markets and interest rates and variable annuity guarantee liabilities | 61 | (95) | (204) | | 267 | | 268 | | 75 | 50 | | 159 |
| Change in actuarial methods and assumptions | • | - | 286 | | - | | - | | (31) | (214) | | - |
| Charge related to decision to change portfolio asset mix supporting our legacy businesses | - | - | _ | | - | | - | | (689) | - | | - |
| Charge related to U.S. Tax Reform | - | - | (7) | | - | | - | (2 | 2,822) | - | | - |
| Reinsurance transactions and other | 48 | 139 | (74) | | (34) | | (61) | | 139 | (41) | | - |
| Net income (loss) attributed to shareholders(1) | \$ 441 | \$ 513 | \$ 630 | \$ | 620 | \$ | 528 | \$ (2 | 2,898) | \$ 322 | \$ | 682 |

^{(1) 2018} core earnings and net income (loss) attributed to shareholders have been updated to reflect the 2019 methodology for allocating capital and interest on surplus to our insurance segments from the Corporate and Other segment.

Global Wealth and Asset Management

| | | | | | | Q | uarterly | y Re | sults | | | | |
|---|-------|---|----|------|-----------|----|----------|------|-------|-----------|-----------|----|------|
| (\$ millions, unaudited) | 1Q1 | 9 | 4 | Q18 | 3Q18 | | 2Q18 | | 1Q18 | 4Q17 | 3Q17 | : | 2Q17 |
| Global WAM core earnings Items to reconcile core earnings (loss) to net income (loss) attributed to shareholders: | \$ 23 | 3 | \$ | 231 | \$ 288 | \$ | 239 | \$ | 227 | \$ 198 | \$ 216 | \$ | 214 |
| Impact related to U.S. Tax Reform | | - | | - | (2) | | - | | - | 308 | - | | - |
| Other | | | | (13) | (6) | | (6) | | (4) | (10) | (10) | | (13) |
| Net income (loss) attributed to shareholders | \$ 23 | 3 | \$ | 218 | \$ 280 | \$ | 233 | \$ | 223 | \$ 496 | \$ 206 | \$ | 201 |

Corporate and Other

| | | | | Quarterl | y Results | | | |
|--|---------|----------|----------|----------|-----------|----------|----------|----------|
| (\$ millions, unaudited) | 1Q19 | 4Q18 | 3Q18 | 2Q18 | 1Q18 | 4Q17 | 3Q17 | 2Q17 |
| Corporate and Other core income (loss) (excluding core investment gains) $^{(1)}$ | \$ (63) | \$ (216) | \$ (121) | \$ (164) | \$ (156) | \$ (201) | \$ (354) | \$ (181) |
| Core investment gains (loss) | 100 | 100 | 100 | 104 | 96 | 100 | 100 | 154 |
| Total core earnings (loss) | 37 | (116) | (21) | (60) | (60) | (101) | (254) | (27) |
| Other items to reconcile core earnings (loss) to net income (loss) attributed to shareholders: | | | | | | | | |
| Investment-related experience outside of core earnings | (99) | (101) | (96) | (52) | (92) | (87) | (92) | (79) |
| Direct impact of equity markets and interest rates | 118 | (102) | (29) | (149) | (131) | 17 | (56) | (53) |
| Changes in actuarial methods and assumptions | | - | 6 | - | - | - | 8 | - |
| Impact related to U.S. Tax Reform | | - | 135 | - | - | 737 | - | - |
| Restructuring charge | | (63) | - | (200) | - | - | - | - |
| Other | | - | - | - | - | (1) | 18 | - |
| Net income (loss) attributed to shareholders ⁽¹⁾ | \$ 56 | \$ (382) | \$ (5) | \$ (461) | \$ (283) | \$ 565 | \$ (376) | \$ (159) |

⁽¹⁾ The Corporate and Other segment includes earnings on assets backing capital net of amounts allocated to operating segments. 2018 core income (loss) (excluding core investment gains) and net income (loss) attributed to shareholders have been updated to reflect the 2019 methodology for allocating capital and interest on surplus to our insurance segments from the Corporate and Other segment.

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 exchange rate 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). Quarterly amounts stated on a constant exchange rate basis in this MD&A are calculated, as appropriate, using the income statement and balance sheet exchange rates effective for 1Q19. Measures that are reported on a constant exchange rate basis include growth in core earnings, sales, APE sales, gross flows, core EBITDA, new business value, new business value margin, assets under management, and assets under management and administration.

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

| (\$ millions) | March 31, 2019 | De | ecember 31, 2018 | March 31, 2018 |
|--|-------------------|----|---------------------|-------------------|
| Total invested assets | \$ 359,458 | \$ | 353,664 | \$ 342,389 |
| Segregated funds net assets | 334,425 | | 313,209 | 326,011 |
| Assets under management per financial statements | 693,883 | | 666,873 | 668,400 |
| Mutual funds | 194,227 | | 182,219 | 197,854 |
| Institutional advisory accounts (excluding segregated funds) | 103,713 | | 102,323 | 98,275 |
| Other funds | 8,488 | | 7,658 | 7,247 |
| Total assets under management | 1,000,311 | | 959,073 | 971,776 |
| Other assets under administration | 134,201 | | 124,449 | 126,271 |
| Currency impact | - | | (15,917) | 24,318 |
| AUMA at constant exchange rates | \$ 1,134,512 | \$ | 1,067,605 | \$ 1,122,365 |

Consolidated capital is a non-GAAP measure. It 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. Consolidated capital is calculated as the sum of (i) total equity excluding accumulated other comprehensive income ("AOCI") on cash flow hedges; and (ii) liabilities for capital instruments.

Consolidated capital

As at

| (\$ millions) | March 31, 2019 | Dec | ember 31, 2018 | March 31, 2018 |
|------------------------------------|-------------------|-----|-------------------|-------------------|
| Total equity | \$ 48,994 | \$ | 47,151 | \$ 44,089 |
| Add AOCI loss on cash flow hedges | 146 | | 127 | 146 |
| Add qualifying capital instruments | 8,185 | | 8,732 | 8,275 |
| Consolidated capital | \$ 57,325 | \$ | 56,010 | \$ 52,510 |

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 basis more comparable to how the profitability of global asset managers is generally measured. Core EBITDA presents core earnings before the impact of interest, taxes, depreciation, and amortization. Core EBITDA excludes certain acquisition expenses related to insurance contracts in our retirement businesses which are deferred and amortized over the expected life time of the customer relationship under the CALM. Core EBITDA was selected as a key performance indicator for our Global WAM business, as EBITDA is widely used among asset management peers, and core earnings is a primary profitability metric for the Company overall.

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

Global Wealth and Asset Management

| | | | | (| Quarterl | ly Results | | | |
|---|--------|-------|---------|------|----------|------------|--------|-------|----------|
| (\$ millions, unaudited) | 1Q19 | 4Q1 | 3 3Q1 | 8 | 2Q18 | 1Q18 | 4Q17 | 3Q1 | 7 2Q17 |
| Core EBITDA | \$ 366 | \$ 36 | 2 \$ 40 | 5 \$ | 370 | \$ 360 | \$ 355 | \$ 35 | 2 \$ 377 |
| Amortization of deferred acquisition costs and other depreciation | 76 | 7 | 7 7 | 6 | 75 | 73 | 87 | 8 | 4 88 |
| Amortization of deferred sales commissions | 23 | 2: | 2 2 | 3 | 24 | 29 | 25 | 2 | 3 23 |
| Core earnings before income taxes | 267 | 26 | 3 30 | 6 | 271 | 258 | 243 | 24 | 5 266 |
| Core income tax (expense) recovery | (34) | (32 |) (18 | 5) | (32) | (31) | (45) | (29 | 9) (52) |
| Core earnings | \$ 233 | \$ 23 | 1 \$ 28 | 8 \$ | 239 | \$ 227 | \$ 198 | \$ 21 | 6 \$ 214 |

Expense efficiency ratio is a non-GAAP measure which Manulife uses to measure progress towards our target to be more efficient. Efficiency ratio is defined as pre-tax general expenses included in core earnings divided by the sum of pre-tax core earnings and pre-tax general expenses included in core earnings.

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 Statements of Financial Position of Manulife, excluding any value associated with future new business. EV is calculated as the sum of the adjusted net worth and the value of in-force business. The adjusted net worth is the IFRS shareholders' equity adjusted for goodwill and intangibles, fair value of surplus assets, the carrying value of debt and preferred shares, 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 LICAT framework. The value of in-force business in Asia reflects local statutory earnings and capital requirements. The value of in-force excludes our Global WAM, Manulife Bank and Property and Casualty Reinsurance businesses.

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 the Company's Global WAM, Manulife Bank and the short-term Property and Casualty Reinsurance businesses. 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 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 our Global WAM, Manulife Bank and Property and Casualty Reinsurance businesses. 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.

APE sales are comprised of 100% of regular premiums/deposits and 10% of single premiums/deposits for both insurance and insurance-based wealth accumulation products.

Insurance-based wealth accumulation product sales include all new deposits into variable and fixed annuity contracts. 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. Asia variable annuity deposits are included in APE sales.

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

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

E4 Caution regarding forward-looking statements

From time to time, MFC makes written and/or oral forward-looking statements, including in this document. In addition, our representatives may make forward-looking statements orally to analysts, investors, the media and others. All such statements are made pursuant to 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 the Canadian Actuarial Standards Board's final standard expected to be issued in the third quarter of 2019 and its impact on net income attributed to shareholders; and 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 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: 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; 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; unforeseen liabilities or asset impairments arising from acquisitions and dispositions of businesses; the realization of losses arising from the sale of investments classified as available-for-sale; our liquidity, including the availability of financing to satisfy existing financial liabilities on expected maturity dates when required; obligations to pledge additional collateral; the availability of letters of credit to provide capital management flexibility; accuracy of information received from counterparties and the ability of counterparties to meet their obligations; the availability, affordability and adequacy of reinsurance; legal and regulatory proceedings, including tax audits, tax litigation or similar proceedings; our ability to adapt products and services to the changing market; our ability to attract and retain key executives, employees and agents; the appropriate use and interpretation of complex models or deficiencies in models used; political, legal, operational and other risks associated with our non-North American operations; acquisitions and our ability to complete acquisitions including the availability of equity and debt financing for this purpose; the disruption of or changes to key elements of the Company's or public infrastructure systems; environmental concerns; 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 and Risk Factors Update" and "Critical Actuarial and Accounting Policies", under "Risk Management", "Risk Factors" and "Critical Actuarial and Accounting Policies" in the Management's Discussion and Analysis in our most recent annual report and, in the "Risk Management" note to the consolidated financial statements in our most recent annual and interim reports and elsewhere in our filings with Canadian and U.S. securities regulators.

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.

E5 Quarterly financial information

The following table provides summary information related to our eight most recently completed quarters.

| | Mar 31, | Dec 31, | Sept 30, | Jun 30, | Mar 31, | Dec 31, | Sept 30, | Jun 30, |
|--|-----------|----------|----------|-----------|----------|------------|-----------|-----------|
| (\$ millions, except per share amounts or otherwise stated, unaudited) | 2019 | 2018 | 2018 | 2018 | 2018 | 2017 | 2017 | 2017 |
| Revenue | | | | | | | | |
| Premium income | | | | | | | | |
| Life and health insurance | \$ 8,077 | \$ 7,724 | \$ 7,700 | \$ 7,628 | \$ 7,300 | \$ 6,000 | \$ 6,321 | \$ 6,040 |
| Annuities and pensions ⁽¹⁾ | 237 | (5,892) | (2,599) | 1,126 | 1,025 | 943 | 922 | 934 |
| Net premium income | 8,314 | 1,832 | 5,101 | 8,754 | 8,325 | 6,943 | 7,243 | 6,974 |
| Investment income | 3,747 | 3,278 | 3,481 | 3,566 | 3,235 | 3,579 | 3,309 | 3,444 |
| Realized and unrealized gains and losses on assets supporting insurance and investment contract liabilities ⁽²⁾ | 8,926 | 1,113 | (3,210) | (1,615) | (5,316) | 2,988 | (1,163) | 3,303 |
| Other revenue | 2,562 | 2,291 | 2,671 | 2,964 | 2,502 | 2,737 | 2,544 | 2,872 |
| Total revenue | \$ 23,549 | \$ 8,514 | \$ 8,043 | \$ 13,669 | \$ 8,746 | \$ 16,247 | \$ 11,933 | \$ 16,593 |
| Income (loss) before income taxes | \$ 2,524 | \$ 359 | \$ 1,911 | \$ 1,535 | \$ 1,714 | \$ (2,123) | \$ 1,269 | \$ 1,618 |
| Income tax (expense) recovery | (289) | (43) | (6) | (246) | (337) | 424 | (13) | (304) |
| Net income (loss) | \$ 2,235 | \$ 316 | \$ 1,905 | \$ 1,289 | \$ 1,377 | \$ (1,699) | \$ 1,256 | \$ 1,314 |
| Net income (loss) attributed to shareholders | \$ 2,176 | \$ 593 | \$ 1,573 | \$ 1,262 | \$ 1,372 | \$ (1,606) | \$ 1,105 | \$ 1,255 |
| Reconciliation of core earnings to net income attributed to shareholders | | | | | | | | |
| Total core earnings(3) | \$ 1,548 | \$ 1,337 | \$ 1,539 | \$ 1,431 | \$ 1,303 | \$ 1,205 | \$ 1,085 | \$ 1,174 |
| Other items to reconcile net income attributed to shareholders to core earnings ⁽⁴⁾ : | | | | | | | | |
| Investment-related experience outside of core earnings | 327 | (130) | 312 | 18 | - | 18 | 11 | 138 |
| Direct impact of equity markets, interest rates and variable annuity guarantee liabilities | 249 | (675) | (277) | 45 | 50 | (68) | 47 | (37) |
| Change in actuarial methods and assumptions | | - | (51) | - | - | (33) | (2) | - |
| Charge related to decision to change portfolio asset mix supporting our legacy businesses | - | - | - | - | - | (1,032) | - | - |
| Charge related to U.S. Tax Reform | - | - | 124 | - | - | (1,777) | - | - |
| Restructuring charges | | (63) | - | (200) | - | - | - | - |
| Reinsurance transactions and other | 52 | 124 | (74) | (32) | 19 | 81 | (36) | (20) |
| Net income (loss) attributed to shareholders | \$ 2,176 | \$ 593 | \$ 1,573 | \$ 1,262 | \$ 1,372 | \$ (1,606) | \$ 1,105 | \$ 1,255 |
| Basic earnings (loss) per common share | \$ 1.09 | \$ 0.28 | \$ 0.77 | \$ 0.61 | \$ 0.67 | \$ (0.83) | \$ 0.54 | \$ 0.62 |
| Diluted earnings (loss) per common share | \$ 1.08 | \$ 0.28 | \$ 0.77 | \$ 0.61 | \$ 0.67 | \$ (0.83) | \$ 0.54 | \$ 0.61 |
| Segregated funds deposits | \$ 10,586 | \$ 9,212 | \$ 9,424 | \$ 9,872 | \$ 9,728 | \$ 8,421 | \$ 8,179 | \$ 8,544 |
| Total assets (in billions) | \$ 780 | \$ 750 | \$ 748 | \$ 752 | \$ 740 | \$ 730 | \$ 713 | \$ 726 |
| Weighted average common shares (in millions) | 1,965 | 1,980 | 1,984 | 1,984 | 1,983 | 1,980 | 1,978 | 1,977 |
| Diluted weighted average common shares (in millions) | 1,969 | 1,983 | 1,989 | 1,989 | 1,989 | 1,988 | 1,986 | 1,984 |
| Dividends per common share | \$ 0.250 | \$ 0.250 | \$ 0.220 | \$ 0.220 | \$ 0.220 | \$ 0.205 | \$ 0.205 | \$ 0.205 |
| CDN\$ to US\$1 - Statement of Financial Position | 1.3363 | 1.3642 | 1.2945 | 1.3168 | 1.2894 | 1.2545 | 1.2480 | 1.2977 |
| CDN\$ to US\$1 - Statement of Income | 1.3295 | 1.3204 | 1.3069 | 1.2912 | 1.2647 | 1.2712 | 1.2528 | 1.3450 |

⁽¹⁾ Includes ceded premiums related to the reinsurance of a block of our legacy U.S. individual payout annuities of US\$0.5 billion in 1Q19, US\$5.3 billion in 4Q18 and US\$2.8 billion in 3Q18.

E6 Other

No changes were made in our internal control over financial reporting during the three months ended March 31, 2019, that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

As in prior quarters, MFC's Audit Committee reviewed this MD&A and the unaudited interim financial report and MFC's Board of Directors approved this MD&A prior to its release.

⁽²⁾ 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 and losses on the assets is largely offset in the change in insurance and investment contract liabilities.

⁽³⁾ Core earnings is a non-GAAP measure. See "Performance and non-GAAP measures" above.

⁽⁴⁾ For explanations of other items, see "Q1 earnings analysis" table in section A1 "Profitability" and for an operating segment split of these items see the 8 quarter trend tables in "Performance and non-GAAP measures" which reconcile net income attributed to shareholders to core earnings.

| As at | | | |
|---|----|----------------|------------------|
| (Canadian \$ in millions, unaudited) | | March 31, 2019 | December 31, 201 |
| Assets | | | |
| Cash and short-term securities | \$ | 16,097 | \$ 16,21 |
| Debt securities | | 188,486 | 185,59 |
| Public equities | | 21,146 | 19,17 |
| Mortgages | | 48,519 | 48,36 |
| Private placements | | 36,390 | 35,75 |
| Policy loans | | 6,390 | 6,44 |
| Loans to bank clients | | 1,793 | 1,79 |
| Real estate | | 12,801 | 12,77 |
| Other invested assets | | 27,836 | 27,54 |
| Total invested assets (note 3) | | 359,458 | 353,66 |
| Other assets | | | |
| Accrued investment income | | 2,483 | 2,42 |
| Outstanding premiums | | 1,610 | 1,36 |
| Derivatives (note 4) | | 15,959 | 13,70 |
| Reinsurance assets | | 42,430 | 43,05 |
| Deferred tax assets | | 4,196 | 4,31 |
| Goodwill and intangible assets | | 10,004 | 10,09 |
| Miscellaneous | | 9,349 | 8,43 |
| Total other assets | | 86,031 | 83,39 |
| Segregated funds net assets (note 14) | | 334,425 | 313,20 |
| Total assets | \$ | 779,914 | \$ 750,27 |
| Liabilities and Equity | * | -,- | |
| Liabilities | | | |
| Insurance contract liabilities (note 5) | \$ | 335,269 | \$ 328,65 |
| Investment contract liabilities (note 5) | * | 3,209 | 3,26 |
| Deposits from bank clients | | 19,984 | 19,68 |
| Derivatives (note 4) | | 8,249 | 7,80 |
| Deferred tax liabilities | | 2,025 | 1,81 |
| Other liabilities | | 14,902 | 15,19 |
| Other nationals | | 383,638 | 376,41 |
| Long-term debt (note 7) | | 4,672 | 4,76 |
| Capital instruments (note 8) | | 8,185 | 8,73 |
| Segregated funds net liabilities (note 14) | | 334,425 | 313,20 |
| Total liabilities | | 730,920 | 703,12 |
| Equity | | 130,320 | 700,12 |
| Preferred shares (note 9) | | 3,822 | 3,82 |
| Common shares (note 9) | | 23,052 | 22,96 |
| Contributed surplus | | 25,032 | 22,90 |
| Shareholders' retained earnings | | 14,239 | 12,70 |
| | | 14,235 | 12,70 |
| Shareholders' accumulated other comprehensive income (loss): Pension and other post-employment plans | | (423) | (426 |
| Available-for-sale securities | | (423) 687 | (265 |
| | | | , |
| Cash flow hedges Real estate revaluation reserve | | (146) | (127 |
| | | 31 6 310 | 2 7.01 |
| Translation of foreign operations | | 6,319 | 7,01 |
| Total shareholders' equity | | 47,846 77 | 45,96 |
| Participating policyholders' equity | | 77 1,071 | 9 1,09 |
| Nama annimallina internata | | | 1 00 |
| Non-controlling interests Total equity | | 48,994 | 47,15 |

Roy Gori

President and Chief Executive Officer

John Cassaday

Kanday

Chairman of the Board of Directors

Consolidated Statements of Income For the three months ended March 31, (Canadian \$ in millions except per share amounts, unaudited) 2019 2018 Revenue Premium income Gross premiums \$ 10.187 9.466 Premiums ceded to reinsurers (1,873)(1,141)Net premiums 8,314 8,325 Investment income (note 3) Investment income 3,747 3,235 Realized and unrealized gains (losses) on assets supporting insurance and investment contract (5,316)liabilities and on the macro hedge program 8,926 Net investment income (loss) 12,673 (2.081)2,502 Other revenue (note 10) 2,562 8,746 Total revenue 23,549 Contract benefits and expenses To contract holders and beneficiaries Gross claims and benefits (note 5) 7,169 6,647 Increase (decrease) in insurance contract liabilities 11,407 (2,567)43 44 Increase (decrease) in investment contract liabilities Benefits and expenses ceded to reinsurers (1,474)(1,213)Decrease (increase) in reinsurance assets (note 5) (298)(21)Net benefits and claims 16,847 2,890 General expenses 1,801 1,835 Investment expenses 403 406 Commissions 1,548 1,521 328 286 Interest expense 94 Net premium taxes 98 Total contract benefits and expenses 21,025 7,032 2,524 1,714 Income before income taxes (289)(337)Income tax expense Net income \$ 2,235 \$ 1,377 Net income (loss) attributed to: Non-controlling interests \$ 73 \$ 54 Participating policyholders (14)(49)Shareholders 2,176 1,372 \$ 2,235 \$ 1,377 \$ \$ Net income attributed to shareholders 2,176 1,372 Preferred share dividends (43)(39)1,333 Common shareholders' net income \$ \$ 2,133 Earnings per share Basic earnings per common share (note 9) \$ 1.09 \$ 0.67 1.08 0.67 Diluted earnings per common share (note 9)

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

Dividends per common share

0.22

0.25

| Consolidated Statements of Comprehensive Income | | |
|---|-------------|-------------|
| For the three months ended March 31, | | |
| (Canadian \$ in millions, unaudited) | 2019 | 2018 |
| Net income | \$ 2,235 | \$ 1,377 |
| Other comprehensive income (loss) ("OCI"), net of tax | | |
| Items that may be subsequently reclassified to net income: | | |
| Foreign exchange gains (losses) on: | | |
| Translation of foreign operations | (788) | 1,267 |
| Net investment hedges | 97 | (118) |
| Available-for-sale financial securities: | | |
| Unrealized gains (losses) arising during the period | 992 | (326) |
| Reclassification of net realized (gains) losses and impairments to net income | (39) | (13) |
| Cash flow hedges: | | |
| Unrealized gains (losses) arising during the period | (19) | (40) |
| Reclassification of realized losses to net income | - | 3 |
| Share of other comprehensive income (losses) of associates | 1 | - |
| Total items that may be subsequently reclassified to net income | 244 | 773 |
| Items that will not be reclassified to net income: | | |
| Change in pension and other post-employment plans | 3 | (21) |
| Real estate revaluation reserve | 11 | - |
| Total items that will not be reclassified to net income | 14 | (21) |
| Other comprehensive income (loss), net of tax | 258 | 752 |
| Total comprehensive income (loss), net of tax | \$ 2,493 | \$ 2,129 |
| Total comprehensive income (loss) attributed to: | | |
| Non-controlling interests | \$ 75 | \$ 52 |
| Participating policyholders | (14) | (48) |
| Shareholders | 2,432 | 2,125 |

| Income Taxes included in Other Comprehensive Income | | |
|---|--------------|-------|
| For the three months ended March 31, | | |
| (Canadian \$ in millions, unaudited) | 2019 | 2018 |
| Income tax expense (recovery) on: | | |
| Unrealized foreign exchange gains/losses on translation of foreign operations | \$ - \$ | - |
| Unrealized foreign exchange gains/losses on net investment hedges | 14 | (30) |
| Unrealized gains/losses on available-for-sale financial securities | 252 | (128) |
| Reclassification of realized gains/losses and recoveries/impairments to net income on available-for-sale financial securities | (11) | 8 |
| Unrealized gains/losses on cash flow hedges | (3) | 39 |
| Reclassification of realized gains/losses to net income on cash flow hedges | - | 1 |
| Change in pension and other post-employment plans | 1 | 16 |
| Real estate revaluation reserve | - | - |
| Total income tax expense (recovery) | \$ 253 \$ | (94) |

| Consolidated Statements of Changes in Equity | | | | |
|--|----|---------|----|---------|
| For the three months ended March 31, | | | | |
| (Canadian \$ in millions, unaudited) | | 2019 | | 2018 |
| Preferred shares | | 2010 | | 2010 |
| Balance, beginning of period | \$ | 3,822 | \$ | 3,577 |
| Issued during the period (note 9) | Ψ | | Ψ | 250 |
| Issuance costs, net of tax | | _ | | (5) |
| Balance, end of period | | 3,822 | | 3,822 |
| Common shares | | 3,022 | | 0,022 |
| Balance, beginning of period | | 22,961 | | 22,989 |
| Repurchased (note 9) | | (116) | | 22,303 |
| Issued on exercise of stock options | | 14 | | 21 |
| Issued under dividend reinvestment and share purchase plans | | 193 | | - |
| Balance, end of period | | 23,052 | | 23,010 |
| Contributed surplus | | 23,032 | | 23,010 |
| • | | 265 | | 277 |
| Balance, beginning of period Exercise of stock options and deferred share units | | | | |
| · | | (3) | | (3) |
| Stock option expense | | 265 | | 275 |
| Balance, end of period | | 200 | | 210 |
| Shareholders' retained earnings | | 40 704 | | 40.000 |
| Balance, beginning of period | | 12,704 | | 10,083 |
| Opening adjustment on adoption of IFRS 16 (note 2) | | (19) | | 4 270 |
| Net income attributed to shareholders | | 2,176 | | 1,372 |
| Common shares repurchased (note 9) | | (90) | | (20) |
| Preferred share dividends | | (43) | | (39) |
| Common share dividends | | (489) | | (429) |
| Balance, end of period | | 14,239 | | 10,987 |
| Shareholders' accumulated other comprehensive income (loss) ("AOCI") | | 0.040 | | 4.007 |
| Balance, beginning of period | | 6,212 | | 4,087 |
| Change in actuarial gains (losses) on pension and other post-employment plans | | 3 | | (21) |
| Change in unrealized foreign exchange gains (losses) of net foreign operations | | (691) | | 1,149 |
| Change in unrealized gains (losses) on available-for-sale financial securities | | 951 | | (338) |
| Change in unrealized gains (losses) on derivative instruments designated as cash flow hedges | | (19) | | (37) |
| Change in real estate revaluation reserve | | 11 | | - |
| Share of other comprehensive income (losses) of associates | | 1 2 400 | | - 4.040 |
| Balance, end of period | | 6,468 | | 4,840 |
| Total shareholders' equity, end of period | | 47,846 | | 42,934 |
| Participating policyholders' equity | | | | |
| Balance, beginning of period | | 94 | | 221 |
| Opening adjustment on adoption of IFRS 16 (note 2) | | (3) | | - |
| Net income (loss) attributed to participating policyholders | | (14) | | (49) |
| Other comprehensive income (loss) attributed to policyholders | | • | | 1_ |
| Balance, end of period | | 77 | | 173 |
| Non-controlling interests | | | | |
| Balance, beginning of period | | 1,093 | | 929 |
| Net income attributed to non-controlling interests | | 73 | | 54 |
| Other comprehensive income (loss) attributed to non-controlling interests | | 2 | | (2) |
| Contributions (distributions/disposal), net | | (97) | | 1 |
| Balance, end of period | | 1,071 | | 982 |
| Total equity, end of period | \$ | 48,994 | \$ | 44,089 |

| Consolidated Statements of Cash Flows | | | | |
|--|---|----|----|----------|
| For the three months ended March 31, | | | | |
| (Canadian \$ in millions, unaudited) | 201 | 9 | | 2018 |
| Operating activities | | | | |
| Net income | \$ 2,23 | 5 | \$ | 1,377 |
| Adjustments: | | | | |
| Increase (decrease) in insurance contract liabilities | 11,40 | 7 | | (2,567) |
| Increase (decrease) in investment contract liabilities | 4 | 3 | | 44 |
| (Increase) decrease in reinsurance assets excluding coinsurance transactions (note 5) | 41 | 4 | | (21) |
| Amortization of (premium) discount on invested assets | 3 | 0 | | 56 |
| Other amortization | 15 | 5 | | 139 |
| Net realized and unrealized (gains) losses and impairment on assets | (9,31 | 1) | | 4,825 |
| Deferred income tax expense (recovery) | 13 | 2 | | 1 |
| Stock option expense | | 3 | | 1 |
| Cash provided by operating activities before undernoted items | 5,10 | 8 | | 3,855 |
| Changes in policy related and operating receivables and payables | (1,19 | 7) | | (7) |
| Cash provided by (used in) operating activities | 3,91 | 1 | | 3,848 |
| Investing activities | | | | |
| Purchases and mortgage advances | (19,52 | 5) | | (23,610) |
| Disposals and repayments | 15,92 | | | 19,892 |
| Change in investment broker net receivables and payables | 13 | 0 | | (21) |
| Net cash increase (decrease) from sale and purchase of subsidiaries and businesses | 25 | 3 | | - |
| Cash provided by (used in) investing activities | (3,21 | 7) | | (3,739) |
| Financing activities | , . | | | |
| Increase (decrease) in repurchase agreements and securities sold but not yet purchased | 20 | 3 | | 137 |
| Redemption of capital instruments (note 8) | (50 | 0) | | (200) |
| Changes in deposits from Bank clients, net | 30 | 8 | | 840 |
| Lease payments | (2 | 7) | | - |
| Shareholders' dividends paid in cash | (33 | - | | (468) |
| Contributions from (distributions to) non-controlling interests, net | • | | | ` 1 |
| Common shares repurchased (note 9) | (20 | 6) | | - |
| Common shares issued, net (note 9) | 1 | 4 | | 21 |
| Preferred shares issued, net (note 9) | | - | | 245 |
| Cash provided by (used in) financing activities | (54 | 7) | | 576 |
| Cash and short-term securities | • | | | |
| Increase (decrease) during the period | 14 | 7 | | 685 |
| Effect of foreign exchange rate changes on cash and short-term securities | (20 | 6) | | 345 |
| Balance, beginning of period | 15,38 | - | | 15,098 |
| Balance, end of period | 15,32 | 3 | | 16,128 |
| Cash and short-term securities | , | | | |
| Beginning of period | | | | |
| Gross cash and short-term securities | 16,21 | 5 | | 15,965 |
| Net payments in transit, included in other liabilities | (83 | | | (867) |
| Net cash and short-term securities, beginning of period | 15,38 | 2 | | 15,098 |
| End of period | 2,1- | | | |
| Gross cash and short-term securities | 16,09 | 7 | | 17,020 |
| Net payments in transit, included in other liabilities | (77 | | | (892) |
| Net cash and short-term securities, end of period | \$ 15,32 | | \$ | 16,128 |
| Supplemental disclosures on cash flow information | , | | • | |
| Interest received | \$ 2,76 | 1 | \$ | 2,523 |
| Interest paid | 25 | | , | 247 |
| Income taxes paid | 30 | | | 268 |

CONDENSED NOTES TO INTERIM CONSOLIDATED FINANCIAL STATEMENTS

(Canadian \$ in millions except per share amounts or unless otherwise stated, unaudited)

Note 1 Nature of Operations and Significant Accounting Policies

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. 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.

These Interim Consolidated Financial Statements and condensed notes have been prepared in accordance with International Accounting Standard ("IAS") 34 "Interim Financial Reporting" as issued by the International Accounting Standards Board ("IASB"), using accounting policies which are consistent with those used in the Company's 2018 Annual Consolidated Financial Statements, except as disclosed in note 2.

These Interim Consolidated Financial Statements should be read in conjunction with the audited Consolidated Financial Statements for the year ended December 31, 2018, included on pages 96 to 178 of the Company's 2018 Annual Report, as well as the disclosures on risk in the shaded text and tables in the" Risk Management and Risk Factors" section the First Quarter 2019 Management Discussion and Analysis. These risk disclosures are considered an integral part of these Interim Consolidated Financial Statements.

These Interim Consolidated Financial Statements as at and for the three months ended March 31, 2019 were authorized for issue by MFC's Board of Directors on May 1, 2019.

Note 2 Accounting and Reporting Changes

Changes in accounting and reporting policy

(I) IFRS 16 "Leases"

Effective January 1, 2019, the Company adopted IFRS 16 "Leases" which was issued in January 2016 and replaces IAS 17 "Leases" and IFRIC 4 "Determining whether an arrangement contains a lease". IFRS 16 sets out principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract. The standard brings most leases on-balance sheet under a single model and eliminates the previous classifications of operating and finance leases. Exemptions to this treatment are for lease contracts with low value assets or leases with duration of less than one year. Lessor accounting largely remains unchanged with previous classifications of operating and finance leases continuing.

The Company adopted IFRS 16 using the modified retrospective method with no restatement of comparative information. Right-of-use assets of \$381 and lease liabilities of \$410 were recognized within miscellaneous assets and other liabilities in the Consolidated Statements of Financial Position, respectively. The net post-tax impact of these adjustments was \$22, of this \$19 was recognized in shareholders' retained earnings and \$3 was recognized in participating policyholders' equity. The assets and liabilities arise primarily from real estate lease contracts.

The Company applied the practical expedient of not reviewing lease classification under IFRS 16 for contracts not previously classified as leases. In addition, the Company has elected to expense lease payments on a straight-line basis for all leases with lease term of 12 months or less or the underlying asset has a low value.

(II) IFRS Interpretation Committee ("IFRIC") Interpretation 23 "Uncertainty over Income Tax Treatments"

Effective January 1, 2019, the Company adopted IFRIC 23 "Uncertainty over Income Tax Treatments" which was issued in June 2017. IFRIC 23 was applied retrospectively. IFRIC 23 provides guidance on applying the recognition and measurement requirements in IAS 12 when there is uncertainty over income tax treatments including whether uncertain tax treatments should be considered together or separately based on which approach better predicts resolution of the uncertainty. Adoption of IFRIC 23 did not have a significant impact on the Company's Consolidated Financial Statements.

(III) Amendments to IAS 28 "Investments in Associates and Joint Ventures"

Effective January 1, 2019, the Company adopted the amendments to IAS 28 "Investments in Associates and Joint Ventures" which were issued in October 2017. The amendments were applied retrospectively. The amendments clarify that an entity applies IFRS 9 "Financial Instruments" to financial interests in an associate or joint venture, aside from investments in equity, to which the equity method is not applied. IAS 39 will be applied to these interests until IFRS 9 is adopted. Adoption of these amendments did not have a significant impact on the Company's Consolidated Financial Statements.

(IV) Annual Improvements 2015-2017 Cycle

Effective January 1, 2019, the Company adopted amendments issued within the Annual Improvements 2015 – 2017 Cycle which was issued in December 2017. The IASB issued four minor amendments to different standards as part of the Annual Improvements process, with the amendments to be applied prospectively. Adoption of these amendments did not have a significant impact on the Company's Consolidated Financial Statements.

(V) Amendments to IAS 19 "Employee Benefits"

Effective January 1, 2019, the Company adopted amendments to IAS 19 "Employee Benefits" which were issued in February 2018. The amendments were applied prospectively. The amendments address the accounting for a plan amendment, curtailment or settlement that occurs within a reporting period. Updated actuarial assumptions must be used to determine current service cost and net interest for the remainder of the reporting period after such an event. The amendments also address how the accounting for asset ceilings are affected by such an event. Adoption of these amendments did not have a significant impact on the Company's Consolidated Financial Statements.

Note 3 Invested Assets and Investment Income

(a) Carrying values and fair values of invested assets

| As at March 31, 2019 | | FVTPL ⁽¹⁾ | | AFS ⁽²⁾ | | Other(3) | I 01 | aı carrying value | | ı otal fair value |
|---|----|----------------------|----|--------------------|----|----------|------|----------------------|----|----------------------|
| Cash and short-term securities ⁽⁴⁾ | \$ | 1,292 | \$ | 9,451 | \$ | 5,354 | \$ | 16,097 | \$ | 16,097 |
| Debt securities ⁽⁵⁾ | Ψ | 1,232 | Ψ | 3,431 | Ψ | 3,334 | Ψ | 10,031 | Ψ | 10,031 |
| Canadian government and agency | | 17,556 | | 5,840 | | _ | | 23,396 | | 23,396 |
| U.S. government and agency | | 10,413 | | 15,075 | | _ | | 25,488 | | 25,488 |
| Other government and agency | | 16,634 | | 4,253 | | _ | | 20,887 | | 20,887 |
| Corporate | | 110,251 | | 5,240 | | _ | | 115,491 | | 115,491 |
| Mortgage/asset-backed securities | | 3,011 | | 213 | | | | 3,224 | | 3,224 |
| Public equities | | 18,504 | | 2,642 | | | | 21,146 | | 21,146 |
| Mortgages | | | | _, | | 48,519 | | 48,519 | | 49,783 |
| Private placements | | | | | | 36,390 | | 36,390 | | 38,436 |
| Policy loans | | | | | | 6,390 | | 6,390 | | 6,390 |
| Loans to Bank clients | | | | | | 1,793 | | 1,793 | | 1,796 |
| Real estate | | | | | | -, | | -, | | -, |
| Own use property | | - | | | | 2,002 | | 2,002 | | 3,246 |
| Investment property | | - | | | | 10,799 | | 10,799 | | 10,799 |
| Other invested assets | | | | | | , | | , | | , |
| Alternative long-duration assets(6),(7) | | 15,313 | | 133 | | 8,504 | | 23,950 | | 24,613 |
| Various other | | 148 | | - | | 3,738 | | 3,886 | | 3,886 |
| Total invested assets | \$ | 193,122 | \$ | 42,847 | \$ | 123,489 | \$ | 359,458 | \$ | 364,678 |
| | | | | | | | | | | |
| | | | | | | | Tof | al carrying | | Total fair |
| As at December 31, 2018 | | FVTPL ⁽¹⁾ | | AFS(2) | | Other(3) | | value | | value |
| Cash and short-term securities ⁽⁴⁾ | \$ | 1,080 | \$ | 10,163 | \$ | 4,972 | \$ | 16,215 | \$ | 16,215 |
| Debt securities ⁽⁵⁾ | | | | | | | | | | |
| Canadian government and agency | | 16,445 | | 7,342 | | - | | 23,787 | | 23,787 |
| U.S. government and agency | | 11,934 | | 13,990 | | - | | 25,924 | | 25,924 |
| Other government and agency | | 16,159 | | 4,101 | | - | | 20,260 | | 20,260 |
| Corporate | | 107,425 | | 5,245 | | - | | 112,670 | | 112,670 |
| Mortgage/asset-backed securities | | 2,774 | | 179 | | - | | 2,953 | | 2,953 |
| Public equities | | 16,721 | | 2,458 | | - | | 19,179 | | 19,179 |
| Mortgages | | - | | - | | 48,363 | | 48,363 | | 48,628 |
| Private placements | | - | | - | | 35,754 | | 35,754 | | 36,103 |
| Policy loans | | - | | - | | 6,446 | | 6,446 | | 6,446 |
| Loans to Bank clients | | - | | - | | 1,793 | | 1,793 | | 1,797 |
| Real estate | | | | | | | | | | |

Total carrying

Total fair

187.409

\$

14,720

151

2,016

10,761

8,617

3,954

122.676

101

43.579

\$

2,016

10,761

23.438

4,105

353.664

Own use property

Various other

Total invested assets

Investment property
Other invested assets

Alternative long-duration assets(6),(7)

3,179

10,761

24.211

4,104

356.217

⁽¹⁾ FVTPL classification was elected for securities backing insurance contract liabilities to substantially reduce any accounting mismatch arising from changes in the fair value of these assets and changes in the value of the related insurance contract liabilities. If this election had not been made and instead the available-for-sale ("AFS") classification was selected, there would be an accounting mismatch 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 properties, investment properties, equity method accounted investments, oil and gas investments, and leveraged leases.

⁽⁴⁾ Includes short-term securities with maturities of less than one year at acquisition amounting to \$2,604 (December 31, 2018 – \$2,530) cash equivalents with maturities of less than 90 days at acquisition amounting to \$8,139 (December 31, 2018 – \$8,713) and cash of \$5,354 (December 31, 2018 – \$4,972).

⁽⁵⁾ Debt securities include securities which were acquired with maturities of less than one year and less than 90 days of \$1,097 and \$nil, respectively (December 31, 2018 – \$870 and \$40, respectively).

- (6) Alternative long-duration assets ("ALDA") Include investments in private equity of \$6,793, power and infrastructure of \$8,138, oil and gas of \$3,528, timber and agriculture sectors of \$4,544 and various other invested assets of \$947 (December 31, 2018 \$6,769, \$7,970, \$3,416, \$4,493 and \$791, respectively). During the period, a group of investments in hydro-electric power of \$418 were sold. These investments were previously classified as held for sale.
- (7) In 2018, the Company sold the following invested assets to related parties: \$1,422 of power and infrastructure ALDA to the John Hancock Infrastructure Master Fund L.P. in the U.S., an associate of the Company which is a structured entity based on partnership voting rights, the Company provides management services to the fund and owns less than 1% of the ownership interest; \$510 of U.S. commercial real estate to the Manulife US Real Estate Investment Trust in Singapore, an associate of the Company which is a structured entity based on unitholder voting rights, the Company provides management services to the trust and owns approximately 8.5% of its units; and \$1,314 of U.S. commercial real estate to three newly established joint ventures which are structured entities based on voting rights.

(b) Investment income

| For the three months ended March 31, | | 2019 | 2018 |
|---|----|--------|---------------|
| Interest income | \$ | 2,828 | \$ 2,682 |
| Dividend, rental and other income | | 668 | 541 |
| Impairments, provisions and recoveries, net | | 60 | 27 |
| Other | | 191 | (15) |
| | | 3,747 | 3,235 |
| Realized and unrealized gains (losses) on assets supporting insurance and investment contract liabilities and on the macro equity hedging program | | | |
| Debt securities | | 5,666 | (3,192) |
| Public equities | | 1,704 | (257) |
| Mortgages | | 13 | 4 |
| Private placements | | 22 | (75) |
| Real estate | | 77 | 94 |
| Other invested assets | | 321 | (331) |
| Derivatives, including macro equity hedging program | | 1,123 | (1,559) |
| | • | 8,926 | (5,316) |
| Total investment income | \$ | 12,673 | \$ (2,081) |

(c) Fair value measurement

The following table presents fair values and the fair value hierarchy of invested assets and segregated funds net assets measured at fair value in the Consolidated Statements of Financial Position.

| | Total fair | | | |
|--|---------------|---------------|---------------|--------------|
| As at March 31, 2019 | value | Level 1 | Level 2 | Level 3 |
| Cash and short-term securities | | | | |
| FVTPL | \$ 1,292 | \$ - | \$ 1,292 | \$ - |
| AFS | 9,451 | - | 9,451 | - |
| Other | 5,354 | 5,354 | - | - |
| Debt securities | | | | |
| FVTPL | | | | |
| Canadian government and agency | 17,556 | - | 17,556 | - |
| U.S. government and agency | 10,413 | - | 10,413 | - |
| Other government and agency | 16,634 | - | 16,442 | 192 |
| Corporate | 110,251 | - | 109,324 | 927 |
| Residential mortgage/asset-backed securities | 13 | - | 6 | 7 |
| Commercial mortgage/asset-backed securities | 1,308 | - | 1,308 | - |
| Other securitized assets | 1,690 | - | 1,690 | - |
| AFS | | | | |
| Canadian government and agency | 5,840 | - | 5,840 | - |
| U.S. government and agency | 15,075 | - | 15,075 | - |
| Other government and agency | 4,253 | - | 4,215 | 38 |
| Corporate | 5,240 | - | 5,116 | 124 |
| Residential mortgage/asset-backed securities | 1 | - | - | 1 |
| Commercial mortgage/asset-backed securities | 148 | - | 111 | 37 |
| Other securitized assets | 64 | - | 64 | - |
| Public equities | | | | |
| FVTPL | 18,504 | 18,501 | - | 3 |
| AFS | 2,642 | 2,640 | 2 | - |
| Real estate - investment property ⁽¹⁾ | 10,799 | - | - | 10,799 |
| Other invested assets ⁽²⁾ | 18,175 | 6 | - | 18,169 |
| Segregated funds net assets(3) | 334,425 | 300,330 | 29,699 | 4,396 |
| Total | \$ 589,128 | \$ 326,831 | \$ 227,604 | \$ 34,693 |

| | Total fair | | | |
|--|---------------|---------------|---------------|--------------|
| As at December 31, 2018 | value | Level 1 | Level 2 | Level 3 |
| Cash and short-term securities | | | | |
| FVTPL | \$ 1,080 | \$ - | \$ 1,080 | \$ - |
| AFS | 10,163 | - | 10,163 | - |
| Other | 4,972 | 4,972 | - | - |
| Debt securities | | | | |
| FVTPL | | | | |
| Canadian government and agency | 16,445 | - | 16,445 | - |
| U.S. government and agency | 11,934 | - | 11,934 | - |
| Other government and agency | 16,159 | - | 15,979 | 180 |
| Corporate | 107,425 | - | 106,641 | 784 |
| Residential mortgage/asset-backed securities | 13 | - | 6 | 7 |
| Commercial mortgage/asset-backed securities | 1,344 | - | 1,344 | - |
| Other securitized assets | 1,417 | - | 1,417 | - |
| AFS | | | | |
| Canadian government and agency | 7,342 | - | 7,342 | - |
| U.S. government and agency | 13,990 | - | 13,990 | - |
| Other government and agency | 4,101 | - | 4,064 | 37 |
| Corporate | 5,245 | - | 5,125 | 120 |
| Residential mortgage/asset-backed securities | 2 | - | - | 2 |
| Commercial mortgage/asset-backed securities | 128 | - | 128 | - |
| Other securitized assets | 49 | - | 49 | - |
| Public equities | | | | |
| FVTPL | 16,721 | 16,718 | - | 3 |
| AFS | 2,458 | 2,456 | 2 | - |
| Real estate - investment property ⁽¹⁾ | 10,761 | - | - | 10,761 |
| Other invested assets ⁽²⁾ | 17,562 | - | - | 17,562 |
| Segregated funds net assets(3) | 313,209 | 276,178 | 32,584 | 4,447 |
| Total | \$ 562,520 | \$ 300,324 | \$ 228,293 | \$ 33,903 |

T-4-1 (-:-

⁽¹⁾ For real estate investment properties, the significant unobservable inputs are capitalization rates (ranging from 2.75% to 8.50% during the period and ranging from 2.75% to 8.75% during the year 2018) and terminal capitalization rates (ranging from 3.65% to 9.25% during the period and ranging from 3.65% to 9.25% during the year 2018). 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.

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 period ranged from 7.80% to 16.0% (for the year ended December 31, 2018 – ranged from 8.95% to 16.5%). 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 period ranged from 5.0% to 7.0% (for the year ended December 31, 2018 – ranged from 5.0% to 7.0%). 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.

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

Fair value and the fair value hierarchy of invested assets not measured at fair value.

| As at March 31, 2019 | Carrying value | Total fair value | Level 1 | Level 2 | Level 3 |
|---|----------------|---------------------|-----------|--------------|--------------|
| Mortgages | \$ 48,519 | \$ 49,783 | \$ | \$ | \$ 49,783 |
| Private placements | 36,390 | 38,436 | - | 32,778 | 5,658 |
| Policy loans | 6,390 | 6,390 | - | 6,390 | - |
| Loans to Bank clients | 1,793 | 1,796 | - | 1,796 | - |
| Real estate - own use property | 2,002 | 3,246 | - | - | 3,246 |
| Other invested assets ⁽¹⁾ | 9,661 | 10,324 | 127 | - | 10,197 |
| Total invested assets disclosed at fair value | \$ 104,755 | \$ 109,975 | \$ 127 | \$ 40,964 | \$ 68,884 |
| | Carrying | Total fair | | | |
| As at December 31, 2018 | value | value | Level 1 | Level 2 | Level 3 |
| Mortgages | \$ 48,363 | \$ 48,628 | \$ - | \$ - | \$ 48,628 |
| Private placements | 35,754 | 36,103 | - | 30,325 | 5,778 |
| Policy loans | 6,446 | 6,446 | - | 6,446 | - |
| Loans to Bank clients | 1,793 | 1,797 | - | 1,797 | - |
| Real estate - own use property | 2,016 | 3,179 | - | - | 3,179 |
| Other invested assets ⁽¹⁾ | 9,981 | 10,753 | 121 | - | 10,632 |
| Total invested assets disclosed at fair value | \$ 104.353 | \$ 106.906 | \$ 121 | \$ 38,568 | \$ 68.217 |

⁽¹⁾ Other invested assets disclosed at fair value include \$3,361 (December 31, 2018 - \$3,575) of leveraged leases which are disclosed at their carrying values as fair value is not routinely calculated on these investments.

Transfers between Level 1 and Level 2

The Company records 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. Conversely, assets are transferred from Level 2 to Level 1 when transaction volume and frequency are indicative of an active market. During the three months ended March 31, 2019 and 2018, the Company had \$nil transfers between Level 1 and Level 2.

For segregated funds net assets, the Company had \$nil transfers between Level 1 and Level 2 for the three months ended March 31, 2019 (March 31, 2018 – \$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 the invested assets and segregated funds net assets as Level 3 if there are no observable markets for these assets or, in the absence of an active markets, most 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. The gains and losses in the tables below include the changes in fair value due to both observable and unobservable factors.

The following table presents a roll forward of invested assets and segregated funds net assets measured at fair value using significant unobservable inputs (Level 3) for the three months ended March 31, 2019 and 2018.

| | | unr | Net ealized/ ealized gains | unrea | | | | | | | | | | | | | ange in |
|---|------------------------------|-----|---|------------|---|-----|----------|-------------------|------|-----------|--------------------------------------|-------------------|-------|-------------------|------------------------------|----|---|
| For the three months ended March 31, 2019 | Balance, nuary 1, 2019 | in | osses) cluded in net come ⁽¹⁾ | (lo inc | gains sses) luded OCI ⁽²⁾ | Pui | rchases | Sales | Sett | lements | nsfer into el 3 ⁽³⁾ | Tran o Leve | ut of | ırrency vement | Balance, arch 31, 2019 | on | gains losses) assets till held |
| Debt securities FVTPL | | | | | | | | | | | | | | | | | |
| Other government & agency Corporate Residential mortgage/asset- backed securities | \$ 180 784 7 | \$ | 7 19 | \$ | | \$ | 11 34 | \$ (5) (45) | \$ | - (11) | \$ - 161 | \$ | - | \$ (1) (15) | \$ 192 927 7 | \$ | 7 32 |
| Other securitized assets | | | | | - | | | | | | | | : | | - | | : |
| outer coounting a doored | 971 | | 26 | | | | 45 | (50) | | (11) | 161 | | - | (16) | 1,126 | | 39 |
| AFS | | | | | | | | • | | ` ' | | | | | | | |
| Other government & agency | 37 | | - | | 1 | | - | - | | - | - | | - | | 38 | | |
| Corporate | 120 | | - | | 1 | | 8 | (3) | | (2) | - | | - | - | 124 | | |
| Residential mortgage/asset- backed securities | 2 | | | | - | | - | | | - | - | | | (1) | 1 | | - |
| Commercial mortgage/asset- backed securities | - | | | | - | | 37 | | | - | - | | | | 37 | | - |
| Other securitized assets | - | | | | - | | - | | | - | - | | - | • | - | | - |
| | 159 | | - | | 2 | | 45 | (3) | | (2) | - | | - | (1) | 200 | | |
| Public equities | | | | | | | | | | | | | | | | | |
| FVTPL | 3 | | • | | • | | • | | | • | • | | • | • | 3 | | |
| D 1 (1 ' 1 ' 1 | 3 | | • | | - | | - | • | | - | - | | - | • | 3 | | - |
| Real estate - investment | 10,761 | | 73 | | - | | 66 | • | | - | 14 | | - | (115) | 10,799 | | 73 |
| Other invested assets | 17,562 | | 282 | | 30 | | 936 | (82) | | (252) | • | | - | (307) | 18,169 | | 259 |
| | 28,323 | | 355 | | 30 | | 1,002 | (82) | | (252) | 14 | | - | (422) | 28,968 | | 332 |
| Segregated funds net assets | 4,447 | | 40 | | - | | 4 | (39) | | (7) | - | | - | (49) | 4,396 | | 28 |
| Total | \$ 33,903 | \$ | 421 | \$ | 32 | \$ | 1,096 | \$ (174) | \$ | (272) | \$ 175 | \$ | - | \$ (488) | \$ 34,693 | \$ | 399 |

| For the three months ended March 31, 2018 | Balance, inuary 1, 2018 | realized/ unrealize d gains (losses) included in net income ⁽¹⁾ | un c (l | Net alized/ realize d gains osses) cluded AOCI ⁽²⁾ | Pu | rchases | Sales | Seti | tlements | nsfer into _evel 3 ⁽³⁾ | Transfer out of Level | urrency vement | | lance, ch 31, 2018 | unre (I on | ange in ealized gains losses) assets till held |
|--|-------------------------------|--|---------------|---|----|---------|-------------|------|----------|--|-----------------------|-------------------|------|--------------------------|------------------|---|
| Debt securities | | | | | | | | | | | | | | | | |
| FVTPL | | | | | | | | | | | | | | | | |
| Other government & agency | \$ 239 | \$ - | \$ | - | \$ | 13 | \$ (23) | \$ | (14) | \$ - | \$ - | \$ 18 | \$ | 233 | \$ | - |
| Corporate Residential mortgage/asset- | 710 | (11) | | - | | 15 | (14) | | (1) | - | (55) | 44 | | 688 | | (11) |
| backed securities | 1 | 6 | | - | | - | - | | - | - | - | - | | 7 | | 6 |
| Other securitized assets | 25 | (1) | | - | | 31 | - | | - | - | (25) | - | | 30 | | (1) |
| | 975 | (6) | | - | | 59 | (37) | | (15) | - | (80) | 62 | | 958 | | (6) |
| AFS | | | | | | | | | | | | | | | | |
| Other government & agency | 46 | - | | - | | 1 | (2) | | (4) | - | - | 3 | | 44 | | - |
| Corporate | 89 | - | | (1) | | 5 | - | | - | - | (7) | 5 | | 91 | | - |
| Residential mortgage/asset- backed securities | - | - | | 1 | | _ | _ | | _ | - | - | 1 | | 2 | | - |
| Other securitized assets | 1 | - | | - | | - | - | | - | - | (1) | - | | - | | - |
| | 136 | - | | - | | 6 | (2) | | (4) | - | (8) | 9 | | 137 | | - |
| Public equities | | | | | | | | | | | | | | | | |
| FVTPL | 3 | - | | - | | - | - | | - | _ | - | - | | 3 | | - |
| | 3 | - | | - | | - | - | | - | - | - | - | | 3 | | - |
| Real estate - investment | 12,529 | 95 | | - | | 378 | (108) | | - | - | - | 245 | 1 | 13,139 | | 75 |
| Other invested assets | 16,203 | (1,147) | | 1 | | 920 | (626) | | (174) | - | - | 371 | 1 | 15,548 | | (431) |
| | 28,732 | (1,052) | | 1 | | 1,298 | (734) | | (174) | - | | 616 | 2 | 28,687 | | (356) |
| Segregated funds net assets | 4,255 | 22 | | - | | 35 | (43) | | (7) | 3 | (2) | 62 | | 4,325 | | 13 |
| Total | \$ 34,101 | \$ (1,036) | \$ | 1 | \$ | 1,398 | \$ (816) | \$ | (200) | \$ 3 | \$ (90) | \$ 749 | \$ 3 | 34,110 | \$ | (349) |

⁽¹⁾ These amounts are included in net investment income on the Consolidated Statements of Income except for the amount related to segregated funds net assets, where the amount is recorded in changes in segregated funds net assets, refer to note 14.

Transfers into Level 3 primarily result from securities that were impaired during the periods 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.

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

⁽³⁾ For assets that are transferred into and/or out of Level 3, the Company uses fair values of the assets at the beginning of period.

Note 4 Derivative and Hedging Instruments

Fair value of derivatives

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

| | | | Mar | ch 31, 2019 | | | | Decem | ber 31, 2018 | 3 | |
|---|----------------------------|---------------|-----|-------------|-------|-------------|---------------|-------|--------------|-------|-------------|
| As at | | Notional | | Fair | value | | Notional | | Fair | value | |
| Type of hedge | Instrument type | amount | | Assets | | Liabilities | amount | | Assets | | Liabilities |
| Qualifying hedge accou | inting relationships | | | | | | | | | | |
| Fair value hedges | Interest rate swaps | \$ 426 | \$ | - | \$ | 6 | \$ 519 | \$ | - | \$ | 13 |
| | Foreign currency swaps | 89 | | 3 | | 1 | 91 | | 5 | | - |
| Cash flow hedges | Foreign currency swaps | 1,814 | | 44 | | 376 | 1,834 | | 80 | | 367 |
| | Forward contracts | 60 | | - | | 6 | 80 | | - | | 9 |
| | Equity contracts | 209 | | 2 | | 3 | 101 | | - | | 12 |
| Net investment hedges | Foreign currency forwards | 1,989 | | - | | 40 | 1,864 | | 21 | | 65 |
| Total derivatives in qualif relationships | ying hedge accounting | 4,587 | | 49 | | 432 | 4,489 | | 106 | | 466 |
| Derivatives not designa accounting relationshi | | | | | | | | | | | |
| | Interest rate swaps | 299,382 | | 12,812 | | 6,436 | 300,704 | | 11,204 | | 5,675 |
| | Interest rate futures | 13,653 | | - | | - | 14,297 | | - | | - |
| | Interest rate options | 11,292 | | 314 | | - | 11,736 | | 314 | | - |
| | Foreign currency swaps | 23,833 | | 560 | | 1,256 | 23,156 | | 747 | | 1,341 |
| | Currency rate futures | 3,857 | | - | | - | 4,052 | | - | | - |
| | Forward contracts | 30,656 | | 1,546 | | 24 | 29,248 | | 670 | | 158 |
| | Equity contracts | 14,588 | | 669 | | 101 | 15,492 | | 653 | | 163 |
| | Credit default swaps | 633 | | 9 | | - | 652 | | 9 | | - |
| | Equity futures | 11,664 | | - | | - | 10,908 | | - | | - |
| Total derivatives not desi accounting relationships | gnated in qualifying hedge | 409,558 | | 15,910 | | 7,817 | 410,245 | | 13,597 | - | 7,337 |
| Total derivatives | | \$ 414,145 | \$ | 15,959 | \$ | 8,249 | \$ 414,734 | \$ | 13,703 | \$ | 7,803 |

The total notional amount of \$414 billion (December 31, 2018 – \$415 billion) includes \$136 billion (December 31, 2018 – \$136 billion) related to derivatives utilized in the Company's variable annuity guarantee dynamic hedging and macro equity risk hedging programs. Due to 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 fair value of the derivative instruments by remaining term to maturity. Fair values disclosed below do not incorporate the impact of master netting agreements (refer to note 6).

| | | Re | emaining te | rm to n | naturity | | | |
|-------------------------|---------------------|----|--------------|---------|-----------------|--------------|----|--------|
| As at March 31, 2019 | Less than 1 year | | 1 to 3 years | | 3 to 5 years | Over 5 years | - | Total |
| Derivative assets | \$ 1,118 | \$ | 840 | \$ | 1,211 | \$ 12,790 | \$ | 15,959 |
| Derivative liabilities | 232 | | 156 | | 188 | 7,673 | | 8,249 |
| | | Re | emaining te | rm to n | naturity | | _ | |
| | Less than | | 1 to 3 | | 3 to 5 | Over 5 | = | |
| As at December 31, 2018 | 1 year | | years | | years | years | | Total |
| Derivative assets | \$ 649 | \$ | 671 | \$ | 795 | \$ 11,588 | \$ | 13,703 |
| Derivative liabilities | 359 | | 229 | | 227 | 6,988 | | 7,803 |

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

| As at March 31, 2019 | Fair value | Level 1 | Level 2 | Level 3 |
|------------------------------|--------------|---------|--------------|-------------|
| Derivative assets | | | | |
| Interest rate contracts | \$ 14,654 | \$ - | \$ 13,436 | \$ 1,218 |
| Foreign exchange contracts | 625 | - | 617 | 8 |
| Equity contracts | 671 | - | 642 | 29 |
| Credit default swaps | 9 | - | 9 | - |
| Total derivative assets | \$ 15,959 | \$ - | \$ 14,704 | \$ 1,255 |
| Derivative liabilities | | | | |
| Interest rate contracts | \$ 6,442 | \$ - | \$ 6,066 | \$ 376 |
| Foreign exchange contracts | 1,703 | - | 1,703 | - |
| Equity contracts | 104 | - | 38 | 66 |
| Total derivative liabilities | \$ 8,249 | \$ - | \$ 7,807 | \$ 442 |
| | | | | |
| As at December 31, 2018 | Fair value | Level 1 | Level 2 | Level 3 |
| Derivative assets | | | | |
| Interest rate contracts | \$ 12,155 | \$ - | \$ 11,537 | \$ 618 |
| Foreign exchange contracts | 886 | - | 876 | 10 |
| Equity contracts | 653 | - | 621 | 32 |
| Credit default swaps | 9 | - | 9 | - |
| Total derivative assets | \$ 13,703 | \$ - | \$ 13,043 | \$ 660 |
| Derivative liabilities | | | | |
| Interest rate contracts | \$ 5,815 | \$ - | \$ 5,318 | \$ 497 |
| Foreign exchange contracts | 1,814 | - | 1,813 | 1 |
| Equity contracts | 174 | | 118 | 56 |
| Total derivative liabilities | \$ 7.803 | \$ | \$ 7.249 | \$ 554 |

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

| For the three months ended March 31, | 2019 | 2018 |
|---|-----------|-------------|
| Balance as at January 1, | \$ 106 | \$ 769 |
| Net realized/unrealized gains (losses) included in: | | |
| Net income ⁽¹⁾ | 695 | (445) |
| OCI ⁽²⁾ | 21 | (18) |
| Purchases | 2 | 6 |
| Settlements | (43) | 30 |
| Transfers | | |
| Into Level 3(3) | 103 | - |
| Out of Level 3(3) | (71) | (61) |
| Currency movement | - | 10 |
| Balance as at March 31 | \$ 813 | \$ 291 |
| Change in unrealized gains (losses) on instruments still held | \$ 669 | \$ (422) |

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

Note 5 Insurance and Investment Contract Liabilities

(a) Insurance and investment contracts

The Company monitors experience and reviews the assumptions used in the calculation of insurance and investment contract liabilities on an ongoing basis to ensure they appropriately reflect future expected experience and any changes in the risk profile of the business. Any changes to the methods and assumptions used in projecting future asset and liability cash flows will result in a change in insurance and investment contract liabilities.

For the three months ended March 31, 2019, changes in assumptions and model enhancements did not impact insurance and investment contract liabilities or net income attributed to shareholders (March 31, 2018 – no changes in assumptions and model enhancements).

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

⁽³⁾ For derivatives 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 period). Transfers out of Level 3 occur when the inputs used to price the assets and liabilities become available from observable market data.

(b) Investment contracts - Fair value measurement

As at March 31, 2019, the fair value of investment contract liabilities measured at fair value was \$785 (December 31, 2018 – \$782). The carrying value and fair value of investment contract liabilities measured at amortized cost were \$2,424 and \$2,708, respectively (December 31, 2018 – \$2,483 and \$2,718, respectively). The net carrying value and fair value of investment contract liabilities were \$2,305 and \$2,588, respectively (December 31, 2018 - \$2,355 and \$2,588, respectively).

(c) Gross claims and benefits

The following table presents a breakdown of gross claims and benefits for the three months ended March 31, 2019 and 2018.

| For the three months ended March 31, | 2019 | 2018 |
|--|-------------|-------------|
| Death, disability and other claims | \$ 3,944 | \$ 3,885 |
| Maturity and surrender benefits | 2,123 | 1,797 |
| Annuity payments | 1,028 | 1,009 |
| Policyholder dividends and experience rating refunds | 323 | 323 |
| Net transfers from segregated funds | (249) | (367) |
| Total | \$ 7,169 | \$ 6,647 |

(d) Annuity coinsurance transactions

On September 26, 2018, the Company entered into coinsurance agreements with Reinsurance Group of America ("RGA") to reinsure a block of legacy U.S. individual pay-out annuities business from John Hancock Life Insurance Company (U.S.A.) ("JHUSA") with a 100% quota share and John Hancock Life Insurance Company of New York ("JHNY") with a 90% quota share. Under the terms of the agreements, the Company will maintain responsibility for servicing the policies. The transaction was structured such that the Company ceded policyholder contract liabilities and transferred invested assets backing these liabilities. The JHUSA transaction closed in 2018.

The JHNY transaction closed with an effective date of January 1, 2019. The Company recorded an after-tax gain of \$18, which includes an increase of reinsurance assets of \$132 and ceded premiums of \$131 on the Consolidated Statements of Income.

On October 31, 2018, the Company entered into coinsurance agreements with Jackson National Life Insurance Company ("Jackson"), a wholly-owned subsidiary of Prudential plc, to reinsure a block of legacy U.S. group pay-out annuities business from JHUSA with a 100% quota share and JHNY with a 90% quota share. Under the terms of the agreements, the Company will maintain responsibility for servicing the policies. The transaction was structured such that the Company ceded policyholder contract liabilities and transferred related invested assets backing these liabilities. The JHUSA transaction closed in 2018.

The JHNY transaction closed with an effective date of January 1, 2019. The Company recorded an after-tax gain of \$31, which includes an increase of reinsurance assets of \$621, a ceding commission paid of \$35 and ceded premiums of \$581 on the Consolidated Statements of Income.

Note 6 Risk Management

The Company's policies and procedures for managing risk related to financial instruments and insurance contracts can be found in note 9 of the Company's 2018 Annual Consolidated Financial Statements as well as the shaded tables and text in the "Risk Management" section of the Company's Management Discussion and Analysis ("MD&A") in the 2018 Annual Report.

(a) Risk disclosures included in the First Quarter's MD&A

Market risk sensitivities related to variable annuity and segregated fund guarantees, publicly traded equity performance risk, interest rate and spread risk and alternative long-duration asset performance risk are disclosed in shaded text and tables in the "Risk Management and Risk Factors" section of the First Quarter 2019 Management Discussion and Analysis. These disclosures are in accordance with IFRS 7 "Financial Instruments: Disclosures" and IAS 34 "Interim Financial Reporting" and are an integral part of these Interim Consolidated Financial Statements.

(b) Credit risk

(I) Credit quality

Private placements

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.

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

| As at March 31, 2019 | AAA | AA | Α | BBB | BB | В | and lower | Total |
|----------------------------|-------------|--------------|--------------|--------------|-------------|----|-----------|--------------|
| Commercial mortgages | | | | | | | | |
| Retail | \$ 107 | \$ 1,379 | \$ 4,911 | \$ 2,164 | \$ 11 | \$ | 63 | \$ 8,635 |
| Office | 55 | 1,533 | 5,490 | 1,625 | 28 | | 6 | 8,737 |
| Multi-family residential | 703 | 1,416 | 2,274 | 781 | 36 | | - | 5,210 |
| Industrial | 35 | 368 | 1,824 | 329 | 118 | | - | 2,674 |
| Other | 284 | 356 | 1,157 | 1,198 | - | | 9 | 3,004 |
| Total commercial mortgages | 1,184 | 5,052 | 15,656 | 6,097 | 193 | | 78 | 28,260 |
| Agricultural mortgages | - | 151 | - | 374 | - | | - | 525 |
| Private placements | 1,112 | 4,901 | 13,643 | 14,206 | 910 | | 1,618 | 36,390 |
| Total | \$ 2,296 | \$ 10,104 | \$ 29,299 | \$ 20,677 | \$ 1,103 | \$ | 1,696 | \$ 65,175 |
| | | | | | | | | |
| As at December 31, 2018 | AAA | AA | Α | BBB | BB | В | and lower | Total |
| Commercial mortgages | | | | | | | | |
| Retail | \$ 82 | \$ 1,524 | \$ 4,459 | \$ 2,227 | \$ 11 | \$ | 74 | \$ 8,377 |
| Office | 56 | 1,495 | 5,454 | 1,650 | 45 | | 6 | 8,706 |
| Multi-family residential | 613 | 1,427 | 2,407 | 839 | 37 | | - | 5,323 |
| Industrial | 36 | 366 | 1,953 | 339 | 120 | | - | 2,814 |
| Other | 289 | 334 | 1,167 | 1,191 | - | | 14 | 2,995 |
| Total commercial mortgages | 1,076 | 5,146 | 15,440 | 6,246 | 213 | | 94 | 28,215 |
| Agricultural mortgages | - | 163 | _ | 389 | - | | _ | 552 |

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

13,304

28,744

14,055

20,690

733

946

1,551

1,645

35,754

64,521

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

4,968

10,277

1,143

2,219

| As at | | Marc | h 31, 2019 | | | December 31, 2018 | | | | |
|-------------------------------|-------------|------|------------|--------------|-------------|-------------------|-----------|----|--------|--|
| | Insured | | Uninsured | Total | Insured | | Uninsured | | Total | |
| Residential mortgages | | | | | | | | | | |
| Performing | \$ 6,813 | \$ | 12,878 | \$ 19,691 | \$ 6,854 | \$ | 12,696 | \$ | 19,550 | |
| Non-performing ⁽¹⁾ | 20 | | 23 | 43 | 19 | | 27 | | 46 | |
| Loans to Bank clients | | | | | | | | | | |
| Performing | n/a | | 1,787 | 1,787 | n/a | | 1,787 | | 1,787 | |
| Non-performing ⁽¹⁾ | n/a | | 6 | 6 | n/a | | 6 | | 6 | |
| Total | \$ 6,833 | \$ | 14,694 | \$ 21,527 | \$ 6,873 | \$ | 14,516 | \$ | 21,389 | |

⁽¹⁾ Non-performing refers to assets that are 90 days or more past due.

(II) Past due or credit impaired financial assets

The following table presents the carrying values of financial assets which are either past due but not impaired and the allowance for credit losses.

| | | Pas | t due | but not impa | aireu | | _ | | |
|-------------------------------------|-----|-------------------|-------|------------------|-------|-------|----|----------------|-----------------------|
| As at March 31, 2019 | Les | s than 90 days | 90 | days and greater | | Total | | Total impaired | wance for edit losses |
| Debt securities | | | | | | | | | |
| FVTPL | \$ | - | \$ | - | \$ | - | \$ | 178 | \$ - |
| AFS | | 5 | | 1 | | 6 | | 1 | - |
| Private placements | | 60 | | - | | 60 | | 8 | 4 |
| Mortgages and loans to Bank clients | | 68 | | - | | 68 | | 114 | 60 |
| Other financial assets | | 156 | | 13 | | 169 | | 1 | • |
| Total | \$ | 289 | \$ | 14 | \$ | 303 | \$ | 302 | \$ 64 |

Pact due but not impaired

| | | Past due but not impaired | | | | | | | |
|-------------------------------------|-----|---------------------------|----|------------------|----|-------|----|----------------|-------------------------|
| As at December 31, 2018 | Les | s than 90 days | 90 | days and greater | | Total | | Total impaired | vance for dit losses |
| Debt securities | | | | | | | | | |
| FVTPL | \$ | 14 | \$ | - | \$ | 14 | \$ | 39 | \$ - |
| AFS | | - | | 2 | | 2 | | 1 | - |
| Private placements | | 15 | | - | | 15 | | 18 | 43 |
| Mortgages and loans to Bank clients | | 70 | | - | | 70 | | 120 | 52 |
| Other financial assets | | 77 | | 26 | | 103 | | 1 | <u>-</u> |
| Total | \$ | 176 | \$ | 28 | \$ | 204 | \$ | 179 | \$ 95 |

(c) Securities lending, repurchase and reverse repurchase transactions

As at March 31, 2019, the Company had loaned securities (which are included in invested assets), with a market value of \$1,794 (December 31, 2018 – \$1,518). The Company holds collateral with a current market value that exceeds the value of securities lent in all cases.

As at March 31, 2019, the Company had engaged in reverse repurchase transactions of \$270 (December 31, 2018 – \$63) which are recorded as short-term receivables. In addition, the Company had engaged in repurchase transactions of \$271 as at March 31, 2019 (December 31, 2018 – \$64) which are recorded as payables.

(d) Credit default swaps

The Company replicates exposure to specific issuers by selling credit protection via credit default swaps ("CDSs") to complement its cash debt securities investing. The Company does not write CDS protection in excess of its government bond holdings.

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

| AA A | Notional amount ⁽¹⁾ | Fair value | average maturity (in years) ⁽²⁾ |
|--|--------------------------------|------------|--|
| Single name CDSs ⁽³⁾ – Corporate debt | | | |
| AA | \$ 24 | \$ | 2 |
| A | 434 | 7 | 2 |
| BBB | 175 | 2 | 1 |
| Total single name CDSs | \$ 633 | \$ 9 | 2 |
| Total CDS protection sold | \$ 633 | \$ 9 | 2 |

| As at December 31, 2018 | Notional amount ⁽¹⁾ | Fair value | Weighted average maturity (in years) ⁽²⁾ |
|--|--------------------------------|------------|--|
| Single name CDSs ⁽³⁾ – Corporate debt | | | |
| AA | \$ 25 | \$ - | 2 |
| A | 447 | 7 | 2 |
| BBB | 180 | 2 | 2 |
| Total single name CDSs | \$ 652 | \$ 9 | 2 |
| Total CDS protection sold | \$ 652 | \$ 9 | 2 |

⁽¹⁾ Notional amount represents 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.

The Company held no purchased credit protection as at March 31, 2019 and December 31, 2018.

(e) 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 March 31, 2019, the percentage of the Company's derivative exposure which was with counterparties rated AA- or higher amounted to 22 per cent (December 31, 2018 – 19 per cent). As at March 31, 2019, the largest single counterparty exposure, without taking into account the impact of master netting agreements or the benefit of collateral held, was \$2,565 (December 31, 2018 – \$2,269). The net exposure to this counterparty, after taking into account master netting agreements and the fair value of collateral held, was \$nil (December 31, 2018 – \$nil).

(f) Offsetting financial assets and financial liabilities

Certain derivatives, securities lent 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 collateral held to offset against the same counterparty's obligation.

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.

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⁽²⁾ The weighted average maturity of the CDS is weighted based on notional amounts.

⁽³⁾ Ratings are based on S&P where available followed by Moody's, DBRS, and Fitch. If no rating is available from a rating agency, an internally developed rating is used.

Related amounts not set off in the Consolidated Statements of Financial Position

| | | | | i illalicia | 11 031 | .1011 | _ | | | |
|-------------------------------|--------------|---------------------------|---------|---------------|---------|---------------|----|-----------------------|----------|--------------|
| | | | | Amounts | | | | | | |
| | | | S | ubject to an | | | | | | |
| | | | | enforceable | | | | | | |
| | | | | aster netting | | inancial and | | Net amount | | |
| | Gro | oss amounts | arra | ingement or | ca | sh collateral | | including | N | et amounts |
| | of financial | | similar | | pledged | | | financing | excludir | |
| As at March 31, 2019 | ır | nstruments ⁽¹⁾ | | agreements | | (received)(2) | | trusts ⁽³⁾ | tına | ncing trusts |
| Financial assets | | | | | | | | | | |
| Derivative assets | \$ | 16,506 | \$ | (7,242) | \$ | (9,181) | \$ | 83 | \$ | 83 |
| Securities lending | | 1,794 | | - | | (1,794) | | - | | - |
| Reverse repurchase agreements | | 270 | | - | | (270) | | - | | - |
| Total financial assets | \$ | 18,570 | \$ | (7,242) | \$ | (11,245) | \$ | 83 | \$ | 83 |
| Financial liabilities | | | | | | | | | | |
| Derivative liabilities | \$ | (9,226) | \$ | 7,242 | \$ | 1,739 | \$ | (245) | \$ | (35) |
| Repurchase agreements | | (271) | | - | | 270 | | (1) | | - |
| Total financial liabilities | \$ | (9,497) | \$ | 7,242 | \$ | 2,009 | \$ | (246) | \$ | (35) |

| | | | Re | elated amounts Consolidated Financia | Stater | ments of | | | |
|-------------------------------|---|---------|--|--|--|----------|---|----|---|
| As at December 31, 2018 | Gross amounts of financial instruments ⁽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⁾ | | et amounts excluding noing trusts |
| Financial assets | | | | | | | | | |
| Derivative assets | \$ | 14,320 | \$ | (6,644) | \$ | (7,431) | \$ 245 | \$ | 245 |
| Securities lending | | 1,518 | | - | | (1,518) | - | | - |
| Reverse repurchase agreements | | 63 | | (63) | | - | - | | - |
| Total financial assets | \$ | 15,901 | \$ | (6,707) | \$ | (8,949) | \$ 245 | \$ | 245 |
| Financial liabilities | | | | | | | | | |
| Derivative liabilities | \$ | (8,716) | \$ | 6,644 | \$ | 1,868 | \$ (204) | \$ | (33) |
| Repurchase agreements | | (64) | | 63 | | 1 | - | | - |
| Total financial liabilities | \$ | (8,780) | \$ | 6,707 | \$ | 1,869 | \$ (204) | \$ | (33) |

⁽¹⁾ Financial assets and liabilities in the above table include accrued interest of \$560 and \$977 respectively (December 31, 2018 – \$621 and \$913 respectively).

The Company also has certain credit linked note assets and variable surplus note liabilities which have unconditional offset rights. Under the netting agreements, the Company has rights of offset including in the event of the Company's default, insolvency, or bankruptcy. These financial instruments are offset in the Company's Consolidated Statements of Financial Position.

A credit linked note is a security that allows the issuer to transfer a specific credit risk to the buyer. A surplus note is a subordinated debt obligation that often qualifies as surplus (the U.S. statutory equivalent of equity) by some U.S. state insurance regulators. Interest payments on surplus notes are made after all other contractual payments are made. The following table presents the effect of unconditional netting.

Financial and cash collateral excludes over-collateralization. As at March 31, 2019, 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 \$890, \$422, \$83 and \$nil, respectively (December 31, 2018 – \$417, \$405, \$80 and \$nil respectively). As at March 31, 2019, collateral pledged (received) does not include collateral in transit on OTC instruments or include initial margin on exchange traded contracts or cleared contracts.

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

| As at March 31, 2019 | Gross amounts of financial instruments | | Amounts subject to an enforceable netting arrangement | Ne | et amounts of financial instruments |
|-----------------------------------|--|----|---|----|---|
| Credit linked note ⁽¹⁾ | \$ 720 | \$ | (720) | \$ | - |
| Variable surplus note | (720) | | 720 | | - |
| | | s | Amounts subject to an | | |
| | Gross amounts | | enforceable | Ne | et amounts of |
| | of financial | | netting | | financial |
| As at December 31, 2018 | instruments | a | arrangement | | instruments |
| Credit linked note(1) | \$ 679 | \$ | (679) | \$ | - |
| Variable surplus note | (679) | | 679 | | - |

⁽¹⁾ As at March 31, 2019, the Company had \$nil (December 31, 2018 - \$nil) fixed surplus notes outstanding.

Note 7 Long-Term Debt

(a) Carrying value of long-term debt instruments

| | | | | ı | March 31, | Dece | ember 31, |
|------------------------|--------------------|--------------------|-----------|----|-----------|------|-----------|
| As at | Issue date | Maturity date | Par value | | 2019 | | 2018 |
| 4.70% Senior notes(1) | June 23, 2016 | June 23, 2046 | US\$1,000 | \$ | 1,328 | \$ | 1,355 |
| 5.375% Senior notes(1) | March 4, 2016 | March 4, 2046 | US\$750 | | 989 | | 1,010 |
| 3.527% Senior notes(1) | December 2, 2016 | December 2, 2026 | US\$270 | | 360 | | 367 |
| 4.150% Senior notes(1) | March 4, 2016 | March 4, 2026 | US\$1,000 | | 1,328 | | 1,356 |
| 4.90% Senior notes(1) | September 17, 2010 | September 17, 2020 | US\$500 | | 667 | | 681 |
| Total | | | | \$ | 4,672 | \$ | 4,769 |

⁽¹⁾ These U.S. dollar senior notes have been designated as hedges of the Company's net investment in its U.S. operations which reduces the earnings volatility that would otherwise arise from the re-measurement of these senior notes into Canadian dollars.

(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. As at March 31, 2019, the fair value of long-term debt was \$4,971 (December 31, 2018 – \$4,886). Long-term debt was categorized in Level 2 of the fair value hierarchy (December 31, 2018 – Level 2).

Note 8 Capital Instruments

(a) Carrying value of capital instruments

| | | Earliest par | ** * ** * * * * * * * * * * * * * * * * | Par | March 31, | Dece | ember 31, |
|---------------------------------------|-------------------|-------------------|---|---------|-------------|------|-----------|
| As at | Issue date | redemption date | Maturity date | value | 2019 | | 2018 |
| 7.535% MFCT II Senior debenture notes | July 10, 2009 | December 31, 2019 | December 31, 2108 | \$1,000 | \$ 1,000 | \$ | 1,000 |
| JHFC Subordinated notes | December 14, 2006 | n/a | December 15, 2036 | \$650 | 647 | | 647 |
| 4.061% MFC Subordinated notes(1) | February 24, 2017 | February 24, 2027 | February 24, 2032 | US\$750 | 997 | | 1,017 |
| 3.00% MFC Subordinated notes | November 21, 2017 | November 21, 2024 | November 21, 2029 | S\$500 | 491 | | 498 |
| 3.049% MFC Subordinated debentures | August 18, 2017 | August 20, 2024 | August 20, 2029 | \$750 | 747 | | 747 |
| 3.317% MFC Subordinated debentures | May 9, 2018 | May 9, 2023 | May 9, 2028 | \$600 | 597 | | 597 |
| 3.181% MLI Subordinated debentures | November 20, 2015 | November 22, 2022 | November 22, 2027 | \$1,000 | 997 | | 997 |
| 3.85% MFC Subordinated notes | May 25, 2016 | May 25, 2021 | May 25, 2026 | S\$500 | 492 | | 499 |
| 2.389% MLI Subordinated debentures | June 1, 2015 | January 5, 2021 | January 5, 2026 | \$350 | 349 | | 349 |
| 2.10% MLI Subordinated debentures | March 10, 2015 | June 1, 2020 | June 1, 2025 | \$750 | 749 | | 749 |
| 2.64% MLI Subordinated debentures | December 1, 2014 | January 15, 2020 | January 15, 2025 | \$500 | 500 | | 500 |
| 2.811% MLI Subordinated debentures(2) | February 21, 2014 | February 21, 2019 | February 21, 2024 | \$500 | - | | 500 |
| 7.375% JHUSA Surplus notes | February 25, 1994 | n/a | February 15, 2024 | US\$450 | 619 | | 632 |
| Total | | | | | \$ 8,185 | \$ | 8,732 |

⁽¹⁾ Designated as a hedge of the Company's net investment in its U.S. operations which reduces the earnings volatility that would otherwise arise from the remeasurement of the subordinated notes into Canadian dollars.

(b) Fair value measurement

Fair value of 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 debt instruments with similar characteristics or estimated using discounted cash flows using observable market rates (Level 2).

Capital instruments are measured at amortized cost in the Consolidated Statements of Financial Position. As at March 31, 2019, the fair value of capital instruments was \$8,316 (December 31, 2018 – \$8,712). Capital instruments were categorized in Level 2 of the fair value hierarchy (December 31, 2018 – Level 2).

Note 9 Share Capital and Earnings Per Share

(a) Preferred shares

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

| | 20 | 19 | | 20 | 2018 | | | | | |
|--|---------------|----|--------|---------------|------|--------|--|--|--|--|
| | Number of | | | Number of | | | | | | |
| | shares | | | shares | | | | | | |
| For the periods ended March 31, | (in millions) | | Amount | (in millions) | | Amount | | | | |
| Balance, January 1 | 156 | \$ | 3,822 | 146 | \$ | 3,577 | | | | |
| Issued, Class 1 shares, Series 25 ⁽¹⁾ | - | | - | 10 | | 250 | | | | |
| Issuance costs, net of tax | - | | - | - | | (5) | | | | |
| Balance, March 31 | 156 | \$ | 3,822 | 156 | \$ | 3,822 | | | | |

⁽¹⁾ On February 20, 2018, MFC issued 10 million of Non-cumulative Rate Reset Class 1 Shares Series 25 at a price of \$25 per share for gross proceeds of \$250.

⁽²⁾ MLI redeemed in full the 2.811% subordinated debentures at par, on February 21, 2019, the earliest par redemption date.

The following table presents additional information on the preferred shares outstanding as at March 31, 2019.

| | | | | Number of | | | | |
|------------------------------|-------------------|------------------|---------------------|---------------|-------------|-------|----|-----------------------|
| | | Annual | Earliest redemption | shares | | | | Net |
| As at March 31, 2019 | Issue date | dividend rate(1) | date ⁽²⁾ | (in millions) | Face amount | | a | amount ⁽³⁾ |
| 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 ^{(4),(5)} | March 11, 2011 | 2.178% | June 19, 2021 | 6 | | 158 | | 155 |
| Series 4 | June 20, 2016 | floating(6) | June 19, 2021 | 2 | | 42 | | 41 |
| Series 5 ^{(4),(5)} | December 6, 2011 | 3.891% | December 19, 2021 | 8 | | 200 | | 195 |
| Series 7 ^{(4),(5)} | February 22, 2012 | 4.312% | March 19, 2022 | 10 | | 250 | | 244 |
| Series 9 ^{(4),(5)} | May 24, 2012 | 4.351% | September 19, 2022 | 10 | | 250 | | 244 |
| Series 11 ^{(4),(5)} | December 4, 2012 | 4.731% | March 19, 2023 | 8 | | 200 | | 196 |
| Series 13 ^{(4),(5)} | June 21, 2013 | 4.414% | September 19, 2023 | 8 | | 200 | | 196 |
| Series 15 ^{(4),(5)} | February 25, 2014 | 3.90% | June 19, 2019 | 8 | | 200 | | 195 |
| Series 17 ^{(4),(5)} | August 15, 2014 | 3.90% | December 19, 2019 | 14 | | 350 | | 343 |
| Series 19 ^{(4),(5)} | December 3, 2014 | 3.80% | March 19, 2020 | 10 | | 250 | | 246 |
| Series 21 ^{(4),(5)} | February 25, 2016 | 5.60% | June 19, 2021 | 17 | | 425 | | 417 |
| Series 23 ^{(4),(5)} | November 22, 2016 | 4.85% | March 19, 2022 | 19 | | 475 | | 467 |
| Series 25 ^{(4),(5)} | February 20, 2018 | 4.70% | June 19, 2023 | 10 | | 250 | | 245 |
| Total | | | | 156 | \$ | 3,900 | \$ | 3,822 |

⁽¹⁾ Holders of Class A and Class 1 preferred shares are entitled to receive non-cumulative preferential cash dividends on a quarterly basis, as and when declared by the Board of Directors

(b) Common shares

As at March 31, 2019, there were 27 million outstanding stock options and deferred share units that entitle the holder to receive common shares or payment in cash or common shares, at the option of the holder (December 31, 2018 – 24 million).

| | three months | |
|--|----------------|-------------------|
| For the | ended | year ended |
| Number of common shares (in millions) | March 31, 2019 | December 31, 2018 |
| Balance, beginning of period | 1,971 | 1,982 |
| Repurchased for cancellation | (10) | (23) |
| Issued under dividend reinvestment plan | 8 | 9 |
| Issued on exercise of stock options and deferred share units | 1 | 3 |
| Balance, end of period | 1,970 | 1,971 |

Normal Course Issuer Bid

On February 19, 2019, the Company announced that the Toronto Stock Exchange approved an amendment to the normal course issuer bid ("NCIB") to increase the number of shares that the Company may purchase from 40 million to 99 million MFC common shares. The current NCIB commenced on November 14, 2018 and will continue until November 13, 2019, when the NCIB expires, or such earlier date as the Company completes its purchases. During the three months ended March 31, 2019, the Company purchased 9.9 million shares for \$206. Of this, \$116 was recorded in common shares and \$90 was recorded in retained earnings in the Consolidated Statements of Changes in Equity.

Redemption of all preferred shares is subject to regulatory approval. MFC may redeem each series, in whole or in part, at par, on the earliest redemption date or every five years thereafter, with the exception of Class A Series 2, Class A Series 3 and Class 1 Series 4 preferred shares. 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. MFC may redeem the Class 1 Series 4, in whole or in part, at any time, at \$25.00 per share if redeemed on June 19, 2021 and on June 19 every five years thereafter, or at \$25.50 per share if redeemed on any other date after June 19, 2016, subject to regulatory approval, as noted.

⁽³⁾ Net of after-tax issuance costs.

⁽⁴⁾ 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%, Series 19 – 2.30%, Series 21 – 4.97%, Series 23 – 3.83% and Series 25 – 2.55%.

⁽⁵⁾ On the earliest redemption 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 4 above.

⁽⁶⁾ The floating dividend rate for the Class 1 Shares Series 4 equals the three-month Government of Canada Treasury bill yield plus 1.41%.

Dividend Reinvestment Plan

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. For the dividend paid on March 19, 2019, common shares in connection with the DRIP were purchased from treasury with a two per cent discount from the market price.

(c) Earnings per share

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

| For the three months ended March 31, | 2019 | 2018 |
|--|-------|-------|
| Weighted average number of common shares (in millions) | 1,965 | 1,983 |
| Dilutive stock-based awards ⁽¹⁾ (in millions) | 4 | 6 |
| Weighted average number of diluted common shares (in millions) | 1,969 | 1,989 |

⁽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 period.

Note 10 Revenue from Service Contracts

The Company provides investment management services, administrative services and distribution and related services to proprietary and third-party investment funds, retirement plans, group benefit plans and other arrangements. The Company also provides real estate management services to tenants of the Company's investment properties.

The Company's service contracts generally impose single performance obligations, each consisting of a series of similar related services for each customer.

The Company's performance obligations within service arrangements are generally satisfied over time as the customer simultaneously receives and consumes the benefits of the services rendered, measured using an output method. Fees typically include variable consideration and the related revenue is recognized to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty is subsequently resolved.

Asset based fees vary with asset values of accounts under management, subject to market conditions and investor behaviors beyond the Company's control. Transaction processing and administrative fees vary with activity volume, also beyond the Company's control. Some fees, including distribution fees, are based on account balances and transaction volumes. Fees related to account balances and transaction volumes are measured daily. Real estate management service fees include fixed portions plus recovery of variable costs of services rendered to tenants. Fees related to services provided are generally recognized as services are rendered, which is when it becomes highly probable that no significant reversal of cumulative revenue recognized will occur. The Company has determined that its service contracts have no significant financing components as fees are collected monthly. The Company has no significant contract assets or contract liabilities.

The following tables present revenue from service contracts by service lines and reporting segments as disclosed in note 13.

| For the three months ended March 31, 2019 | Asia | Canada | U.S. | Global WAM | orporate nd Other | Total |
|---|-----------|-----------|-----------|---------------|----------------------|-------------|
| Investment management and other related fees | \$ 82 | \$ 39 | \$ 129 | \$ 651 | \$ (51) | \$ 850 |
| Transaction processing, administration, and service fees | 60 | 200 | 4 | 489 | - | 753 |
| Distribution fees and other | 50 | 12 | 45 | 170 | (9) | 268 |
| Total included in other revenue | 192 | 251 | 178 | 1,310 | (60) | 1,871 |
| Real estate management services included in net investment income | 9 | 39 | 36 | - | 2 | 86 |
| Total | \$ 201 | \$ 290 | \$ 214 | \$ 1,310 | \$ (58) | \$ 1,957 |

| Facility than a could be add March 24 0040 | A - ' - | 0 | 0 | Global | | orporate | T. (-) |
|---|-----------|-----------|-----------|-------------|----|----------|-------------|
| For the three months ended March 31, 2018 | Asia | Canada | U.S. | WAM | а | nd Other | Total |
| Investment management and other related fees | \$ 84 | \$ 38 | \$ 130 | \$ 681 | \$ | (55) | \$ 878 |
| Transaction processing, administration, and service fees | 54 | 217 | 4 | 475 | | - | 750 |
| Distribution fees and other | 72 | 12 | 162 | 188 | | (11) | 423 |
| Total included in other revenue | 210 | 267 | 296 | 1,344 | | (66) | 2,051 |
| Real estate management services included in net investment income | 7 | 41 | 38 | - | | 1 | 87 |
| Total | \$ 217 | \$ 308 | \$ 334 | \$ 1,344 | \$ | (65) | \$ 2,138 |

Note 11 Employee Future Benefits

The Company maintains a number of pension plans, both defined benefit and defined contribution, and retiree welfare plans for eligible employees and agents. Information about the cost of the Company's material pension and retiree welfare plans in the U.S. and Canada is as follows.

| | Pensi | on plan | s | Retiree w | elfare p | lans |
|---|-----------|---------|------|-----------|----------|------|
| For the three months ended March 31, | 2019 | | 2018 | 2019 | | 2018 |
| Defined benefit current service cost | \$ 10 | \$ | 10 | \$ | \$ | - |
| Defined benefit administrative expenses | 5 | | 2 | - | | - |
| Past service cost amendment ⁽¹⁾ | - | | 8 | - | | - |
| Service cost | 15 | | 20 | - | | - |
| Interest on net defined benefit (asset) liability | 4 | | 3 | - | | 1 |
| Defined benefit cost | 19 | | 23 | - | | 1 |
| Defined contribution cost | 23 | | 22 | - | | - |
| Net benefit cost | \$ 42 | \$ | 45 | \$ - | \$ | 1 |

⁽¹⁾ In 2018, past service cost includes \$8, reflecting a surplus sharing agreement between the Company and certain legacy employees in Canada, which received regulatory approval in 2018.

Note 12 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 where the Company is a party ordinarily relate to its activities as a provider of insurance protection or wealth management products, reinsurance, or its capacity as an investment adviser, employer, or taxpayer. Other life insurers and asset managers, operating in the jurisdictions in which the Company does business, have been subject to a wide variety of other types of actions, some of which resulted in substantial judgments or settlements against the defendants; it is possible that the Company may become involved in similar actions in the future. 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.

A class action against John Hancock Life Insurance Company (U.S.A.) ("JHUSA") is pending in the U.S. District Court for the Southern District of New York (the "Southern District of NY") in which claims are made that JHUSA breached, and continues to breach, the contractual terms of certain universal life policies issued between approximately 1990 and 2006 by including impermissible charges in its cost of insurance ("COI") calculations and certain other rider charges. The Company believes that its COI calculations have been, and continue to be, in accordance with the terms of the policies. In May 2018, the parties agreed to the financial terms of a settlement in the amount of US\$91. On March 18, 2019, the court approved the US\$91 settlement, and proceeds will be distributed beginning in May 2019.

In June 2018, a class action was initiated against JHUSA and John Hancock Life Insurance Company of New York ("JHNY") in the Southern District of NY on behalf of owners of Performance Universal Life policies issued between 2003 and 2009 whose policies are subject to a COI increase announced in 2018. In October 2018, a second and almost identical class action was initiated against JHUSA and JHNY in the Southern District of NY. The two cases were determined to be related and they were assigned to the same judge. Discovery has commenced in these cases and will continue through 2019. No hearings on substantive matters have been scheduled. It is too early to assess the range of potential outcomes for these two related lawsuits.

(b) Guarantees

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

MFC has guaranteed the payment of amounts on 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, as amended and restated on January 13, 2017, of Class A Shares and Class B Shares of MLI and any other class of preferred shares that rank in parity with Class A Shares or Class B Shares of MLI. MFC has also provided a subordinated guarantee on the day of issuance for the following subordinated debentures issued by MLI: \$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.

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

Condensed Consolidated Statements of Income Information

| For the three months ended March 31, 2019 | (Gı | MFC uarantor) | cor | MLI nsolidated | | Other ubsidiaries MFC on a combined basis | | nsolidation djustments | co | Total ensolidated amounts | | MFLP |
|---|-----|------------------|-----|-------------------|----|---|----|---------------------------|----|---------------------------------|----|----------|
| Total revenue Net income (loss) attributed to shareholders | \$ | (4) 2,176 | \$ | 23,566 2,261 | \$ | | \$ | (13) (2,261) | \$ | 23,549 2,176 | \$ | 5 (3) |
| For the three months anded March 21, 2019 | (C) | MFC | 001 | MLI nsolidated | | Other ubsidiaries MFC on a combined basis | | nsolidation diustments | co | Total | | MFLP |
| For the three months ended March 31, 2018 Total revenue | \$ | uarantor) | \$ | 8.758 | \$ | 5 | \$ | | \$ | amounts 8,746 | \$ | 17 |
| Net income (loss) attributed to shareholders | Ą | 1,372 | φ | 0,750 1,446 | φ | 5 (5) | φ | (24) (1,441) | Ф | 0,740 1,372 | φ | 7 |

Condensed Consolidated Statements of Financial Position Information

| As at March 31, 2019 | (Gu | MFC Jarantor) | со | MLI nsolidated | Other ubsidiaries MFC on a combined basis | solidation justments | Total consolidated amounts | MFLP |
|----------------------------------|-----|------------------|----|-------------------|---|-----------------------------|----------------------------|----------|
| Invested assets | \$ | 27 | \$ | 359,421 | \$ 10 | \$ - | \$ 359,458 | \$ 11 |
| Total other assets | | 56,781 | | 86,941 | 3 | (57,694) | 86,031 | 1,100 |
| Segregated funds net assets | | - | | 334,425 | - | - | 334,425 | - |
| Insurance contract liabilities | | - | | 335,269 | - | - | 335,269 | - |
| Investment contract liabilities | | - | | 3,209 | - | - | 3,209 | - |
| Segregated funds net liabilities | | - | | 334,425 | - | - | 334,425 | - |
| Total other liabilities | | 8,962 | | 50,226 | - | (1,171) | 58,017 | 877 |

| As at December 31, 2018 | (Gua | MFC rantor) | COI | MLI nsolidated | Other subsidiaries f MFC on a combined basis | nsolidation djustments | Total consolidated amounts | MFLP |
|----------------------------------|------|----------------|-----|-------------------|--|-------------------------------|----------------------------|----------|
| Invested assets | \$ | 21 | \$ | 353,632 | \$ 11 | \$ - | \$ 353,664 | \$ 11 |
| Total other assets | 5 | 4,346 | | 83,523 | 3 | (54,474) | 83,398 | 1,059 |
| Segregated funds net assets | | - | | 313,209 | - | - | 313,209 | - |
| Insurance contract liabilities | | - | | 328,654 | - | - | 328,654 | - |
| Investment contract liabilities | | - | | 3,265 | - | - | 3,265 | - |
| Segregated funds net liabilities | | - | | 313,209 | - | - | 313,209 | - |
| Total other liabilities | | 8,403 | | 50,043 | - | (454) | 57,992 | 833 |

(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 15.

Note 13 Segment and Geographic Reporting

The Company's reporting segments are Asia, Canada, U.S., Global WAM and Corporate and Other. Each reporting segment is responsible for managing its operating results, developing products, defining strategies for services and distribution based on the profile and needs of its business and market. The Company's significant product and service offerings are shown below.

Wealth and asset management businesses (Global WAM) – include mutual funds and exchange traded funds, group retirement and savings products, and institutional asset management services across all major asset classes. These products and services are distributed through multiple distribution channels, including agents and brokers affiliated with the Company, independent securities brokerage firms and financial advisors, pension plan consultants and banks.

Insurance and annuity products (Asia, Canada and U.S.) – includes a variety of individual life insurance, individual and group long-term care insurance and guaranteed and partially guaranteed annuity products. Products are distributed through multiple distribution channels, including insurance agents, brokers, banks, financial planners and direct marketing. Manulife Bank of Canada offers a variety of deposit and credit products to Canadian customers.

Corporate and Other Segment – comprised of investment performance on assets backing capital, net of amounts allocated to operating segments; costs incurred by the corporate office related to shareholder activities (not allocated to the operating segments); financing costs; Property and Casualty Reinsurance Business; and run-off reinsurance operations including variable annuities and accident and health.

Effective January 1, 2019, the Company has updated its methodology for allocating capital and the related earnings to each reporting segment from the Corporate and Other segments. Prior period amounts have been restated to reflect this change.

(a) By Segment

| For the three months ended | | | | Global | Corporate | |
|--|---------------|---------------|---------------|---------------|----------------|---------------|
| March 31, 2019 | Asia | Canada | U.S. | WAM | and Other | Total |
| Revenue | | | | | | |
| Life and health insurance | \$ 4,461 | \$ 2,105 | \$ 1,487 | \$ - | \$ 24 | \$ 8,077 |
| Annuities and pensions(1) | 708 | 115 | (586) | - | - | 237 |
| Net premium income | 5,169 | 2,220 | 901 | - | 24 | 8,314 |
| Net investment income | 3,254 | 4,582 | 4,588 | 23 | 226 | 12,673 |
| Other revenue | 328 | 288 | 651 | 1,311 | (16) | 2,562 |
| Total revenue | 8,751 | 7,090 | 6,140 | 1,334 | 234 | 23,549 |
| Contract benefits and expenses | | | | | | |
| Life and health insurance | 5,458 | 3,220 | 5,596 | - | (8) | 14,266 |
| Annuities and pensions | 1,029 | 2,219 | (704) | 37 | - | 2,581 |
| Net benefits and claims | 6,487 | 5,439 | 4,892 | 37 | (8) | 16,847 |
| Interest expense | 54 | 124 | 9 | 2 | 139 | 328 |
| Other expenses | 1,281 | 755 | 694 | 1,028 | 92 | 3,850 |
| Total contract benefits and expenses | 7,822 | 6,318 | 5,595 | 1,067 | 223 | 21,025 |
| Income (loss) before income taxes | 929 | 772 | 545 | 267 | 11 | 2,524 |
| Income tax recovery (expense) | (117) | (78) | (104) | (34) | 44 | (289) |
| Net income (loss) | 812 | 694 | 441 | 233 | 55 | 2,235 |
| Less net income (loss) attributed to: | | | | | | |
| Non-controlling interests | 74 | - | - | - | (1) | 73 |
| Participating policyholders | 43 | (57) | | | <u>-</u> - | (14) |
| Net income (loss) attributed to shareholders | \$ 695 | \$ 751 | \$ 441 | \$ 233 | \$ 56 | \$ 2,176 |
| Total assets | \$ 117,022 | \$ 224,036 | \$ 270,476 | \$ 139,444 | \$ 28,936 | \$ 779,914 |

| For the three months ended | | | | | Global | Corporate | |
|---------------------------------------|---------------|----|---------|---------------|---------------|--------------|---------------|
| March 31, 2018 | Asia | | Canada | U.S. | WAM | and Other | Total |
| Revenue | | | | | | | |
| Life and health insurance | \$ 3,741 | \$ | 2,024 | \$ 1,512 | \$ - | \$ 23 | \$ 7,300 |
| Annuities and pensions | 745 | | 129 | 151 | - | - | 1,025 |
| Net premium income | 4,486 | | 2,153 | 1,663 | - | 23 | 8,325 |
| Net investment income | (439) | | 669 | (2,284) | 3 | (30) | (2,081) |
| Other revenue | 264 | | 362 | 627 | 1,344 | (95) | 2,502 |
| Total revenue | 4,311 | | 3,184 | 6 | 1,347 | (102) | 8,746 |
| Contract benefits and expenses | | | | | | | |
| Life and health insurance | 2,591 | | 1,739 | (1,154) | - | 11 | 3,187 |
| Annuities and pensions | 35 | | 9 | (354) | 13 | - | (297) |
| Net benefits and claims | 2,626 | | 1,748 | (1,508) | 13 | 11 | 2,890 |
| Interest expense | 43 | | 91 | 11 | - | 141 | 286 |
| Other expenses | 1,110 | | 742 | 842 | 1,081 | 81 | 3,856 |
| Total contract benefits and expenses | 3,779 | | 2,581 | (655) | 1,094 | 233 | 7,032 |
| Income (loss) before income taxes | 532 | | 603 | 661 | 253 | (335) | 1,714 |
| Income tax recovery (expense) | (92) | | (132) | (133) | (30) | 50 | (337) |
| Net income (loss) | 440 | | 471 | 528 | 223 | (285) | 1,377 |
| Less net income (loss) attributed to: | | | | | | | |
| Non-controlling interests | 56 | | - | - | - | (2) | 54 |
| Participating policyholders | (68) | | 19 | | | <u>-</u> | (49) |
| Net income (loss) attributed to | 4=6 | _ | 4=5 | -00 | | (0.05) | 4.0=6 |
| shareholders | \$ 452 | \$ | 452 | \$ 528 | \$ 223 | \$ (283) | \$ 1,372 |
| Total assets | \$ 102,769 | \$ | 216,314 | \$ 263,537 | \$ 133,326 | \$ 23,877 | \$ 739,823 |

⁽¹⁾ During the period, the Company ceded premiums to RGA and Jackson for the JHNY transactions, refer to note 5(d) for details.

(b) By Geographic Location

For the three months ended

| March 31, 2019 | Asia | Canada | U.S. | Other | Total |
|---------------------------|-------------|-------------|-------------|-----------|--------------|
| Revenue | | | | | |
| Life and health insurance | \$ 4,481 | \$ 2,003 | \$ 1,487 | \$ 106 | \$ 8,077 |
| Annuities and pensions | 708 | 115 | (586) | - | 237 |
| Net premium income | 5,189 | 2,118 | 901 | 106 | 8,314 |
| Net investment income | 3,346 | 4,649 | 4,626 | 52 | 12,673 |
| Other revenue | 526 | 659 | 1,375 | 2 | 2,562 |
| Total revenue | \$ 9,061 | \$ 7,426 | \$ 6,902 | \$ 160 | \$ 23,549 |

For the three months ended

| March 31, 2018 | Asia | Canada | U.S. | Other | Total |
|---------------------------|-------------|-------------|-------------|-----------|-------------|
| Revenue | | | | | |
| Life and health insurance | \$ 3,759 | \$ 1,918 | \$ 1,512 | \$ 111 | \$ 7,300 |
| Annuities and pensions | 745 | 129 | 151 | - | 1,025 |
| Net premium income | 4,504 | 2,047 | 1,663 | 111 | 8,325 |
| Net investment income | (420) | 760 | (2,440) | 19 | (2,081) |
| Other revenue | 468 | 733 | 1,305 | (4) | 2,502 |
| Total revenue | \$ 4,552 | \$ 3,540 | \$ 528 | \$ 126 | \$ 8,746 |

Note 14 Segregated Funds

The Company manages a number of segregated funds on behalf of policyholders. Policyholders are provided with the opportunity to invest in different categories of segregated funds that respectively hold a range of underlying investments. The underlying investments of the segregated funds consist of both individual securities and mutual funds (collectively "net assets"). The carrying value and change in segregated funds net assets are as follows.

Segregated funds net assets

| As at | March 31, 2019 | De | ecember 31, 2018 |
|---|-------------------|----|---------------------|
| Investments at market value | | | |
| Cash and short-term securities | \$ 3,460 | \$ | 3,700 |
| Debt securities | 16,351 | | 15,313 |
| Equities | 12,784 | | 11,661 |
| Mutual funds | 298,100 | | 277,133 |
| Other investments | 4,640 | | 4,678 |
| Accrued investment income | 319 | | 1,811 |
| Other assets and liabilities, net | (812) | | (700) |
| Total segregated funds net assets | \$ 334,842 | \$ | 313,596 |
| Composition of segregated funds net assets | | | |
| Held by policyholders | \$ 334,425 | \$ | 313,209 |
| Held by the Company | 417 | | 387 |
| Total segregated funds net assets | \$ 334,842 | \$ | 313,596 |
| Net policyholder cash flow | | | |
| For the three months ended March 31, | 2019 | | 2018 |
| · · | † 40.500 | Φ. | 0.700 |
| Deposits from policyholders | \$ 10,586 | \$ | 9,728 |
| Net transfers to general fund | (249) | | (367 |
| Payments to policyholders | (11,568) | | (11,392 |
| | (1,231) | | (2,031 |
| Investment related | 4.040 | | 000 |
| Interest and dividends | 1,249 | | 908 |
| Net realized and unrealized investment gains (losses) | 26,681 | | (2,339 |
| O41 | 27,930 | | (1,431 |
| Other Management and a desirial testing for a | (4.007) | | (005 |
| Management and administration fees | (1,037) | | (895 |
| Impact of changes in foreign exchange rates | (4,416) | | 6,060 |
| | (5,453) | | 5,165 |
| Net additions (deductions) | 21,246 | | 1,703 |
| Segregated funds net assets, beginning of period | 313,596 | | 324,808 |
| Segregated funds net assets, end of period | | | |

Segregated funds 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 guarantees 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 and Risk Factors Update" section of the Company's First Quarter 2019 Management Discussion and Analysis provides information regarding the risks associated with variable annuity and segregated fund guarantees.

Note 15 Information Provided in Connection with Investments in Deferred Annuity Contracts and SignatureNotes 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 Interim 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 (i) incorporated by reference in the registration statements of MFC and JHUSA that relate to MFC's guarantee of certain securities to be issued by JHUSA and (ii) are provided in reliance on an exemption from continuous disclosure obligations of JHUSA. For information about JHUSA, the MFC guarantees and restrictions on the ability of MFC to obtain funds from its subsidiaries by dividend or loan, refer to note 23 to the Company's 2018 Annual Consolidated Financial Statements.

Condensed Consolidated Statement of Financial Position

| | | MFC | JHUSA | | Other | С | onsolidation | Co | nsolidated |
|--|----|------------|---------------|----|-------------|----|--------------|----|------------|
| As at March 31, 2019 | (0 | Guarantor) | (Issuer) | S | ubsidiaries | | adjustments | | MFC |
| Assets | | | | | | | | | |
| Invested assets | \$ | 27 | \$ 103,830 | \$ | 255,959 | \$ | (358) | \$ | 359,458 |
| Investments in unconsolidated subsidiaries | | 56,536 | 7,445 | | 18,029 | | (82,010) | | - |
| Reinsurance assets | | - | 62,457 | | 9,827 | | (29,854) | | 42,430 |
| Other assets | | 245 | 17,925 | | 46,104 | | (20,673) | | 43,601 |
| Segregated funds net assets | | - | 178,954 | | 157,356 | | (1,885) | | 334,425 |
| Total assets | \$ | 56,808 | \$ 370,611 | \$ | 487,275 | \$ | (134,780) | \$ | 779,914 |
| Liabilities and equity | | | | | | | | | |
| Insurance contract liabilities | \$ | - | \$ 154,464 | \$ | 211,329 | \$ | (30,524) | \$ | 335,269 |
| Investment contract liabilities | | - | 1,157 | | 2,054 | | (2) | | 3,209 |
| Other liabilities | | 966 | 17,388 | | 47,254 | | (20,448) | | 45,160 |
| Long-term debt | | 4,672 | - | | - | | - | | 4,672 |
| Capital instruments | | 3,324 | 619 | | 4,242 | | - | | 8,185 |
| Segregated funds net liabilities | | - | 178,954 | | 157,356 | | (1,885) | | 334,425 |
| Shareholders' equity | | 47,846 | 18,029 | | 63,892 | | (81,921) | | 47,846 |
| Participating policyholders' equity | | - | - | | 77 | | - | | 77 |
| Non-controlling interests | | - | | | 1,071 | | | | 1,071 |
| Total liabilities and equity | \$ | 56,808 | \$ 370,611 | \$ | 487,275 | \$ | (134,780) | \$ | 779,914 |

Condensed Consolidated Statement of Financial Position

| | | MFC | JHUSA | | Other | С | onsolidation | С | onsolidated |
|--|----|------------|---------------|----|--------------|----|--------------|----|-------------|
| As at December 31, 2018 | (| Guarantor) | (Issuer) | ; | subsidiaries | i | adjustments | | MFC |
| Assets | | | | | | | | | |
| Invested assets | \$ | 21 | \$ 105,043 | \$ | 248,962 | \$ | (362) | \$ | 353,664 |
| Investments in unconsolidated subsidiaries | | 54,015 | 7,356 | | 17,738 | | (79,109) | | - |
| Reinsurance assets | | - | 63,435 | | 9,136 | | (29,518) | | 43,053 |
| Other assets | | 331 | 17,025 | | 43,213 | | (20,224) | | 40,345 |
| Segregated funds net assets | | - | 168,476 | | 146,671 | | (1,938) | | 313,209 |
| Total assets | \$ | 54,367 | \$ 361,335 | \$ | 465,720 | \$ | (131,151) | \$ | 750,271 |
| Liabilities and equity | | | | | | | | | |
| Insurance contract liabilities | \$ | - | \$ 155,162 | \$ | 203,682 | \$ | (30,190) | \$ | 328,654 |
| Investment contract liabilities | | - | 1,191 | | 2,076 | | (2) | | 3,265 |
| Other liabilities | | 275 | 18,136 | | 46,072 | | (19,992) | | 44,491 |
| Long-term debt | | 4,769 | - | | - | | - | | 4,769 |
| Capital instruments | | 3,359 | 632 | | 4,741 | | - | | 8,732 |
| Segregated funds net liabilities | | - | 168,476 | | 146,671 | | (1,938) | | 313,209 |
| Shareholders' equity | | 45,964 | 17,738 | | 61,291 | | (79,029) | | 45,964 |
| Participating policyholders' equity | | - | - | | 94 | | - | | 94 |
| Non-controlling interests | | - | - | | 1,093 | | - | | 1,093 |
| Total liabilities and equity | \$ | 54,367 | \$ 361,335 | \$ | 465,720 | \$ | (131,151) | \$ | 750,271 |

Condensed Consolidated Statement of Income

| For the three months ended | | MFC | JHUSA | | Other | Co | nsolidation | Co | onsolidated |
|--|----|------------|-------------|----|-------------|----|-------------|----|-------------|
| March 31, 2019 | ((| Guarantor) | (Issuer) | S | ubsidiaries | а | djustments | | MFC |
| Revenue | | | | | | | | | |
| Net premium income | \$ | - | \$ 1,183 | \$ | 7,131 | \$ | - | \$ | 8,314 |
| Net investment income (loss) | | (8) | 3,406 | | 9,301 | | (26) | | 12,673 |
| Net other revenue | | 4 | 767 | | 2,835 | | (1,044) | | 2,562 |
| Total revenue | | (4) | 5,356 | | 19,267 | | (1,070) | | 23,549 |
| Contract benefits and expenses | | | | | | | | | |
| Net benefits and claims | | - | 4,413 | | 13,097 | | (663) | | 16,847 |
| Commissions, investment and general expenses | | 8 | 768 | | 3,353 | | (377) | | 3,752 |
| Other expenses | | 100 | 53 | | 303 | | (30) | | 426 |
| Total contract benefits and expenses | | 108 | 5,234 | | 16,753 | | (1,070) | | 21,025 |
| Income (loss) before income taxes | | (112) | 122 | | 2,514 | | | | 2,524 |
| Income tax (expense) recovery | | 29 | (2) | | (316) | | - | | (289) |
| Income (loss) after income taxes | | (83) | 120 | | 2,198 | | | | 2,235 |
| Equity in net income (loss) of unconsolidated subsidiaries | | 2,259 | 238 | | 358 | | (2,855) | | - |
| Net income (loss) | \$ | 2,176 | \$ 358 | \$ | 2,556 | \$ | (2,855) | \$ | 2,235 |
| Net income (loss) attributed to: | | | | | | | | | |
| Non-controlling interests | \$ | - | \$ - | \$ | 73 | \$ | | \$ | 73 |
| Participating policyholders | | - | - | | (14) | | | | (14) |
| Shareholders | | 2,176 | 358 | | 2,497 | | (2,855) | | 2,176 |
| | \$ | 2,176 | \$ 358 | \$ | 2,556 | \$ | (2,855) | \$ | 2,235 |

Condensed Consolidated Statement of Income

| For the three months ended | | MFC | JHUSA | | Other | Con | solidation | Cor | nsolidated |
|--|----|-----------|-------------|----|------------|-----|------------|-----|------------|
| March 31, 2018 | (G | uarantor) | (Issuer) | su | bsidiaries | ad | justments | | MFC |
| Revenue | | | | | | | | | |
| Net premium income | \$ | - | \$ 1,151 | \$ | 7,174 | \$ | - | \$ | 8,325 |
| Net investment income (loss) | | 7 | (2,096) | | 27 | | (19) | | (2,081) |
| Net other revenue | | - | 422 | | 1,471 | | 609 | | 2,502 |
| Total revenue | | 7 | (523) | | 8,672 | | 590 | | 8,746 |
| Contract benefits and expenses | | | | | | | | | |
| Net benefits and claims | | - | (1,823) | | 3,662 | | 1,051 | | 2,890 |
| Commissions, investment and general expenses | | 3 | 809 | | 3,386 | | (436) | | 3,762 |
| Other expenses | | 92 | 50 | | 263 | | (25) | | 380 |
| Total contract benefits and expenses | | 95 | (964) | | 7,311 | | 590 | | 7,032 |
| Income (loss) before income taxes | | (88) | 441 | | 1,361 | | - | | 1,714 |
| Income tax (expense) recovery | | 23 | (82) | | (278) | | - | | (337) |
| Income (loss) after income taxes | | (65) | 359 | | 1,083 | | - | | 1,377 |
| Equity in net income (loss) of unconsolidated subsidiaries | | 1,437 | 242 | | 601 | | (2,280) | | |
| Net income (loss) | \$ | 1,372 | \$ 601 | \$ | 1,684 | \$ | (2,280) | \$ | 1,377 |
| Net income (loss) attributed to: | | | | | | | | | |
| Non-controlling interests | \$ | - | \$ - | \$ | 54 | \$ | - | \$ | 54 |
| Participating policyholders | | - | 34 | | (49) | | (34) | | (49) |
| Shareholders | | 1,372 | 567 | | 1,679 | | (2,246) | | 1,372 |
| | \$ | 1,372 | \$ 601 | \$ | 1,684 | \$ | (2,280) | \$ | 1,377 |

Consolidated Statement of Cash Flows

| For the three months ended March 31, 2019 | (Gı | MFC uarantor) | JHUSA (Issuer) | SI | Other ubsidiaries | nsolidation djustments | Co | nsolidated MFC |
|--|-----|------------------|-------------------|----|----------------------|---------------------------|----|-------------------|
| Operating activities | (0. | | (receive) | | | -, | | |
| Net income (loss) | \$ | 2,176 | \$ 358 | \$ | 2,556 | \$ (2,855) | \$ | 2,235 |
| Adjustments: | | | | | | | | |
| Equity in net income of unconsolidated subsidiaries | | (2,259) | (238) | | (358) | 2,855 | | - |
| Increase (decrease) in insurance contract liabilities | | - | 3,147 | | 8,260 | | | 11,407 |
| Increase (decrease) in investment contract liabilities | | - | 13 | | 30 | • | | 43 |
| (Increase) decrease in reinsurance assets excluding coinsurance | | | | | | | | |
| transactions | | - | (357) | | 771 | - | | 414 |
| Amortization of (premium) discount on invested assets | | - | 7 | | 23 | - | | 30 |
| Other amortization | | 1 | 29 | | 125 | - | | 155 |
| Net realized and unrealized (gains) losses and impairment on | | | | | | | | |
| assets | | (1) | (2,226) | | (7,084) | - | | (9,311) |
| Deferred income tax expense (recovery) | | (30) | (1) | | 163 | - | | 132 |
| Stock option expense | | • | (1) | | 4 | • | | 3 |
| Cash provided by (used in) operating activities before undernoted | | | | | | | | |
| items | | (113) | 731 | | 4,490 | • | | 5,108 |
| Dividends from unconsolidated subsidiary | | - | 1 | | - | (1) | | - |
| Changes in policy related and operating receivables and payables | | (84) | (1,568) | | 455 | • | | (1,197) |
| Cash provided by (used in) operating activities | | (197) | (836) | | 4,945 | (1) | | 3,911 |
| Investing activities | | | | | | | | |
| Purchases and mortgage advances | | - | (5,416) | | (14,109) | - | | (19,525) |
| Disposals and repayments | | - | 5,860 | | 10,065 | - | | 15,925 |
| Changes in investment broker net receivables and payables | | - | (2) | | 132 | • | | 130 |
| Net cash increase (decrease) from sale and purchase of | | | | | | | | |
| subsidiaries and businesses | | - | - | | 253 | - | | 253 |
| Return of capital from unconsolidated subsidiaries | | - | 67 | | - | (67) | | - |
| Notes receivable from parent | | - | - | | (815) | 815 | | - |
| Notes receivable from subsidiaries | | (81) | • | | • | 81 | | |
| Cash provided by (used in) investing activities | | (81) | 509 | | (4,474) | 829 | | (3,217 |
| Financing activities | | | | | | | | |
| Increase (decrease) in repurchase agreements and securities sold | | | | | | | | |
| but not yet purchased | | - | - | | 203 | - | | 203 |
| Redemption of capital instruments | | - | - | | (500) | - | | (500 |
| Changes in deposits from Bank clients, net | | _ | - | | 308 | - | | 308 |
| Lease payments | | _ | (2) | | (25) | - | | (27 |
| Shareholders' dividends paid in cash | | (339) | (- / | | | - | | (339 |
| Dividends paid to parent | | - | - | | (1) | 1 | | - |
| Common shares repurchased | | (206) | _ | | (-/ | - | | (206 |
| Common shares issued, net | | 14 | _ | | _ | - | | 14 |
| Return of capital to parent | | | _ | | (67) | 67 | | |
| Notes payable to parent | | _ | - - | | 81 | (81) | | _ |
| Notes payable to subsidiaries | | 815 | - - | | - | (815) | | _ |
| Cash provided by (used in) financing activities | | 284 | (2) | | (1) | (828) | | (547 |
| | | 204 | (2) | | (1) | (020) | | (347 |
| Cash and short-term securities Increase (decrease) during the period | | 6 | (220) | | 470 | | | 147 |
| Effect of foreign exchange rate changes on cash and short-term | | О | (329) | | 4/0 | - | | 147 |
| securities | | | (5.4) | | (452) | | | /206 |
| | | 24 | (54) | | (152) | • | | (206 |
| Balance, beginning of period | | 21 | 2,317 | | 13,044 | - | | 15,382 |
| Balance, end of period | | 27 | 1,934 | | 13,362 | • | | 15,323 |
| Cash and short-term securities | | | | | | | | |
| Beginning of period | | | | | | | | |
| Gross cash and short-term securities | | 21 | 2,783 | | 13,411 | - | | 16,215 |
| Net payments in transit, included in other liabilities | | | (466) | | (367) | • | | (833 |
| Net cash and short-term securities, beginning of period | | 21 | 2,317 | | 13,044 | • | | 15,382 |
| End of period | | | | | | | | |
| Gross cash and short-term securities | | 27 | 2,345 | | 13,725 | - | | 16,097 |
| Net payments in transit, included in other liabilities | | | (411) | | (363) | - | | (774 |
| Net cash and short-term securities, end of period | \$ | 27 | \$ 1,934 | \$ | 13,362 | \$ - | \$ | 15,323 |
| Supplemental disclosures on cash flow information: | | | | | | | | |
| Interest received | \$ | 28 | \$ 1,100 | \$ | 1,724 | \$ (91) | \$ | 2,761 |
| Interest paid | | 143 | 17 | | 190 | (91) | | 259 |
| | | | (1) | | 303 | | | 302 |

Consolidated Statement of Cash Flows

| For the three months ended March 31, 2018 | (0 | MFC Guarantor) | | JHUSA (Issuer) | SU | Other obsidiaries | | solidation justments | Cor | nsolidated MFC |
|--|----|-------------------|----|-------------------|----|----------------------|----|-------------------------|-----|-------------------|
| Operating activities | | | | | | | | | | |
| Net income (loss) | \$ | 1,372 | \$ | 601 | \$ | 1,684 | \$ | (2,280) | \$ | 1,377 |
| Adjustments: | | | | | | | | | | |
| Equity in net income of unconsolidated subsidiaries | | (1,437) | | (242) | | (601) | | 2,280 | | - |
| Increase (decrease) in insurance contract liabilities | | - | | (3,735) | | 1,168 | | - | | (2,567) |
| Increase (decrease) in investment contract liabilities | | - | | (20) | | 64 | | - | | 44 |
| (Increase) decrease in reinsurance assets | | - | | 852 | | (873) | | - | | (21) |
| Amortization of (premium) discount on invested assets | | - | | 15 | | 41 | | - | | 56 |
| Other amortization | | 1 | | 18 | | 120 | | - | | 139 |
| Net realized and unrealized (gains) losses and impairment on | | | | | | | | | | |
| assets | | (3) | | 3,261 | | 1,567 | | - | | 4,825 |
| Deferred income tax expense (recovery) | | (23) | | - | | 24 | | - | | 1 |
| Stock option expense | | ` - | | - | | 1 | | - | | 1 |
| Cash provided by (used in) operating activities before undernoted | | | | | | | | | | |
| items | | (90) | | 750 | | 3,195 | | - | | 3,855 |
| Dividends from unconsolidated subsidiary | | . , | | 3 | | · - | | (3) | | · - |
| Changes in policy related and operating receivables and payables | | (29) | | (1,013) | | 1,035 | | - | | (7) |
| Cash provided by (used in) operating activities | | (119) | | (260) | | 4,230 | | (3) | | 3,848 |
| Investing activities | | (110) | | (200) | | 1,200 | | (0) | | 0,010 |
| Purchases and mortgage advances | | | | (11,103) | | (12 507) | | | | (23,610) |
| | | - | | 11,094 | | (12,507) 8,798 | | - | | 19,892 |
| Disposals and repayments | | - | | | | | | - | | |
| Changes in investment broker net receivables and payables | | (050) | | (154) | | 133 | | - | | (21) |
| Investment in common shares of subsidiaries | | (250) | | - (4) | | - | | 250 | | - |
| Capital contribution to unconsolidated subsidiaries | | - | | (1) | | - | | 1 | | - |
| Return of capital from unconsolidated subsidiaries | | - | | 47 | | - | | (47) | | - |
| Notes receivable from parent | | | | - | | (20,712) | | 20,712 | | - |
| Notes receivable from subsidiaries | | (20,135) | | <u> </u> | | - | | 20,135 | | - |
| Cash provided by (used in) investing activities | | (20,385) | | (117) | | (24,288) | | 41,051 | | (3,739) |
| Financing activities | | | | | | | | | | |
| Increase (decrease) in repurchase agreements and securities sold | | | | | | | | | | |
| but not yet purchased | | - | | - | | 137 | | - | | 137 |
| Redemption of capital instruments | | - | | - | | (200) | | - | | (200) |
| Changes in deposits from Bank clients, net | | - | | - | | 840 | | - | | 840 |
| Shareholders' dividends paid in cash | | (468) | | - | | - | | - | | (468) |
| Dividends paid to parent | | - | | - | | (3) | | 3 | | - |
| Contributions from (distributions to) non-controlling interests, net | | - | | - | | 1 | | - | | 1 |
| Common shares issued, net | | 21 | | - | | 250 | | (250) | | 21 |
| Preferred shares issued, net | | 245 | | - | | - | | ` - | | 245 |
| Capital contributions by parent | | _ | | _ | | 1 | | (1) | | _ |
| Return of capital to parent | | _ | | _ | | (47) | | 47 | | _ |
| Notes payable to parent | | _ | | _ | | 20,135 | | (20,135) | | _ |
| Notes payable to subsidiaries | | 20,712 | | _ | | 20,100 | | (20,712) | | _ |
| Cash provided by (used in) financing activities | | 20,510 | | _ | | 21,114 | | (41,048) | | 576 |
| Cash and short-term securities | | 20,510 | | | | 21,117 | | (+1,0+0) | | 310 |
| | | 6 | | (277) | | 1 056 | | | | 685 |
| Increase (decrease) during the period | | 0 | | (377) | | 1,056 | | - | | 000 |
| Effect of foreign exchange rate changes on cash and short-term | | | | 112 | | 222 | | | | 245 |
| securities | | - | | 113 | | 232 | | - | | 345 |
| Balance, beginning of period | | 21 | | 3,638 | | 11,439 | | - | | 15,098 |
| Balance, end of period | | 27 | | 3,374 | | 12,727 | | - | | 16,128 |
| Cash and short-term securities | | | | | | | | | | |
| Beginning of period | | | | | | | | | | |
| Gross cash and short-term securities | | 21 | | 4,133 | | 11,811 | | - | | 15,965 |
| Net payments in transit, included in other liabilities | | - | | (495) | | (372) | | - | | (867) |
| Net cash and short-term securities, beginning of period | | 21 | | 3,638 | | 11,439 | | - | | 15,098 |
| End of period | | _ | | _ | | _ | | _ | | _ |
| Gross cash and short-term securities | | 27 | | 3,929 | | 13,064 | | _ | | 17,020 |
| Net payments in transit, included in other liabilities | | | | (555) | | (337) | | _ | | (892) |
| Net cash and short-term securities, end of period | \$ | 27 | \$ | 3,374 | \$ | 12,727 | \$ | | \$ | 16,128 |
| Supplemental disclosures on cash flow information: | Ψ | <u> </u> | Ψ | 0,014 | Ψ | 14,141 | Ψ | | Ψ | 10,120 |
| Interest received | \$ | 27 | \$ | 1,053 | \$ | 1,528 | ¢ | /0E\ | ¢ | 2,523 |
| Interest paid | φ | 131 | φ | | φ | 1,526 | \$ | (85) (85) | \$ | 2,523 247 |
| • | | 131 | | 12 | | | | (85) | | |
| Income taxes paid (refund) | | - | | (5) | | 273 | | - | | 268 |

Note 16 Comparatives

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

SHAREHOLDER INFORMATION

MANULIFE FINANCIAL CORPORATION

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Web site: www.manulife.com

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: 416 926-3503

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.

TRANSFER AGENTS

Canada

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E-mail: inquiries@astfinancial.com Online: www.astfinancial.com/ca-en

AST Trust Company (Canada) offices are also located in Toronto, Vancouver and Calgary.

United States

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P.O. Box 199036 Brooklyn, NY United States 11219 Toll Free: 1 800 249-7702 Collect: 416 682-3864

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E-mail: rcbcstocktransfer@rcbc.com

Online: www.rcbc.com

AUDITORS

Ernst & Young LLP **Chartered Professional Accountants** Licensed Public Accountants Toronto, Canada

The following Manulife documents are available online at www.manulife.com

- · Annual Report and Proxy Circular
- Notice of Annual Meeting
- Shareholders Reports
- Public Accountability Statement
- · Corporate Governance material

Rating

Financial strength is a key factor in generating new business, maintaining and expanding distribution relations and providing a base for expansion, acquisitions and growth. As at March 31, 2019, Manulife had total capital of C\$57.3 billion, including C\$47.8 billion of total shareholders' equity. The Manufacturers Life Insurance Company's financial strength and claims paying ability ratings are among the strongest in the insurance industry.

| Rating Agency | Rating | Rank |
|----------------------------|---------------|---------------------------------|
| S&P Global Ratings | AA- | (4th of 21 ratings) |
| Moody's Investors Services | A1 | (5 th of 21 ratings) |
| Fitch Ratings Inc. | AA- | (4 th of 19 ratings) |
| DBRS Limited | AA (low) | (4 th of 22 ratings) |
| A.M. Best Company | A+ (Superior) | (2 nd of 13 ratings) |

Common Stock Trading Data

The following values are the high, low and close prices plus the average daily trading volume for Manulife Financial Corporation's common stock on the Toronto Stock Exchange, the U.S. exchanges, The Stock Exchange of Hong Kong and the Philippine Stock Exchange for the first quarter. The common stock symbol is MFC on all exchanges except Hong Kong where it is 945.

As at March 31, 2019, there were 1,970 million common shares outstanding.

| January 1 – March 31, 2019 | Toronto Canadian \$ | U.S. Composite United States \$ | Hong Kong Hong Kong \$ | Philippines Philippine Peso |
|----------------------------------|------------------------|---------------------------------------|---------------------------|--------------------------------|
| High | \$23.85 | \$17.96 | \$138.90 | P 825 |
| Low | \$18.94 | \$13.90 | \$112.00 | P 750 |
| Close | \$22.60 | \$16.91 | \$133.40 | P 785 |
| Average Daily Volume (000) | 9,420 | 2,172 | 27 | 0.15 |

Consent to receive documents electronically

Electronic documents available from Manulife

Manulife is pleased to offer Electronic Documents. Access the information when you want, no more waiting for the mail.

The Manulife documents available electronically are:

- Annual Report and Proxy Circular
- Notice of Annual Meeting
- Shareholder Reports
- Public Accountability Statement
- Corporate Governance material

These documents will be available to you on our Web site www.manulife.com at the same time as they are mailed to other shareholders. Documents relating to the annual meeting, including annual reports, will be available on the Web site at least until the next version is available.

We will notify you when documents will be available on the Web site and confirm the instructions for accessing the documents at the same time. In the event that the documents are not available on our Web site, paper copies will be mailed to you.

This information is also available for viewing or download under quarterly reports from the Investor Relations section of our web site at www.manulife.com

| Detach Here | | | | | |
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| site. I understand that I am not required to consent to electronic delivery and that I may revoke my consent at any time. | Contact Phone Number | | | | |
| Please note: We will contact you by phone only if there is a problem with your email address. | Shareholder email Address | | | | |
| The information provided is confidential and will not be used for any purpose other than that described. | Shareholder Signature | | | | |
| | Date | | | | |



