MANAGEMENT'S

DISCUSSION

AND ANALYSIS

Management's Discussion and Analysis

February 12, 2020

A. How We Report Our Results

Sun Life Financial Inc. ("SLF Inc.") is a leading international financial services organization providing insurance, wealth and asset management solutions to individual and corporate Clients. Sun Life has operations in a number of markets worldwide, including Canada, the United States, the United Kingdom, Ireland, Hong Kong, the Philippines, Japan, Indonesia, India, China, Australia, Singapore, Vietnam, Malaysia and Bermuda. As of December 31, 2019, Sun Life had total assets under management ("AUM") of $1,099 billion.

SLF Inc. is a publicly traded company domiciled in Canada and is the holding company of Sun Life Assurance Company of Canada ("Sun Life Assurance"). In this management's discussion and analysis ("MD&A"), SLF Inc., its subsidiaries and, where applicable, its joint ventures and associates are collectively referred to as "the Company", "Sun Life", "we", "our", and "us". Unless otherwise indicated, all information in this MD&A is presented as at and for the year ended December 31, 2019 and the information contained in this document is in Canadian dollars. Where information at and for the year ended December 31, 2019 is not available, information available for the latest period before December 31, 2019 is used. Except where otherwise noted, financial information is presented in accordance with International Financial Reporting Standards ("IFRS") and the accounting requirements of the Office of the Superintendent of Financial Institutions ("OSFI"). Reported net income (loss) refers to Common shareholders' net income (loss) determined in accordance with IFRS.

We manage our operations and report our financial results in five business segments: Canada, United States ("U.S."), Asset Management, Asia, and Corporate. Prior to the second quarter of 2019, these business segments were referred to as Sun Life Financial Canada, Sun Life Financial U.S., Sun Life Financial Asset Management, Sun Life Financial Asia, and Corporate, respectively, in our interim and annual MD&A. Information concerning these segments is included in our annual and interim consolidated financial statements and accompanying notes ("Annual Consolidated Financial Statements" and "Interim Consolidated Financial Statements", respectively, and "Consolidated Financial Statements" collectively) and this MD&A. Effective in the first quarter of 2018, we transferred our International business unit from the U.S. to Asia and comparable periods have been changed to conform to the current year presentation.

i. Use of Non-IFRS Financial Measures

We report certain financial information using non-IFRS financial measures, as we believe that these measures provide information that is useful to investors in understanding our performance and facilitate a comparison of our quarterly and full year results from period to period. These non-IFRS financial measures do not have any standardized meaning and may not be comparable with similar measures used by other companies. For certain non-IFRS financial measures, there are no directly comparable amounts under IFRS. These non-IFRS financial measures should not be viewed in isolation from or as alternatives to measures of financial performance determined in accordance with IFRS. Additional information concerning these non-IFRS financial measures and reconciliations to the closest IFRS measures are available in section L - Non-IFRS Financial Measures in this document. Further additional information concerning these non-IFRS financial measures and reconciliations to the closest IFRS measures are included in the Supplementary Financial Information packages that are available on www.sunlife.com under Investors - Financial results & reports.

ii. Forward-looking Statements

Certain statements in this document are forward-looking statements within the meaning of certain securities laws, including the "safe harbour" provisions of the United States Private Securities Litigation Reform Act of 1995 and applicable Canadian securities legislation. Additional information concerning forward-looking statements and important risk factors that could cause our assumptions, estimates, expectations and projections to be inaccurate and our actual results or events to differ materially from those expressed in or implied by such forward-looking statements can be found in section O - Forward-looking Statements in this document.

iii. Additional Information

Additional information relating to the Company can be found in the Consolidated Financial Statements and SLF Inc.'s Annual Information Form ("AIF") for the year ended December 31, 2019. These documents are filed with securities regulators in Canada and are available at www.sedar.com. SLF Inc.'s Annual Consolidated Financial Statements, annual MD&A and AIF are filed with the United States Securities and Exchange Commission ("SEC") in SLF Inc.'s annual report on Form 40-F and SLF Inc.'s interim MD&As and Interim Consolidated Financial Statements are furnished to the SEC on Form 6-Ks and are available at www.sec.gov.

B. Overview

Sun Life is a leading international financial services organization providing a diverse range of insurance, wealth and asset management solutions to individual and corporate Clients.

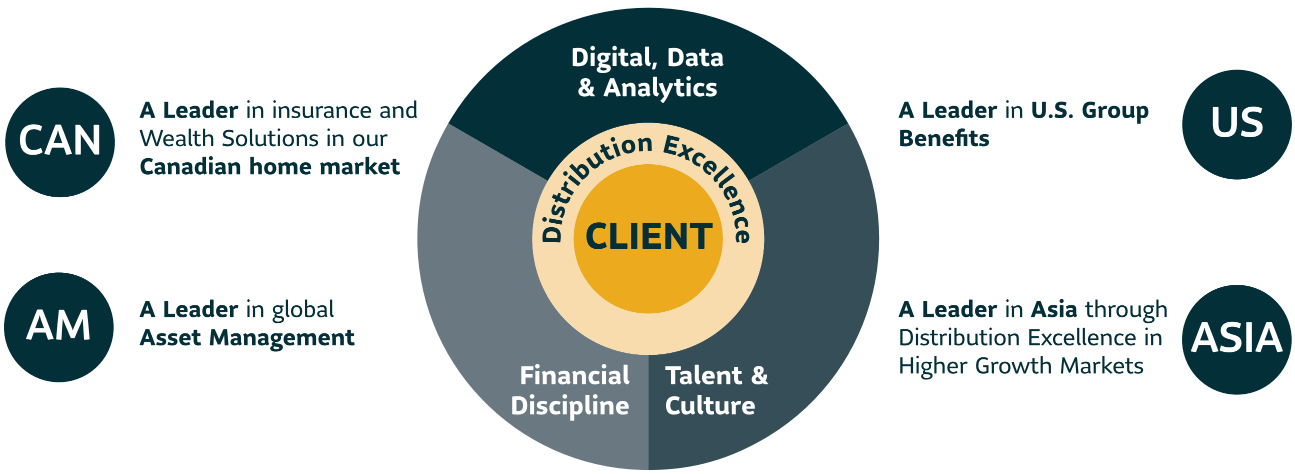
Purpose and Ambition

Our Purpose is to help our Clients achieve lifetime financial security and live healthier lives.

Our ambition is to be one of the best insurance and asset management companies in the world. To achieve this, across each of the four pillars of our business we aim to have:
- Top quartile Client scores relative to our competitors
- Each pillar of our business be viewed as one of the best in its market
- Top quartile total shareholder return
- A disproportionate share of top talent, wrapped in an empowering culture

1. Strategy

We aim to provide outstanding value to our Clients. Our strategy places the Client at the centre of everything we do. We believe our Client for life strategy and purpose, as described below, will allow us to gain a distinct competitive advantage to achieve our goal to be a leader in each of our four pillars.



Our Client Strategy

Our Client-centric strategy has five key areas of focus that we are pursuing across each of our four pillars. These areas of focus define how we compete in our markets, extend our competitive advantages, fulfill our purpose and support our ambition to be one of the best insurance and asset management companies in the world.

Client: Our Clients are at the centre of everything we do and we are focused on building lasting and trusted Client relationships by providing quality products and services that deliver on our Purpose. We believe this allows us to maximize the value we provide our Clients, and leads to better business outcomes for Sun Life. We achieve this by:
- Making it easier to do business with us
- Being more proactive in contacting and engaging with our Clients
- Delivering consistently superior Client service

Distribution Excellence: Our Clients work with high-quality distribution partners who put them at the centre of what they do. Our distribution partners will engage Clients where, when and how they wish, in a personalized and relevant way. We continue to invest in our distribution capabilities, through digital channels and by enabling our advisors, agents, partners and brokers to deliver great Client experiences and focus on meeting Client needs.

Digital, Data & Analytics: Our Digital, Data & Analytics capabilities are critical to both delivering value to our Clients and for efficiency and effectiveness, while respecting our Clients' privacy. As consumer preferences evolve and technological advancements enable new possibilities and services, Sun Life is investing in new capabilities across our businesses to reach our Clients more effectively, drive efficiencies and explore new business opportunities. Our focus in these areas is to:
- Digitize current processes and interactions
- Be more proactive, predictive and personalized with our Clients
- Build and deploy new digital business models

Financial Discipline: Our continued financial and risk management prudence, efficient use of capital and strong execution will support our medium-term financial objectives and also support us in meeting our aim of top quartile total shareholder returns while maintaining a preferred risk and capital profile. Specific areas of focus are to:
- Deliver strong earnings growth and disciplined expense management to support the enterprise's medium-term objectives
- Create a culture of accountability, purpose and passion for long-term Client and business value embodied by all employees, including a strong focus on efficient use of resources to drive top and bottom line growth

Talent and Culture: Delivering on our strategy will require that we maintain our focus on attracting, retaining and developing the best talent, while also continuing to evolve our talent and culture to manage the increasing pace of change. Specifically, our talent goals are to continue to:
- Attract a disproportionate share of top talent across our geographies, wrapped in an empowering culture
- Build on our high performance culture and support and reward our diverse, talented workforce
- Ensure that our focus on our Clients becomes deeply embedded in our unique and inclusive culture
- Remain committed to the highest standards of business ethics and good governance

Our Four Pillars
Our four pillar approach defines the businesses and markets in which we compete. In each of these pillars, we focus on creating value for our Clients and shareholders in businesses that have strong growth prospects, favourable return on equity and strong capital generation in attractive global markets.

Currently, in our four pillars we are:

A leader in insurance and wealth solutions in our Canadian Home Market
- Delivering value to over six million Clients via our Group and Individual businesses
- Market leader in providing benefits and pensions in the workplace
- Servicing individuals with a wide range of wealth, health, and insurance products via our retail channels, including our leading SLFD[1] network

A leader in U.S. group benefits
- A market leader in group benefits serving employees and their families with employer-sponsored benefits at workplaces of all sizes across the country including group life, disability, dental, vision, voluntary and supplemental health products
- The largest independent provider of medical stop-loss insurance in the U.S.
- A leader in providing turnkey solutions for insurance and health plan partners through FullscopeRMS, including disability, absence management, life, stop-loss and supplemental health coverages

A leader in Global Asset Management
- A provider of investment products through MFS Investment Management ("MFS") and SLC Management that delivers superior value to Clients through traditional active asset management as well as liability driven investing ("LDI") and alternative asset classes:
  - MFS is a premier asset management firm offering a comprehensive selection of asset management products and services to retail and institutional investors around the world
  - SLC Management is an institutional investment management business delivering customized LDI, alternative fixed income and global real estate solutions

A leader in Asia through distribution excellence in higher growth markets
- A provider of individual life and health insurance that delivers Client value in all markets
- A provider, in select markets, of asset management and group retirement products and services
- Operating in seven local markets: Philippines, Hong Kong, Indonesia, Vietnam, Malaysia, India and China
- Among the global leaders in providing life insurance solutions to international high-net-worth Clients

Underpinning Our Strategy is an Enduring Commitment to Sustainability
Sustainability is a priority and is essential to our long-term business success. We strive to contribute to a healthier, more financially resilient, environmentally secure, and economically prosperous world. Our sustainability plan is underpinned by our Purpose of helping our Clients achieve lifetime financial security and live healthier lives, and is integrated into our business activities. We focus on three areas where we have the greatest opportunity to have a positive impact on society, while creating competitive advantage for our business.

Financial Security: We provide our Clients and employees with innovative products and services that increase their lifetime financial security. We're committed to improving financial resiliency in society by advocating for and expanding access to products and services to close insurance coverage gaps and build long-term wealth.

Healthier Lives: We offer our Clients and employees products and tools to live healthier lives. Through investments in community health and access to health and disability insurance, we're focused on improving health and wellness in society.

Sustainable Investing: We manage capital with sustainability embedded in our investment processes. We offer our Clients and employees sustainable investing opportunities, and invest our assets to support a low-carbon and more inclusive economy.

Our sustainability plan builds from our foundation as a **Trusted and Responsible Business**. At the core of this foundation is our commitment to being a responsibly-managed business that is Client-focused, competitive, forward-thinking, financially and environmentally resilient, and sustainable for the long term. Operating ethically, treating our Clients and employees with utmost respect, investing in communities and reducing our impact on the environment are all vital components of maintaining the proven longevity and resiliency of our business. Our robust approach to managing our business creates trust and value for our Clients, employees and stakeholders.

For additional information on our sustainability plan and recent progress, refer to www.sunlife.com/sustainability.

(1) Sun Life Financial Distribution - our proprietary career advisory network.

2. Financial Objectives

Our medium-term financial objectives are outlined as follows:

Measure[(1)]	Medium-term financial objectives	5-Year[(2)]	2019 results
Underlying EPS growth Growth in EPS reflects the Company's focus on generating sustainable earnings for shareholders.	8%-10%	12%	6%
Underlying ROE ROE is a significant driver of shareholder value and is a major focus for management across all businesses.	12%-14%	13.2%	14.3%
Dividend payout ratio Payout of capital serves shareholder value, based on underlying net income.	40%-50%	41%	41%

(1) Underlying earnings per share ("EPS"), underlying return on equity ("ROE") and the dividend payout ratio are non-IFRS financial measures. See section L - Non-IFRS Financial Measures. The dividend payout ratio represents the ratio of common shareholders' dividends to underlying net income. See section I - Capital and Liquidity Management - 1 - Capital in this document for further information regarding dividends.
(2) Underlying EPS growth is calculated using a compound annual growth rate. Underlying ROE and dividend payout ratio are calculated using an average.

We have performed well against our medium-term financial objectives. Although considered reasonable, we may not be able to achieve our medium-term financial objectives as our assumptions may prove to be inaccurate. Accordingly, our actual results could differ materially from our medium-term financial objectives as described above. Our medium-term financial objectives do not constitute guidance. Our medium-term financial objectives are forward-looking non-IFRS financial measures and additional information is provided in this MD&A in the section O - Forward-looking Statements - Medium-Term Financial Objectives.

3. Acquisitions and Other

The following developments occurred since January 1, 2019. Additional information concerning acquisitions and dispositions is provided in our 2019 Annual Consolidated Financial Statements.

On December 17, 2019, we entered into an agreement with InfraRed Capital Partners ("InfraRed"), a global infrastructure and real estate investment manager, to purchase 80% of the entity and the ability to acquire the remaining interest in the future ("InfraRed transaction"). InfraRed will form part of our Asset Management business segment. The InfraRed transaction is expected to close during the first half of 2020, subject to receipt of regulatory approvals and satisfaction of customary closing conditions.

At the beginning of the third quarter of 2019, we completed the acquisition of our majority stake in BentallGreenOak ("BGO acquisition"), which was the product of the merger of the Bentall Kennedy group of companies and GreenOak Real Estate, a global real estate investment firm. The acquisition increases our global real estate investment footprint, while adding organizational depth and a full spectrum of solutions including equity and debt real estate strategies. As a result of the acquisition, total equity was reduced by $860 million, primarily driven by the establishment of financial liabilities associated with the anticipated increase of our future ownership in BGO.

On October 17, 2019, we entered into a 15-year bancassurance partnership with Tien Phong Commercial Bank ("TPBank"). The agreement combines TPBank's distribution network with our market-leading life insurance products, giving 2.5 million TPBank customers access to a comprehensive range of innovative insurance solutions. TPBank is fast growing with a strong Client focus, and is a digital leader in Vietnam.

C. Financial Summary

($ millions, unless otherwise noted)	2019	2018	2017
Profitability			
Net income (loss)			
Reported net income (loss)	**2,618**	2,522	2,149
Underlying net income (loss)(1)	**3,057**	2,947	2,546
Diluted EPS ($)			
Reported EPS (diluted)	**4.40**	4.14	3.49
Underlying EPS (diluted)(1)	**5.16**	4.86	4.15
Reported basic EPS ($)	**4.42**	4.16	3.51
Return on equity (%)			
Reported ROE(1)	**12.3%**	12.1%	10.7%
Underlying ROE(1)	**14.3%**	14.2%	12.7%
Growth			
Sales			
Insurance sales(1)	**3,524**	3,189	3,042
Wealth sales(1)	**158,992**	136,702	145,314
Value of new business(1)	**1,206**	1,154	968
Premiums and deposits			
Net premium revenue	**20,288**	18,642	15,281
Segregated fund deposits	**11,958**	11,553	10,858
Mutual fund sales(1)	**99,836**	84,202	87,515
Managed fund sales(1)	**45,062**	38,903	44,093
ASO premium and deposit equivalents(1)(2)	**6,802**	6,808	6,933
Total premiums and deposits(1)	**183,946**	160,108	164,680
Assets under management(1)			
General fund assets	**180,229**	168,765	162,720
Segregated fund assets	**116,973**	103,062	106,392
Mutual fund assets, managed fund assets and other AUM(1)	**802,145**	679,316	705,673
Total AUM(1)	**1,099,347**	951,143	974,785
Financial Strength			
LICAT ratios(3)(4)			
Sun Life Financial Inc.	**143%**	144%	n/a
Sun Life Assurance(5)	**130%**	131%	n/a
Financial leverage ratio(1)	**21.2%**	21.2%	23.6%
Dividend(6)			
Dividend yield(7)	**3.9%**	3.7%	3.6%
Dividend payout ratio(1)	**41%**	39%	42%
Dividends per common share ($)	**2.100**	1.905	1.745
Capital			
Subordinated debt and innovative capital instruments(8)	**3,738**	3,738	4,136
Participating policyholders' equity and non-controlling interests	**1,110**	864	650
Total shareholders' equity	**23,398**	23,706	22,321
Total capital	**28,246**	28,308	27,107
Average common shares outstanding (millions)	**592**	606	613
Closing common shares outstanding (millions)	**588**	599	611

(1) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.
(2) Administrative Services Only ("ASO").
(3) Life Insurance Capital Adequacy Test ("LICAT") ratio.
(4) LICAT ratios are not applicable before January 1, 2018; we previously used the Minimum Continuing Capital and Surplus Requirements ("MCCSR") guideline, the former capital regulatory guideline.
(5) Sun Life Assurance is SLF Inc.'s principal operating life insurance subsidiary.
(6) See section I - Capital and Liquidity Management - 1 - Capital in this document for further information regarding dividends.
(7) Dividend yield is calculated on dividends per common share paid divided by the daily annual average share price for the year.
(8) Innovative capital instruments consist of Sun Life ExchangEable Capital Securities ("SLEECS") which qualify as capital for Canadian regulatory purposes. Under IFRS, these items are reported as Senior debentures in our Consolidated Financial Statements. For additional information, see the section I - Capital and Liquidity Management - 1 - Capital in this document.

D. Profitability

2019 vs. 2018

The following table reconciles our reported net income and underlying net income. The table also sets out the impacts that other notable items had on our reported net income and underlying net income in 2019 and 2018. All factors discussed in this document that impact our underlying net income are also applicable to reported net income.

($ millions, after-tax)	2019	2018
Reported net income	**2,618**	2,522
Less: Market-related impacts[1]	**(237)**	(188)
Assumption changes and management actions[1]	**(46)**	(155)
Other adjustments[1]	**(156)**	(82)
Underlying net income[2]	**3,057**	2,947
Reported ROE[2]	**12.3%**	12.1%
Underlying ROE[2]	**14.3%**	14.2%
Impacts of other notable items on reported and underlying net income		
Experience-related items[3]		
Impacts of investment activity on insurance contract liabilities ("investing activity")	**131**	135
Credit	**74**	72
Mortality	**22**	(6)
Morbidity	**(70)**	51
Lapse and other policyholder behaviour	**(24)**	(49)
Expenses	**(18)**	(62)
Other experience	**(29)**	90

(1) Represents an adjustment made to arrive at a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document for a breakdown of components within this adjustment.
(2) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.
(3) Experience-related items reflect the difference between actual experience during the reporting period and best estimate assumptions used in the determination of our insurance contract liabilities.

Reported net income increased by $96 million or 4% in 2019 compared to 2018, driven by less unfavourable assumption changes and management actions ("ACMA") impacts, partially offset by higher fair value adjustments on MFS's share-based payment awards and unfavourable market-related impacts. Underlying net income increased by $110 million or 4%, driven by business growth, higher net benefits from tax-related items, improved expense experience, favourable mortality experience in the U.S. and Canada and improved lapse and other policyholder behaviour experience, partially offset by unfavourable morbidity experience in Canada, interest on par seed capital[1] in 2018 and lower new business gains in Canada and Asia.

i. Market-related impacts

Market-related impacts in 2019 compared to 2018 reflected unfavourable impacts from interest rates and changes in the fair value of investment properties, largely offset by favourable impacts from equity markets. See Section L - Non-IFRS Financial Measures in this document for a breakdown of the components of market-related impacts.

ii. Assumption changes and management actions

Due to the long-term nature of our business, we make certain judgments involving assumptions and estimates to value our obligations to policyholders. The valuation of these obligations is recorded in our financial statements as insurance contract liabilities and investment contract liabilities and requires us to make assumptions about equity market performance, interest rates, asset default, mortality and morbidity rates, lapse and other policyholder behaviour, expenses and inflation and other factors over the life of our products.

We review assumptions each year, generally in the third quarter, and revise these assumptions if appropriate. We consider our actual experience in current and past periods relative to our assumptions as part of our annual review.

Compared to a decrease of $155 million in 2018, ACMA in 2019 resulted in a decrease of $46 million to reported net income.

(1) In the first quarter of 2018, the seed capital that was transferred into the participating account at demutualization was transferred into the shareholder account, along with accrued investment income ("interest on par seed capital"). The results include income of $110 million of which $75 million was in Canada and $35 million was in the U.S.

Assumption Changes and Management Actions by Type

The following table sets out the impacts of ACMA on our reported net income in 2019.

2019	Full year	
($ millions, after-tax)	**Impacts on reported net income[(1)]**	**Comments**
Mortality / morbidity	**318**	Updates to reflect mortality / morbidity experience in all jurisdictions. The largest items were favourable mortality impacts in the United Kingdom ("UK") in Corporate and in Group Retirement Services ("GRS") in Canada.
Lapse and other policyholder behaviour	**(91)**	Updates to lapse and policyholder behaviour in all jurisdictions. The largest item was an unfavourable lapse update in International in Asia.
Expenses	**(9)**	Updates to reflect expense experience in all jurisdictions.
Investment returns	**10**	Updates to various investment-related assumptions across the Company, partially offset by updates to promulgated ultimate reinvestment rate.
Model enhancements and other	**(274)**	Various enhancements and methodology changes across all jurisdictions. The largest items were unfavourable strengthening of reinsurance provisions in In-force Management in the U.S., as well as methodology changes relating to medical stop-loss in Group Benefits in the U.S., partially offset by a favourable change to participating accounts in the UK in Corporate and the Philippines in Asia.
Total impacts on reported net income[(2)]	**(46)**	

(1) ACMA is included in reported net income and is presented as an adjustment to arrive at underlying net income.
(2) In this table, ACMA represents the shareholders' reported net income impacts (after-tax) including management actions. In Note 10.A of our 2019 Annual Consolidated Financial Statements, the impacts of method and assumptions changes represents the change in shareholders' and participating policyholders' insurance contract liabilities net of reinsurance assets (pre-tax) and does not include management actions. Further information can be found in section L - Non-IFRS Financial Measures in this document.

Additional information on estimates relating to our policyholder obligations, including the methodology and assumptions used in their determination, can be found in this MD&A under the section M - Accounting and Control Matters - 1 - Critical Accounting Policies and Estimates and in Note 10 in our 2019 Annual Consolidated Financial Statements.

iii. Other adjustments

Other adjustments in 2019 decreased reported net income by $156 million, compared to $82 million in 2018, reflecting higher fair value adjustments on MFS's share-based payment awards, higher acquisition and integration costs in SLC Management and restructuring costs in Corporate, partially offset by lower integration costs in the U.S. and Corporate. The costs in SLC Management relate to the BGO acquisition and the pending InfraRed transaction. The costs in Corporate include severance costs as a result of various initiatives to simplify our organizational structure and drive efficiencies. The lower costs in the U.S. reflect the successful completion of the integration of the U.S. employee benefits business acquired in 2016.

iv. Experience-related items

Compared to 2018, the significant changes in experience-related items are as follows:

- Favourable mortality experience in the U.S. and Canada;
- Unfavourable morbidity experience in Canada;
- Improved lapse and other policyholder behaviour experience in the U.S., Asia and Canada, partially offset by the UK in Corporate;
- Improved expense experience resulting from expense discipline while growing the businesses, and lower incentive compensation costs; and
- Unfavourable other experience, including interest on par seed capital of $110 million - $75 million in Canada and $35 million in the U.S. in 2018, and higher project spend including the adoption of IFRS 17 *Insurance Contracts* ("IFRS 17").

v. Income taxes

Our statutory tax rate is normally reduced by various tax benefits, such as lower taxes on income subject to tax in foreign jurisdictions, a range of tax-exempt investment income, and other sustainable tax benefits that are expected to decrease our effective tax rate.

For 2019, our effective tax rates on reported and underlying net income[(1)] were 8.8% and 14.1%, respectively, compared to 17.0% and 17.2%, respectively, for 2018. Our effective tax rate on underlying net income for 2019 is below our expected range of 15% to 20%, primarily due to the favourable resolution of Canadian tax matters and higher tax-exempt investment income. For additional information, refer to Note 20 in our 2019 Annual Consolidated Financial Statements. Our effective tax rate on underlying net income for 2018 was within our expected range.

vi. Impacts of foreign exchange translation

We have operations in many markets worldwide, including Canada, the United States, the United Kingdom, Ireland, Hong Kong, the Philippines, Japan, Indonesia, India, China, Australia, Singapore, Vietnam, Malaysia and Bermuda, and generate revenues and incur expenses in local currencies in these jurisdictions, which are translated to Canadian dollars.

(1) Our effective income tax rate on underlying net income is calculated using underlying net income and income tax expense associated with underlying net income, which excludes amounts attributable to participating policyholders.

Items impacting our Consolidated Statements of Operations are translated into Canadian dollars using average exchange rates for the respective period. For items impacting our Consolidated Statements of Financial Position, period end rates are used for currency translation purposes.

The following table provides the foreign exchange rates for the U.S. dollar, which is usually our most significant impact of foreign exchange translation, over the past four quarters and two years.

Exchange rate	Quarterly				Full year	
	Q4'19	Q3'19	Q2'19	Q1'19	**2019**	2018
U.S. Dollar - Average	**1.320**	1.320	1.337	1.329	**1.327**	1.295
U.S. Dollar - Period end	**1.299**	1.324	1.309	1.334	**1.299**	1.364

In general, our net income benefits from a weakening Canadian dollar and is adversely affected by a strengthening Canadian dollar as net income from the Company's international operations is translated back to Canadian dollars. Conversely, in a period of losses, the weakening of the Canadian dollar has the effect of increasing losses in foreign jurisdictions. The relative impacts of foreign exchange translation in any given period are driven by the movement of foreign exchange rates as well as the proportion of earnings generated in our foreign operations. We generally express the impacts of foreign exchange translation on net income on a year-over-year basis.

During 2019, the impacts of foreign exchange translation increased reported net income and underlying net income by $33 million and $47 million, respectively.

E. Growth

1. Sales and Value of New Business

($ millions)	**2019**	2018	2017
Insurance sales by business group(1)			
Canada	**988**	984	1,125
U.S.(2)	**1,382**	1,307	1,106
Asia(2)	**1,154**	898	811
Total insurance sales	**3,524**	3,189	3,042
Wealth sales by business group(1)			
Canada	**16,114**	15,286	14,976
Asia	**8,373**	10,101	13,056
Total wealth sales excluding Asset Management	**24,487**	25,387	28,032
Asset Management sales(1)	**134,505**	111,315	117,282
Total wealth sales	**158,992**	136,702	145,314
Value of New Business(1) ("VNB")	**1,206**	1,154	968

(1) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.
(2) Effective January 1, 2018, we transferred our International business unit from the U.S. to Asia, and comparative figures in 2017 have been changed to conform to the current year presentation.

Total Company insurance sales increased by $335 million or 11% ($283 million or 9%, excluding the impacts of foreign exchange translation) in 2019 compared to 2018.

- Canada insurance sales were in line with 2018.
- U.S. insurance sales increased by 3%, excluding the favourable impacts of foreign exchange translation of $32 million, primarily driven by strong growth in medical stop-loss sales, partially offset by lower large case sales in employee benefits.
- Asia insurance sales increased by 26%, excluding the favourable impacts of foreign exchange translation of $20 million, driven by growth in all local insurance markets.

Total Company wealth sales increased by $22.3 billion or 16% ($19.1 billion or 14%, excluding the impacts of foreign exchange translation) in 2019 compared to 2018.

- Canada wealth sales increased by 5%, primarily driven by continued growth in GRS.
- Asia wealth sales decreased by 18%, excluding the favourable impacts of foreign exchange translation of $120 million, as a result of lower mutual fund sales in India due to weak market sentiment, partially offset by money market sales in the Philippines and growth in the pension business in Hong Kong.
- Asset Management sales increased by 18%, excluding the favourable impacts of foreign exchange translation of $3.1 billion, driven by higher mutual and managed fund sales in MFS and higher sales in SLC Management.

Total Company VNB was $1,206 million in 2019, an increase of 5% compared to 2018, driven by higher sales in the U.S. and Asia, partially offset by changes in sales mix and the impact of lower interest rates.

2. Premiums and Deposits

($ millions)	**2019**	2018	2017
Premiums and Deposits			
Net premium revenue	**20,288**	18,642	15,281
Segregated fund deposits	**11,958**	11,553	10,858
Mutual fund sales(1)	**99,836**	84,202	87,515
Managed fund sales(1)	**45,062**	38,903	44,093
ASO premium and deposit equivalents(1)	**6,802**	6,808	6,933
Total premiums and deposits(1)	**183,946**	160,108	164,680
Adjusted premiums and deposits(2)	**181,100**	160,710	166,897

(1) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.
(2) Adjusted premiums and deposits is a non-IFRS financial measure excludes from premiums and deposits the impacts of Constant Currency Adjustment and Reinsurance in Canada's GB Operations Adjustment as described in section L - Non-IFRS Financial Measures in this document.

Premiums and deposits increased by $23.8 billion or 15% in 2019, compared to 2018, driven by increased mutual fund and managed fund sales. The impacts of foreign exchange translation increased premiums and deposits by $3.4 billion. Adjusted premiums and deposits increased by $20.4 billion or 13% in 2019 compared to 2018, driven by increased mutual fund and managed fund sales.

Net premium revenue increased by $1.6 billion or 9% in 2019 compared to 2018, driven by increased premium revenue in Canada, Asia and the U.S. The impacts of foreign exchange translation increased net premiums revenue by $184 million.

Segregated fund deposits increased by $405 million or 4% in 2019 compared to 2018, driven by increased deposits in Canada. The impacts of foreign exchange translation increased segregated fund deposits by $37 million.

Mutual fund sales increased by $15.6 billion or 19% in 2019 compared to 2018, driven by increased sales in MFS, the Philippines in Asia and Canada. The impacts of foreign exchange translation increased mutual fund sales by $2.2 billion.

Managed fund sales increased by $6.2 billion or 16% in 2019 compared to 2018, driven by increased sales in MFS, SLC Management and Hong Kong in Asia. The impacts of foreign exchange translation increased managed fund sales by $1.0 billion.

ASO premium and deposit equivalents in 2019 were in line with 2018. The impacts of foreign exchange translation increased ASO premium and deposit equivalents by $6 million.

3. Assets Under Management

AUM consists of general funds, segregated funds and other AUM. Other AUM includes mutual funds and managed funds, which include institutional and other third-party assets managed by the Company.

($ millions)	**2019**	2018	2017
Assets under management			
General fund assets	**180,229**	168,765	162,720
Segregated fund assets	**116,973**	103,062	106,392
Mutual fund assets, managed fund assets and other AUM(1)	**802,145**	679,316	705,673
Total AUM(1)	**1,099,347**	951,143	974,785

(1) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.

AUM increased by $148.2 billion or 16% as at December 31, 2019 compared to December 31, 2018, resulting primarily from:
(i) an increase of favourable market movements on the value of mutual funds, managed funds and segregated funds of $166.6 billion;
(ii) an increase of $12.6 billion from the BGO acquisition;
(iii) an increase in AUM of general fund assets of $11.5 billion; and
(iv) an increase of other business activities of $2.4 billion; partially offset by
(v) a decrease of $35.6 billion from the impacts of foreign exchange translation (excluding the impacts from general fund assets); and
(vi) net outflows from mutual, managed and segregated funds of $9.3 billion.

The net outflow of mutual, managed and segregated funds of $9.3 billion in 2019 was predominantly driven by net outflows from MFS of $15.8 billion, which were partially offset by net inflows of $3.6 billion in SLC Management, $2.4 billion in Asia and $1.4 billion in Canada.

General fund assets increased by $11.5 billion or 7% as at December 31, 2019 compared to December 31, 2018, primarily attributable to:
(i) other business activities of $7.8 billion; and
(ii) an increase of $7.1 billion from the change in value of fair value through profit or loss ("FVTPL") assets and liabilities; partially offset by
(iii) a decrease of $3.4 billion from the impacts of foreign exchange translation.

Segregated fund assets increased by $13.9 billion or 13% as at December 31, 2019 compared to December 31, 2018, primarily driven by favourable market movements of $14.7 billion, partially offset by the impacts of foreign exchange translation of $0.3 billion and net outflows of $0.1 billion.

Mutual funds, managed funds and other AUM increased by $122.8 billion or 18% as at December 31, 2019 compared to December 31, 2018, driven by favourable market movements of $152.0 billion, an increase of $12.6 billion from the BGO acquisition, other business activities of $2.8 billion, partially offset by the impacts of foreign exchange translation of $35.3 billion and net outflows of $9.2 billion.

F. Financial Strength

	2019	2018	2017
LICAT ratio(1)			
Sun Life Financial Inc.	**143%**	144%	n/a
Sun Life Assurance	**130%**	131%	n/a
Financial leverage ratio(2)	**21.2%**	21.2%	23.6%
Dividend			
Dividend payout ratio(2)	**41%**	39%	42%
Dividends per common share ($)	**2.100**	1.905	1.745
Capital ($ millions)			
Subordinated debt	**3,538**	3,039	3,437
Innovative capital instruments(3)	**200**	699	699
Equity			
Participating policyholders' equity and non-controlling interests	**1,110**	864	650
Preferred shareholders' equity	**2,257**	2,257	2,257
Common shareholders' equity	**21,141**	21,449	20,064
Total equity	**24,508**	24,570	22,971
Total capital	**28,246**	28,308	27,107

(1) LICAT ratios are not applicable before January 1, 2018.
(2) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.
(3) Innovative capital instruments consist of Sun Life ExchangEable Capital Securities and qualify as regulatory capital. However, under IFRS they are reported as Senior debentures in our Consolidated Financial Statements. For additional information, see section I - Capital and Liquidity Management - 1 - Capital in this document.

Life Insurance Capital Adequacy Test

OSFI has developed the regulatory capital framework referred to as the Life Insurance Capital Adequacy Test for Canada. LICAT measures the capital adequacy of an insurer using a risk-based approach and includes elements that contribute to financial strength through periods when an insurer is under stress as well as elements that contribute to policyholder and creditor protection wind-up.

SLF Inc. is a non-operating insurance company and is subject to the LICAT guideline. As at December 31, 2019, SLF Inc.'s LICAT ratio was 143%, which was 1% lower than December 31, 2018. The favourable impacts of reported net income, market movements and net change in subordinated debt were more than offset by the impacts of payment of dividends, repurchases of common shares, redemption of innovative capital instruments, OSFI's 2019 LICAT guideline revisions, the de-registration of a U.S. reinsurer in the second quarter and the BGO acquisition.

Sun Life Assurance, SLF Inc.'s principal operating life insurance subsidiary, is also subject to the LICAT guideline. As at December 31, 2019, Sun Life Assurance's LICAT ratio was 130%, compared to 131% as at December 31, 2018. The favourable contribution of reported net income and market impacts were more than offset by dividends to SLF Inc. and the impact from OSFI's 2019 LICAT guideline revisions. The Sun Life Assurance LICAT ratios in both periods are well above OSFI's supervisory ratio of 100% and regulatory minimum ratio of 90%.

Capital

Our total capital consists of subordinated debt and other capital instruments, participating policyholders' equity and total shareholders' equity which includes common shareholders' equity, preferred shareholders' equity, and non-controlling interests. As at December 31, 2019, our total capital was $28.2 billion, largely unchanged from the prior year. The decreases to total capital included the payment of $1,236 million of dividends on common shares of SLF Inc. ("common shares"), the impact related to the BGO acquisition of $860 million(1), the decrease of $592 million from the repurchase and cancellation of common shares, the impacts of foreign exchange translation loss of $564 million included in other comprehensive income (loss) ("OCI"), changes in the remeasurement of defined benefit plans of $42 million and net changes in debentures detailed below that net to $nil, largely offset by reported net income of $2,618 million, net unrealized gains on available-for-sale ("AFS") assets of $369 million and change in participating policyholders' equity of $227 million.

We strive to achieve an optimal capital structure by balancing the use of debt and equity financing. The financial leverage ratio for SLF Inc., which includes the innovative capital instruments and preferred shares issued by SLF Inc. as part of debt for the purposes of this calculation, was 21.2% as at December 31, 2019, consistent with December 31, 2018.

The legal entity, SLF Inc. (the ultimate parent company) and its wholly-owned holding companies had $2.3 billion in cash and other liquid assets(2) as at December 31, 2019. Of this amount, $1.3 billion was held at SLF Inc. The remaining $1.0 billion of liquid assets were held by SLF Inc.'s wholly-owned holding companies, which are available to SLF Inc. without any regulatory restrictions. SLF Inc. and its wholly-owned holding companies had $2.5 billion in cash and other liquid assets as at December 31, 2018.

(1) For additional information, refer to Note 3 in our 2019 Annual Consolidated Financial Statements.
(2) Other liquid assets include cash equivalents, short-term investments, and publicly traded securities.

On May 13, 2019, SLF Inc. redeemed all of the outstanding $250 million principal amount of Series 2014-1 Subordinated Unsecured 2.77% Fixed/Floating Debentures, in accordance with the redemption terms attached to such debentures. The redemption was funded from existing cash and other liquid assets.

On July 2, 2019, SLF Inc.'s Series D Senior Unsecured 5.70% Debentures matured and SLF Inc. repaid all of the outstanding $300 million principal amount of such debentures together with all accrued and unpaid interest. Under LICAT, senior debentures do not qualify as available capital, as a result, the repayment of the Series D Debentures had no impact on the LICAT ratio of Sun Life Assurance or SLF Inc. In addition, a separate pool of assets had been set aside to support the redemption of these debentures. As such, the redemption did not affect the cash and other liquid assets held by SLF Inc. and its wholly-owned holding companies noted above.

On August 13, 2019, SLF Inc. completed its issuance of Series 2019-1 Subordinated Unsecured 2.38% Fixed/Floating Debentures, with a principal amount of $750 million, due 2029. Sun Life intends to use an amount equal to the net proceeds to finance or refinance eligible assets as defined in our Sustainability Bond Framework.

On December 31, 2019, Sun Life Capital Trust II, a subsidiary of SLF Inc. redeemed all of the outstanding $500 million principal amount of Sun Life ExchangEable Capital Securities - Series 2009-1, in accordance with the terms outlined in the prospectus for the securities.

Common Share Dividend Activity

SLF Inc. increased the dividend paid on its common shares in the second and fourth quarter of 2019 and paid total common shareholder dividends of $2.100 per common share in 2019, compared to $1.905 paid in 2018. In relation to the Canadian Dividend Reinvestment and Share Purchase Plan ("DRIP"), commencing with the dividends paid on March 31, 2016, common shares were acquired by the plan agent on the open market and no shares were issued from treasury in connection with the plan in 2017, 2018 or 2019.

Normal Course Issuer Bids

On August 14, 2019, SLF Inc. renewed its normal course issuer bid, which remains in effect until August 13, 2020, or such earlier date as SLF Inc. may determine, or until SLF Inc. has purchased an aggregate of 15.0 million common shares under the bid. Shares purchased in 2019 were as follows:

	2019	
	Common shares purchased[1][2] (millions)	Amount ($ millions)
Bid announced August 2018 (expired August 13, 2019)	**8.6**	**445**
Bid announced August 2019	**2.8**	**147**
	11.4	**592**

(1) All of the common shares purchased under SLF Inc.'s normal course issuer bids during 2019 were subsequently cancelled.
(2) There were no common shares purchased in the fourth quarter of 2019.

Financial Strength Ratings

Independent rating agencies assign credit ratings to securities issued by companies and assign financial strength ratings to financial institutions such as Sun Life Assurance.

The financial strength ratings assigned by rating agencies are intended to provide an independent view of the creditworthiness and financial strength of a financial institution. Each rating agency has developed its own methodology for the assessment and subsequent rating of life insurance companies.

Rating agencies do not assign a financial strength rating for SLF Inc., however, credit ratings are assigned to the securities issued by SLF Inc. and its subsidiaries and are described in SLF Inc.'s AIF under the heading Security Ratings.

The following table summarizes the financial strength ratings for Sun Life Assurance as at January 31, 2020 and January 31, 2019.

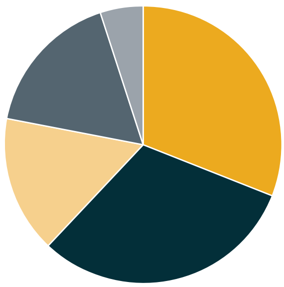
	A.M. Best	DBRS	Moody's	Standard & Poor's
January 31, 2020	**A+**	**AA**	**Aa3**	**AA**
January 31, 2019	A+	AA(low)	Aa3	AA-

Rating agencies took the following actions on the financial strength rating of Sun Life Assurance throughout 2019:
- March 14, 2019 - Standard and Poor's ("S&P") upgraded the financial strength rating to "AA" from "AA-"
- October 16, 2019 - DBRS upgraded the financial strength rating to "AA" from "AA(low)"
- December 4, 2019 - A.M. Best affirmed the financial strength rating with a stable outlook

G. Performance by Business Group

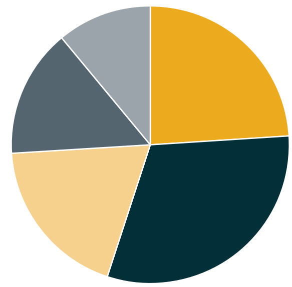
Sun Life's business is well-diversified across geographies and business types, supported by our four pillar strategy and our diversified offerings of insurance and wealth products.

Underlying net income by business group[1]



	As at December 31, 2019	2018
Canada	**31%**	33%
U.S.	**16%**	16%
Asset Management	**31%**	29%
Asia	**17%**	17%
UK	**5%**	5%

Underlying net income by type of business[1]



	As at December 31, 2019	2018
Individual Insurance	**24%**	28%
Asset Management	**31%**	29%
Group Insurance	**19%**	19%
Wealth	**15%**	12%
Run-Off	**11%**	12%

(1) Excludes Corporate Support.

($ millions, unless otherwise noted)	2019	2018	2017
Reported net income (loss)			
Canada	**883**	942	963
U.S.[1]	**163**	52	(144)
Asset Management	**897**	909	653
Asia[1]	**520**	555	778
Corporate	**155**	64	(101)
Total reported net income (loss)	**2,618**	2,522	2,149
Underlying net income (loss)[2]			
Canada	**1,012**	1,036	949
U.S.[1]	**532**	514	376
Asset Management	**1,004**	925	812
Asia[1]	**550**	523	461
Corporate	**(41)**	(51)	(52)
Total underlying net income (loss)[2]	**3,057**	2,947	2,546

(1) Effective January 1, 2018, we transferred our International business unit from the U.S. to Asia, and comparative figures have been changed to conform to the current year presentation.
(2) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.

All factors discussed in this document that impact our underlying net income are also applicable to reported net income.

1. Canada

Our Canada business segment is a leading provider of protection, health, and wealth solutions, providing products and services that deliver value to over 6 million Clients. We are the largest provider of benefits and pensions in the workplace, and provide a wide range of products to individuals via retail channels. Canada is a growth market for Sun Life and we are well-positioned to help meet evolving Client needs with integrated solutions for savings, retirement, health care and insurance protection.

Business Units

- **Individual Insurance & Wealth**
- **Group Retirement Services**
- **Group Benefits**

2019 Highlights

Shaping the market

- Maintained #1 position in workplace solutions, reaching over $110 billion GRS assets under administration and $11 billion of business-in-force in Group Benefits ("GB").
- Achieved sales of $1.9 billion in Defined Benefit Solutions ("DBS") for the year, which included the largest same-day group annuities transaction in the Canadian market with a single insurer. DBS offers customized and innovative solutions assisting companies in de-risking their pension plans.
- Maintained #1 position in Individual insurance and health sales(1) by offering a wide-range of solutions, including the launch of a Universal Life product targeted to meet the needs of small business owners.
- Continued retail wealth momentum driving Sun Life Global Investments ("SLGI") assets to $29 billion and with Sun GIF(2) gross sales growing 7% over the prior year.
- For the 11th consecutive year, voted "Most Trusted Life Insurance Company" by Reader's Digest.
- For the 12th consecutive year, received 100% on the Corporate Equality Index ("CEI") and was awarded the "Best Place to Work for LGBTQ Workplace Equality"(3).
- For the fifth consecutive year, recognized as one of "Canada's Top Employers for Young People" in the editorial competition organized by the Canada's Top 100 Employers project.

Putting the Client at the Centre, with Digital, Data and Analytics

- Continued to advance our digital capabilities, particularly our Client and supplier digital platform, *Lumino Health*, which provides Canadians with a single point of contact for a comprehensive range of health resources, with over 10 million health care provider user ratings and an average of approximately 10,000 user searches per day.
- Our highly rated Canadian mobile app, *my Sun Life*, enables Clients to search and connect with 150,000 Client-rated, paramedical health care providers across Canada, call for appointment bookings, submit health claims, check investment balances, take a picture to send and update forms, and connect with their financial advisor.
- Enhanced our use of data analytics to accelerate the underwriting process, which improved the Client and advisor experience, requiring fewer laboratory tests and issuing policies faster.
- Continued to be a leader in offering coverages that reflect changing demographics, society and social values. We were the first major group benefits provider to offer gender affirmation coverage, as we continue to evolve and diversify our health benefit plans, helping to meet the needs of all Canadians.
- Expanded our suite of available health care innovations to include pharmacogenomics, which helps medical practitioners identify the right medications and dosages for individuals based on their personal health profile and makeup, resulting in improved outcomes for our Clients.
- Launched *SunUniversalLife Pro* for small business owners, providing permanent insurance coverage to help them meet their business, personal and estate planning needs.

Strategy and Outlook

As the leading provider of group benefits, the market leader in the group retirement market and one of the largest players in individual insurance in the Canadian market, Sun Life is well-positioned to shape the market based on the complex and evolving needs of Canadians. Going forward, we will continue to leverage our market leadership position across our core businesses and distribution networks, to deliver on our Purpose to help our Clients achieve lifetime financial security and live healthier lives. Our focus for our Canadian businesses will be to:

Put the Client at the centre of everything we do

- Deliver a consistent best-in-class Client experience across all our Canadian businesses and continue to raise the bar, making it easier to do business with us. We have established the Client Experience Office ("CXO"), to drive change and share the best innovations in our organization.
- Continue to innovate to deliver a seamless, multi-channel experience, engaging Clients where, when and how they wish, while providing more proactive, personalized contact, leveraging our digital, data and analytics capabilities.

(1) LIMRA Sales Market Share as of third quarter 2019 year-to-date.
(2) Sun Life Guaranteed Investment Funds ("Sun GIF").
(3) Human Rights Campaign Foundation's Corporate Equality Index 2020 Report.

Shape the market enabled by leadership in core businesses

- Continue to support our industry-leading SLFD[1] network, and our third-party advisors, with new and enhanced products and services, while leveraging their capabilities by providing additional digital support in these channels. The advisor channels are well-positioned to help our Clients with customized financial plans and life and health insurance solutions.
- Advance new business models to shape and grow the market to meet our Clients' health needs, including the advancement of our Digital Health Solutions ("DHS") business and Lumino Health platform.
- Our strength in the worksite market and industry-leading technology positions us to implement innovations, such as aiding GB Clients in managing their organizations' health needs from an employee wellness perspective, as well as providing solutions to help bend the medical cost curve. These kinds of initiatives will allow us to extend our high Client retention rate and our market leadership in the GB and GRS businesses.
- We are helping to shape the growing Canadian group annuities market by assisting employers manage the risk in their defined benefit plans, where we are the leading provider of customized solutions.

Leverage digital, data and analytics, and artificial intelligence to develop new business models

- Continue our journey to digitizing the Client and sponsor journey, with innovative capabilities to engage Clients in moments that matter.
- Ensure every Client across the country can have a distinctive, integrated, Client-centric digital experience across life, health, and wealth solutions platforms.
- Use Client insights to provide expanded proactive and personalized interactions, and deliver these through our Digital Benefits Assistant ("DBA") and Ella platforms, which deliver personalized, relevant advice to our Clients.
- Continue to develop our highly-rated *my Sun Life* mobile app in Canada, making it easy and convenient for plan members to manage and use their pensions and benefits.

Outlook

We continue to evolve our business based on shifting demographics in the Canadian market, with aging cohorts at one end, and millennials, with a preference for digital interfaces, at the other end. All cohorts are focused on the need for financial security in retirement, and the impacts of the downloading of financial responsibility from governments and employers to individuals. With this, Canadians have two major preoccupations, their financial well-being, and their personal and loved ones' health. Both of these drive the need for effective life and health protection and wealth advice, presenting opportunities for Sun Life to provide additional services to Canadians. As a trusted market leader with a full suite of solutions and advice and a strong presence at the worksite and in communities across Canada, we are well-positioned to continue to help our Clients in the right way, at the right time.

The Canadian market is facing several headwinds that present both challenges and opportunities for our business. Digital disruptors continue to emerge, regulatory focus and changes are impacting all business units, and the competitive environment continues to apply additional pressure on achieving our objectives. To address these headwinds, we are actively investing in innovative digital solutions to provide more proactive personalized contact with our Clients to shape the industry in response to their needs. We continue to adjust and adapt our plans to drive momentum across our core businesses and accelerate growth through our CXO. We continue to build on our leadership at the worksite, reach out to Clients through our multi-channel distribution, and explore new offerings in the wealth and health spaces to help our Clients achieve lifetime financial security and healthier lives.

Business Units

Business	Description	Market position
Individual Insurance & Wealth	• Provides holistic advice to individuals to help them and their families achieve lifetime financial security, and live healthier lives, leveraging a broad suite of life and health insurance and investment products • Products distributed via multi-channel distribution model consisting of the SLFD, third-party channels, including independent brokers and broker-dealers, and direct to consumer for certain products	• 1st place market position by premiums within the individual life and health market[1] • 1st in fixed product sales[1] and 4th place market position by total wealth deposits and premiums[1]
Group Benefits	• Provides group insurance products in Canada, including life, dental, extended health care, disability and critical illness, to employers of all sizes • Leverages our worksite advantage to offer voluntary benefits solutions to individual plan members, including post-employment life and health plans • Products distributed by sales representatives in collaboration with independent advisors, benefits consultants and the SLFD	• 1st place group benefits provider in Canada for the 7th consecutive year[2]
Group Retirement Services	• Provides defined contribution pension plans and defined benefit solutions in Canada to employers of all sizes • Leverages our worksite advantage to offer voluntary savings plans, including post-employment plans, to those members exiting their employer-sponsored plans • Defined Benefit Solutions offers an expanding range of innovative de-risking solutions for defined benefit pension plans • Products distributed by sales representatives in collaboration with a multi-channel distribution network of pension consultants and advisors	• GRS ranked 1st in the defined contribution market based on total Capital Accumulation Plan assets for the 17th consecutive year[3] and is an industry leader in the defined benefit solutions annuity market

(1) LIMRA Sales Market Share as of third quarter 2019 year-to-date.
(2) Based on revenue for year ended December 2018 from 2019 Benefits Canada Report.
(3) Based on the 2018 Fraser Pension Universe Report.

(1) Sun Life Financial Distribution—our proprietary career advisory network.

Financial and Business Results

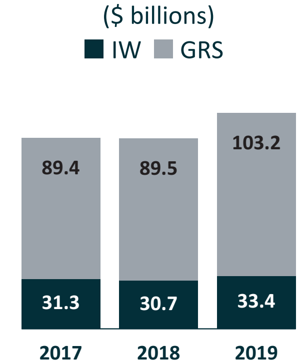
($ millions)	2019	2018	2017
Individual Insurance & Wealth	**282**	328	415
Group Benefits	**253**	282	332
Group Retirement Services	**348**	332	216
Reported net income	**883**	942	963
Less: Market-related impacts(1)	**(111)**	(117)	8
Assumption changes and management actions(1)	**(17)**	23	22
Other adjustments(1)(2)	**(1)**	–	(16)
Underlying net income(3)	**1,012**	1,036	949
Reported ROE (%)(3)	**12.6%**	13.8%	12.6%
Underlying ROE (%)(3)	**14.4%**	15.2%	12.4%
Insurance sales(3)	**988**	984	1,125
Wealth sales(3)	**16,114**	15,286	14,976
Assets under management(3)	**199,840**	177,436	176,417

(1) Represents an adjustment made to arrive at a non-IFRS measure. See section L - Non-IFRS Financial Measures in this document for a breakdown of components within this adjustment.
(2) Mainly comprised of certain hedges in Canada that do not qualify for hedge accounting and acquisition, integration and restructuring costs. For further information, see section L - Non-IFRS Financial Measures in this document for a breakdown of components within this adjustment.
(3) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.

Profitability
Canada's reported net income decreased by $59 million or 6% in 2019 compared to 2018, reflecting unfavourable ACMA impacts. Underlying net income decreased by $24 million or 2%, reflecting unfavourable morbidity experience in GB, interest on par seed capital of $75 million in 2018, unfavourable credit experience, a mortgage impairment and lower new business gains, partially offset by business growth, favourable expense experience, higher AFS and investing activity gains, higher net benefits from tax-related items and favourable mortality experience.

Growth
Canada insurance sales in 2019 were in line with 2018. Canada individual insurance sales were $389 million in 2019, a decrease of $7 million or 2% compared to 2018, driven by lower life insurance sales. Sales in GB were $599 million in 2019, an increase of $11 million or 2% compared to 2018.

Wealth - Asset Under Management
($ billions)



Canada wealth sales increased by $0.8 billion or 5% in 2019 compared to 2018. Individual wealth sales were $6.4 billion in 2019, an increase of $0.1 billion or 2% compared to 2018, driven by increased mutual fund and segregated fund sales, partially offset by lower fixed annuity sales. GRS sales were $9.8 billion in 2019, an increase of $0.7 billion or 8% compared to 2018, driven by improved sales across all products.

One of our key initiatives is to continue growing our individual wealth manufactured products, including SLGI mutual funds and Sun GIF segregated funds. AUM for our wealth businesses, including GRS, was $136.6 billion as at December 31, 2019, an increase of $16.4 billion or 14% compared to December 31, 2018, driven by improved markets and net inflows.

Profitability and Growth by Business Unit

Individual Insurance & Wealth
Individual Insurance & Wealth's reported net income decreased by $46 million or 14% in 2019 compared to 2018, reflecting interest on par seed capital of $75 million in 2018, more unfavourable ACMA impacts and unfavourable credit experience, partially offset by business growth, favourable mortality experience and higher investing activity gains.

Individual life and health insurance product sales were $389 million in 2019, a decrease of $7 million or 2% compared to 2018. As noted above, the decrease was due to lower life insurance sales. Individual wealth product sales were $6.4 billion in 2019, an increase of $0.1 billion or 2% compared to 2018, driven by increased mutual fund and segregated fund sales, partially offset by lower fixed annuity sales.

Group Benefits
GB's reported net income decreased by $29 million or 10% in 2019 compared to 2018, reflecting unfavourable morbidity experience, partially offset by favourable expense experience, business growth and less unfavourable ACMA impacts.

GB sales were $599 million in 2019, an increase of $11 million or 2% compared to 2018. Group Benefits maintained the #1 market share position for overall revenue in Canada with $11 billion in business-in-force, while continuing to focus on Client service and productivity.

Group Retirement Services

GRS's reported net income increased by $16 million or 5% in 2019, compared to 2018, reflecting investing activity gains and business growth, partially offset by less favourable ACMA impacts.

GRS sales were $9.8 billion in 2019, an increase of $0.7 billion or 8% in 2019 compared to 2018, including the result of the largest same-day group annuities transaction in the Canadian market with a single insurer. Assets under administration was $111.8 billion as at December 31, 2019, an increase of $14.5 billion or 15% compared to December 31, 2018 driven by improved markets and net inflows.

2. U.S.

Our U.S. business group is one of the largest group benefits providers in the U.S. market, serving employees and their families at more than 55,000 workplaces of all sizes across the country with employer-sponsored insurance products and solutions. In addition, our U.S. business manages an in-force block of more than 100,000 individual life insurance policies.

Business Units

- **Group Benefits**
- **In-force Management**

2019 Highlights

Growth and profitability

- Our total Group Benefits sales of over one billion U.S. dollars (US$1,043 million) reached a new high, and an increase of 4% over 2018. Business-in-force of US$4.3 billion as of December 31, 2019 was up 7% over the previous year.
- Achieved an after-tax profit margin for U.S. Group Benefits of 7.3% as of the fourth quarter of 2019, up from 6.7% as of the fourth quarter of 2018.
- Completed remaining major milestones of integration of the employee benefits business acquired in 2016, including reaching our full target of $100 million pre-tax run-rate synergies as scheduled.

Advanced our strategies to simplify benefits administration and close coverage gaps

- Leveraged our Maxwell Health acquisition to launch a combined benefits administration platform, providing employers and employees with an intuitive digital experience, access to the complete portfolio of Sun Life benefits and the ability to enroll in health insurance from third parties. By year-end, over 10,000 families were enrolled on this new platform.
- Helped members safeguard their finances by providing employers auto-enrollment for income-protecting disability coverage, and by adding dental plan options with higher maximums that reduce out-of-pocket costs for dental and orthodontic benefits.
- Helped our In-force Management Clients achieve their estate planning goals by offering them an individual life product extension beyond age 100 for policies that would have otherwise expired.
- Deployed robotics to streamline processes, enhance efficiency and provide better Client experiences, including OrthoTron, our digital enhancement which helps calculate and pay orthodontic claims quickly and accurately.

Grew our leading medical stop-loss presence in the marketplace

- Increased our business-in-force by 17% in 2019, advancing our position as the largest independent stop-loss provider in the U.S.
- Analyzed our deep database of medical claims for our annual high-cost claims and injectable drug trends report, which showed specialty drugs, extended hospital stays and complex treatments as major cost drivers in million-dollar and plus claims, providing employers actionable information to help bend the medical cost curve on their self-funded health plans.
- Generated millions of dollars in cost savings for both ourselves and our medical stop-loss Clients through our Clinical 360 program that combines clinical experts with tailored data analysis.
- Our business-in-force through our captive relationships has nearly doubled during the year. Captive relationships allow employers to pool together to share a portion of their self-funded risk, which is a good option for small- and medium-sized employers looking to self-fund their medical benefits.

Launched offerings that grow our core business and help Clients manage absence

- Introduced paid family and medical leave offerings in select states to help employers provide fully-insured and self-insured paid leave programs, and continued our leadership working with lawmakers, regulators and advocates to help expand access to these benefits for more Americans through their employers.
- Introduced a new FullscopeRMS offering for an integrated absence solution for industry partners and gained traction in the marketplace with our new medical stop-loss offering for health plans.

Strategy and Outlook

In the U.S., we continue to execute core strategies and expand further into health care to achieve our goal of building the best benefits company in America. We are focused on closing our members' insurance coverage gaps through our life, disability, absence management, dental, vision, voluntary, and supplemental health offerings. We are also helping self-funded employers and health plans solve for rising health care costs through our leading medical stop-loss business, and we are well-positioned to expand in the health care space where we deliver unique value due to our strong market position and expertise. Our strategy goes to the heart of our Purpose of helping our Clients achieve lifetime financial security and live healthier lives.

Executing in our core Group Benefits businesses to deliver profitable growth

- Continue to maintain our progress on margins and growth of our business-in-force in our employee benefits business by improving sales and retention through outstanding Client experiences, investing in claims management, leveraging our voluntary business and building on our broker relationships.
- Advance our national accounts capabilities in absence management and continue to focus on creating a magnetic Client experience with proactive contact and enhanced employer on-boarding.
- Increase market share in our industry-leading medical stop-loss business by providing deep data insights, expertise and flexible risk management options to protect self-funded employers from the impact of high-cost claims.
- Expand the FullscopeRMS portfolio of turnkey solutions for industry partners into new product lines, in order to drive growth of this business.

Helping employers manage claims and absence for both paid and unpaid leaves

- Expand the roll-out of products and capabilities to help employers meet the requirements of federal and state leave laws while giving more Americans access to paid leave.
- Advance claim automation capabilities that enhance tracking and reporting for Clients.
- Continue leadership in advocating for paid family and medical leave legislation that includes a role for private insurers.

Enhancing the Client experience and making it easier to do business with us

- Introduce more automated digital capabilities and predictive analytics that enable a personal experience, a high-touch claims approach and quicker service time.
- Build new data and infrastructure capabilities to help us provide better service and deeper insights.
- Expand our clinical approach for long-term disability claims.
- Improve training and tools to better integrate plain language throughout our Client communications and service.

Expanding in the health care market through our medical stop-loss business

- Leverage our data and analytics capabilities to identify opportunities to reduce health care costs for Clients through products and programs, such as our Clinical 360 program.
- Create insights into pharmacy cost drivers and emerging treatments to help Clients understand the trends that impact their medical benefits and costs.
- Build additional self-funded health plan solutions for employers who have an increasing need to share risk and control health care and pharmacy costs.

Helping Clients close coverage gaps and select the right benefits

- Continue to innovate on the Sun Life + Maxwell Health insurtech platform, providing an intuitive**,** digital enrollment platform using data to drive proactive outreach and to nudge Clients on coverage options they should consider.
- Help brokers and employers access our voluntary and supplemental health products with simple, digital support tools that guide employees as their needs evolve, and help them to fund out-of-pocket medical costs.
- Expand our digital distribution by adding relationships and data exchange capabilities with key administration and enrollment providers to ensure we can meet the needs of our wide range of employer and broker stakeholders.

Optimizing the value of our In-force Management business

- Continue to provide excellent service to our individual insurance policy-owners.
- Evaluate opportunities to improve profitability, including expense efficiencies and alternative investment strategies.
- Effectively manage risk and capital through reinsurance and product offerings for converting or maturing policies.

Outlook

The group benefits market in the U.S. continues a steady pace of growth as employers seek to offer competitive benefits in a currently tight labour market. The health insurance market, which we serve via our medical stop-loss & health products, is growing at a faster pace due to medical inflation and increasing demand. In the current environment, we are leveraging our medical stop-loss analytics to help self-funded employers manage health care costs and develop further insights into prescription drug cost drivers. The high cost of health care creates opportunities to educate members about their coverage needs as they reach different milestones in their lives, particularly as high-deductible health plans create financial gaps that our supplemental health products can fill. Our growth strategies incorporate these factors to help Clients manage their health benefit costs.

Paid family and medical leave continues to be a trend in the U.S. with legislation at both the state and federal levels. In states with paid-leave laws that allow employers to use private insurance to meet these requirements, Sun Life is beginning to offer products to support employers, as well as to provide options for more generous plans. We see an opportunity to educate employers on the need for disability insurance to complement state-required benefits, and we continue to be a leader in working with lawmakers, regulators and advocates to communicate the valuable role private insurers can play in expanding access to paid family and medical leave to more Americans through their employers.

We see the potential for regulatory headwinds with the increasing focus on consumer data and privacy rights coupled with developing interest in the risks posed by data analytics and predictive modeling. These trends have the potential to benefit the business by establishing industry standards, but may also increase costs and limit the scope of business initiatives. We are enhancing our internal governance controls framework around these initiatives, and monitoring and providing input into regulatory developments through trade group participation and peer group networking.

Business Units

Business	Description	Market position
Group Benefits	• Provides group insurance products and services, including life, long-term and short-term disability, absence management, medical stop-loss, dental, vision, voluntary and supplemental health insurance such as accident and critical illness • Stop-loss insurance provides employers who self-insure their employee health plans with protection against large claims • Products distributed through more than 31,000 independent brokers and benefits consultants, supported by more than 200 employed sales representatives • Serves more than 55,000 employers in small, medium and large workplaces across the U.S. • FullscopeRMS, which includes Disability RMS, provides turnkey solutions for disability, absence management, life, stop-loss and supplemental health coverages and capabilities including underwriting services, claims administration, product development, actuarial and policy administration	• Largest independent medical stop-loss provider[(1)] • Largest turnkey disability provider[(2)] • One of the largest preferred provider organization ("PPO") dental networks with 130,000 unique dentists[(3)] • Top ten group life, disability and voluntary benefits provider[(4)]
In-force Management	• Provides more than 100,000 individual life insurance policies, primarily universal life and participating whole life insurance	

(1) Ranking compiled by Sun Life based on data contained in the 2018 Accident and Health Policy Experience Report from the National Association of Insurance Commissioners ("NAIC"). An independent stop-loss carrier is defined as a stop-loss carrier that does not also sell medical claim administration services.
(2) Based on annual 2018 NAIC Accident and Health Policy Experience Report and DRMS market expertise.
(3) Based on September 2019 data from the NetMinder Report; based on unique dentist count.
(4) Based on LIMRA 2018 Annual U.S. Sales & In-Force Reports for group term life, group short-term disability and long-term disability insurance and the annual LIMRA 2018 U.S. Voluntary In Force report for combined group voluntary life and supplemental health products.

Financial and Business Results

(US$ millions)[1]	2019	2018	2017
Group Benefits	**187**	217	140
In-force Management	**(65)**	(176)	(247)
Reported net income (loss)	**122**	41	(107)
Less: Market-related impacts[2]	**(40)**	(21)	(44)
Assumption changes and management actions[2][3]	**(221)**	(302)	(210)
Acquisition, integration and restructuring[2][4]	**(16)**	(32)	(52)
U.S. tax reform[2][3]	**–**	–	(90)
Underlying net income (loss)[5]	**399**	396	289
Reported ROE (%)[5]	**4.5%**	1.5%	(4.1)%
Underlying ROE (%)[5]	**14.7%**	14.6%	11.1%
After-tax profit margin for Group Benefits (%)[5]	**7.3%**	6.7%	5.0%
Insurance sales[5]	**1,043**	999	863
(C$ millions)			
Reported net income (loss)	**163**	52	(144)
Underlying net income (loss)[5]	**532**	514	376

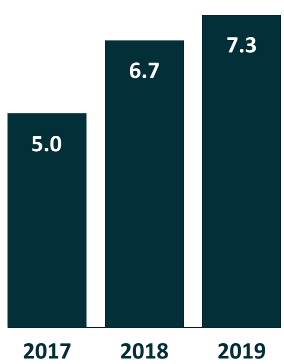
(1) Effective January 1, 2018, we transferred our International business unit from the U.S. to Asia, and comparative figures have been changed to conform to the current year presentation.
(2) Represents an adjustment made to arrive at a non-IFRS measure. See section L - Non-IFRS Financial Measures in this document for a breakdown of components within this adjustment.
(3) ACMA in 2017 excludes the US$(231) million ($(293) million) charge that is included in U.S. tax reform, shown separately.
(4) Acquisition, integration and restructuring amounts related to the acquisition costs of the U.S. employee benefits business acquired in 2016 and Maxwell Health acquired in 2018.
(5) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.

Profitability

U.S.'s reported net income increased by US$81 million ($111 million) in 2019 compared to 2018, driven by improved impacts from ACMA and lower integration costs as the integration of the U.S. employee benefits business acquired in 2016 was completed, partially offset by unfavourable market-related impacts, predominantly from changes in the fair value of investment properties. Underlying net income was in line with 2018, reflecting business growth, improved mortality experience, improved lapse and policyholder behaviour experience as well as improved expense experience, offset by interest on par seed capital of US$28 million ($35 million) in 2018, and lower investing activity and AFS gains. The impacts of foreign exchange translation increased reported net income and underlying net income by $4 million and $12 million, respectively.

The after-tax profit margin for Group Benefits[1] was 7.3% as of the fourth quarter of 2019, compared to 6.7% as of the fourth quarter of 2018.

Group Benefits After-Tax Profit Margin %



Growth

U.S.'s insurance sales of over one billion U.S. dollars (US$1,043 million) reached a new high, up US$44 million or 4% in 2019 compared to 2018, primarily driven by growth in medical stop-loss in Group Benefits. Medical stop-loss business-in-force increased to US$1.9 billion, an increase of 17% compared to 2018, advancing our leadership position as the largest independent medical stop-loss provider.

Profitability by Business Unit

Group Benefits

Group Benefits' reported net income decreased by US$30 million or 14% in 2019 compared to 2018, reflecting unfavourable ACMA impacts, partially offset by favourable mortality experience, business growth and lower integration costs as the integration of the U.S. employee benefits business acquired in 2016 was completed.

In-Force Management

In-force Management's reported net loss improved by US$111 million or 63% in 2019 compared to 2018, reflecting less unfavourable ACMA impacts, improved lapse and policyholder behaviour experience as well as improved expense experience, partially offset by unfavourable market-related impacts, interest on par seed capital of US$28 million ($35 million) in 2018, lower investing activity gains and unfavourable mortality experience.

(1) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.

3. Asset Management

Our Asset Management business group is comprised of MFS and SLC Management. MFS is a premier global asset management firm which offers a comprehensive selection of financial products and services that deliver superior value and actively manages assets for retail and institutional investors around the world. SLC Management is an institutional investment management business that delivers liability driven investing, alternative fixed income and real estate solutions to Clients, with operations around the world.

Business Units

- **MFS Investment Management**
- **SLC Management**

2019 Highlights

- We ended 2019 with $768.8 billion in assets under management consisting of $684.8 billion (US$527.4 billion) from MFS and $84.0 billion from SLC Management.

MFS

- Strong investment performance of MFS's U.S. retail mutual fund assets ranked in the top half of their Lipper categories based on ten-, five- and three-year performance, with 93%, 93% and 98%, respectively, as at December 31, 2019.
- MFS opened offices in Milan as part of its new "in-country" retail strategy, which deepens relationships with local professional buyers, and as a result, sales increased 45% in 2019, compared to the previous year.
- MFS recorded four consecutive quarters of positive retail net flows in 2019, driven by retail net inflows from both equity and fixed income products in the U.S. Despite the industry trend of net outflows, MFS U.S.'s retail equity sector experienced net inflows, demonstrating that MFS's performance and brand presence are resonating with retail investors seeking active fund managers with strong long-term performance.
- Fixed income gross sales were up 38% in 2019 over the previous year.

SLC Management

- We completed the BGO acquisition, which was the product of the merger of the Bentall Kennedy group of companies and GreenOak Real Estate, a global investment firm. The acquisition expands the capabilities of SLC Management by increasing our global real estate investment footprint, while adding organizational depth and a full spectrum of solutions including equity and debt real estate strategies.
- We announced our intention to acquire a majority stake in InfraRed Capital Partners, a global infrastructure and real estate investment manager. InfraRed advises institutional and pooled fund clients on approximately $16 billion (US$12 billion) in assets under management as of September 30, 2019. InfraRed is headquartered in London, UK and has more than 175 partners and staff. InfraRed will form part of SLC, and the acquisition is integral to Sun Life's strategy of broadening its asset management pillar by extending the capabilities of SLC to the benefit of existing and prospective clients.

Strategy and Outlook

Our strategy is to design and deliver investment products through MFS and SLC Management that will deliver growth in traditional active asset management as well as LDI and alternative asset classes. MFS competes primarily in the global institutional and U.S. retail markets. SLC Management leverages Sun Life's long-standing expertise in LDI and private asset class investments to offer customized investment solutions to third-party institutional investors.

MFS: Continue to deliver superior investment performance to our Clients while building a world-class fixed income platform

MFS's active management strategy focuses on delivering value to our Clients over the long term. Our strong relative performance puts us in a competitive position over other asset managers:

- With increasing market volatility and a successful track record, MFS is well-positioned to attract flows from all Client sectors that are seeking risk-managed capital appreciation over the long term based on our disciplined, long-term approach. We are engaging Clients to align with MFS on longer investment horizons, to leverage our proven ability to deliver over benchmark performance through a market cycle, as well as our leadership on environmental, social, and governance ("ESG") analytics.
- Build out fixed income and product and sales capabilities, and continue our non-U.S. retail initiatives.
- MFS strives to maintain margins in the top quartile of active managers' margins while maintaining our commitment to provide long-term value to clients.
- MFS is piloting its "in-country" distribution model in Italy, which leverages MFS's capabilities to meet local Client needs by deepening relationships with professional buyers.

SLC Management: Help institutional investors meet their goals by offering a broad suite of fixed income strategies and alternative asset classes

We are well-positioned to take advantage of three key trends in our target markets through:

- Increased allocations to fixed income by pension funds looking to de-risk.
- Outsourcing of asset management by insurance companies, and consolidation of investment manager relationships by institutional investors.
- Increased demand for investment alternatives due to low nominal interest rates.

Our strategy is to continue to deliver superior investment performance, expand our distribution capabilities and product lineup with offerings that leverage our existing investment capabilities, and continue to investigate potential acquisitions that fit our strategic targets. We offer our Clients a compelling suite of solutions, including:

- Income-related and total return capabilities across key asset classes including public and private fixed income.
- Deep real estate equity and debt expertise.
- Differentiated investment strategies.

Outlook

We will continue to see industry consolidation in the asset management industry as changes are driving clients and platforms to consolidate assets into fewer investment firms. While we continue to see a historical bull market run, we believe the inevitable market correction will accelerate consolidation of less skilled and sub-scale active managers, providing us with opportunities to establish new Client relationships. Within this context, we believe that we have the scale, proven long-term track records and broad product portfolios to take advantage of this opportunity to gain market share.

Active asset management businesses are facing headwinds as demand for passive and alternative strategies grows faster than the overall market, as well as slow downward pressure on fees, from technology, new market entrants, regulation and increased transparency.

To address these headwinds, we will continue to position our active asset manager to serve the large pool of alpha-seeking assets in both the retail and institutional markets, bringing our scale, and proven track record to the service of our global Clients. We will leverage our data analytics capabilities to continue to improve our distribution capabilities. Even with some investors choosing a passive strategy, as a well-positioned and skilled active manager we will have the opportunity to grow.

In a low yield environment, our Clients are increasingly looking for strategies that best match the liability profile of their business and that offer additional yield and return. SLC Management meets these needs through an array of fixed income strategies and alternative assets. These strategies are often consistent with our own approach for managing the general account of Sun Life Financial, resulting in an alignment of interests with our Clients, enabling opportunities for co-investing.

Business Units

Business	Description	Market position
MFS	• Actively manages assets for retail and institutional investors, including pension plans, sovereign wealth funds, monetary authorities, and endowments and foundations • Retail products are distributed through financial advisors, brokerages and other professionals • Institutional products are distributed by an internal sales force, which is aided by a network of independent consultants	• Over US$527 billion in AUM • The 11th largest U.S. Retail funds manager(1)
SLC Management	• SLC Management delivers LDI, alternative fixed income and real estate solutions to Clients through a portfolio of companies, including: • BGO, a global real estate investment manager • SLC Management (U.S.)(2), a U.S. institutional asset manager specializing in customized fixed income portfolio and LDI for U.S. insurance companies and pension plans • SLC Management (Canada), a Canadian institutional asset manager that provides investment expertise in alternative asset classes and LDI to pension funds and other institutional investors • Institutional products are distributed by an internal sales force, which is aided by a network of independent consultants	• Over $84.0 billion in AUM

(1) As reported by Strategic insight based on AUM as at December 31, 2019.

(2) Ryan Labs Asset Management Inc., Prime Advisors, Inc. and Sun Life Capital Management (U.S.) LLC merged effective January 1, 2020, keeping the name Sun Life Capital Management (U.S.) LLC.

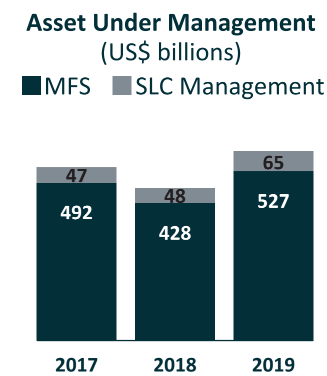
Financial and Business Results

Asset Management (C$ millions)	**2019**	2018	2017
Reported net income	**897**	909	653
Less: Fair value adjustments on MFS's share-based payment awards[1]	**(64)**	(5)	(81)
Other[(1)(2)(3)]	**(43)**	(11)	(78)
Underlying net income[4]	**1,004**	925	812
Assets under management (C$ billions)[4]	**768.8**	649.7	677.6
Gross sales (C$ billions)[4]	**134.5**	111.4	117.3
Net sales (C$ billions)[4]	**(12.2)**	(37.3)	(22.4)
MFS (C$ millions)			
Reported net income	**909**	893	612
Less: Fair value adjustments on MFS's share-based payment awards[1]	**(64)**	(5)	(81)
U.S. tax reform[(1)(3)]	**–**	–	(95)
Underlying net income[4]	**973**	898	788
Assets under management (C$ billions)[4]	**684.8**	584.2	618.3
Gross sales (C$ billions)[4]	**125.0**	104.3	106.5
Net sales (C$ billions)[4]	**(15.8)**	(38.5)	(28.5)
MFS (US$ millions)			
Reported net income	**685**	689	471
Less: Fair value adjustments on MFS's share-based payment awards[1]	**(48)**	(4)	(64)
U.S. tax reform[(1)(3)]	**–**	–	(75)
Underlying net income[4]	**733**	693	610
Pre-tax net operating profit margin ratio[4]	**39%**	38%	38%
Average net assets (US$ billions)[4]	**484.0**	477.5	460.5
Assets under management (US$ billions)[4]	**527.4**	428.4	491.6
Gross sales (US$ billions)[4]	**94.2**	80.6	82.1
Net sales (US$ billions)[4]	**(11.8)**	(29.7)	(21.8)
Asset appreciation (depreciation) (US$ billions)	**110.8**	(33.5)	87.8
S&P 500 Index (daily average)	**2,914**	2,744	2,448
MSCI EAFE Index (daily average)	**1,892**	1,965	1,886
SLC Management (C$ millions)			
Reported net income	**(12)**	16	41
Less: Other[(1)(2)(3)]	**(43)**	(11)	17
Underlying net income[4]	**31**	27	24
Assets under management (C$ billions)[4]	**84.0**	65.5	59.3
Gross sales (C$ billions)[4]	**9.5**	7.0	10.8
Net sales (C$ billions)[4]	**3.6**	1.2	6.1

(1) Represents an adjustment made to arrive at a non-IFRS measure. See section L - Non-IFRS Financial Measures in this document for a breakdown of components within this adjustment.
(2) Amounts include acquisition costs for our acquisition of a majority stake in BentallGreenOak and the pending InfraRed transaction, which includes the unwinding of the discount for the Put option and Deferred payments liability of $16 million.
(3) In the fourth quarter of 2017, the U.S. tax reform of $(78) million consists of a charge of $32 million relating to the revaluation of its deferred tax balances, consisting of a charge of $49 million for MFS, partially offset by a benefit of $17 million for SLC Management, and a one-time charge on the deemed repatriation of foreign earnings of $46 million for MFS in the fourth quarter of 2017.
(4) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.

Profitability
Asset Management's reported net income decreased by $12 million or 1% in 2019 compared to 2018, reflecting higher fair value adjustments on MFS's share-based payment awards and higher acquisition and integration costs related to the BGO acquisition and the pending InfraRed transaction. Underlying net income increased by $79 million or 9%, primarily driven by higher average net assets ("ANA"), expense management and investment income including returns on seed capital in MFS. The impacts of foreign exchange translation in 2019 increased reported net income and underlying net income by $21 million and $23 million, respectively.

Growth
Asset Management's AUM increased by $119.1 billion or 18% as at December 31, 2019 compared to December 31, 2018, primarily driven by asset appreciation of $151.2 billion, partially offset by the impacts of foreign exchange translation of $33.4 billion and net outflows of $12.2 billion.



Profitability and Growth by Business Unit

MFS

In U.S. dollars, MFS's reported net income in 2019 was in line with 2018, reflecting higher fair value adjustments on MFS's share-based payment awards. Underlying net income increased by US$40 million or 6%, driven by the impacts of higher ANA, expense management and investment income including returns on seed capital.

MFS's AUM increased by US$99.0 billion or 23% as at December 31, 2019 compared to December 31, 2018, primarily driven by asset appreciation of US$110.8 billion, partially offset by net outflows of US$11.8 billion.

SLC Management

SLC Management's reported net loss was $12 million in 2019 compared to an income of $16 million in 2018, reflecting higher acquisition and integration costs related to the BGO acquisition and the pending InfraRed transaction. Underlying net income increased by $4 million or 15%, driven by net income from the BGO acquisition that closed in July 2019, partially offset by an increase in expenses.

SLC Management's AUM increased by $18.5 billion or 28% as at December 31, 2019 compared to December 31, 2018, primarily driven by the BGO acquisition of $12.6 billion, asset appreciation of $4.1 billion and net inflows of $3.6 billion, partially offset by the impacts of foreign exchange translation of $2.7 billion.

4. Asia

Our Asia segment consists of two business units: Insurance and Wealth and International. Our Insurance and Wealth business unit operates in seven local markets, delivering value to over 23 million Clients by providing life, health, wealth and asset management solutions through a multi-channel distribution approach. Our International business unit focuses on high-net-worth insurance and wealth products. Asia's presence in the local markets provides us with a strong foothold to take advantage of the high growth prospects in this region.

Business Units

- **Insurance and Wealth**
- **International**

2019 Highlights

Growth in scale and distribution

- We ended 2019 with $52.0 billion in total AUM in our wealth and asset management businesses, including $15.0 billion from our Hong Kong Mandatory Provident Fund ("MPF") pension business, the second fastest growing MPF business[(1)], and the fourth largest in terms of AUM, and $23.2 billion from our asset management joint venture in India.
- Expanded our distribution network through two new bancassurance agreements in Vietnam and Indonesia as well as launching a new broker channel in Vietnam.
- Grew our elite agency development programs, providing advisors with the necessary skills and tools required to provide Clients with world-class service and advice, with the result that the number of MDRT[(2)] qualifiers has nearly doubled in the last 3 years to over 2,000.
- Conducted e-distribution experiments with strategic partners such as U Mobile Sdn Bhd and Lazada E-Services Philippines Inc., and piloted a new online sales channel in China, resulting in strong sales growth for the businesses.

Digital transformation progress

- Client mobile applications are now available in all seven of our local markets and point-of-sales ("POS") systems continue to be rolled out across our businesses, powering greater Client experiences across a variety of platforms.
- Modernized our back office systems, including the launch of a new cloud-based platform for e-distribution which accelerated speed-to-market, allowing on-boarding of new partners in as little as 3 weeks.
- Optimized internal processes resulting in more efficient claims processing and payments, with claims turned around in as little as 24 hours.
- Bowtie Life Insurance Company, the first virtual insurer[(3)], in which we have a strategic investment, began selling their Voluntary Health Insurance Scheme in Hong Kong.

Strategy and Outlook

In order to achieve our ambitious growth objectives in earnings, sales and value of new business, we will need to grow scale in all of our markets, with world-class distribution capabilities and operational excellence, while investing in the right talent. Our areas of focus for Asia are to:

Build world-class distribution

- Extend our reach across channels and segments to serve the growing insurance markets in Asia and to help more Clients through expanding our health and wellness offerings, with targeted expansion in local markets.
- Deliver a multi-channel experience engaging Clients where, when and how they wish.
- Create a unique distribution differentiator in each market by continuing to build on our Most Respected Advisor ("MRA") principles to create the next generation of elite distribution leaders.
- Use data and analytics to drive advancement in Client retention, advisor productivity, quality recruitment and training and development.

(1) Gain Miles MPF Market Analysis, December 2019.
(2) Million Dollar Round Table ("MDRT").
(3) First virtual insurer under the Hong Kong Insurance Authority's Fast Track.

Transform our operations and business model

- Digitize our business and use common technology platforms to improve operational efficiency to enhance the Client experience by making it easier to do business with us and ensure a seamless experience in all our markets in Asia.
- Better engage prospective and existing Clients by being more personal, proactive and predictive through the use of data and analytics.

Continue to build scale in each of our markets

- Achieve scale in each market and offer a holistic set of solutions to help our Clients achieve lifetime financial security and live healthier lives.
- To grow our scale, we will focus on both organic and inorganic approaches, which include opportunities that bring distribution capabilities and are accretive to Sun Life's earnings.

Outlook

We believe our diversified business, with a multi-country presence and a multi-channel distribution, positions us to capture opportunities as they arise, and protects our business as a whole against adverse economic or regulatory cycles in any one market. We expect that the region's economic growth will continue, with predictions that 90% of the next billion entrants into the middle class in the world will come from Asia[1], allowing us to deliver financial security and healthier lives to different segments of the population. With these strong demographics, and low penetration rates for insurance, we expect to see sustained growth across all of our distribution channels.

Competition and economic and geopolitical uncertainty continue to pose challenges to our businesses. However, our current market positions, key strategic relationships, and our ability to leverage our global expertise position us well for the future. As governments continue to download responsibilities in both the retirement and health spaces, we are well-equipped to offer current and potential Clients sound solutions.

Business Markets

Business	Description	Market Position
Insurance and Wealth		
Philippines(1)	• Individual and group life and health insurance products to individuals and businesses through a multi-channel distribution network • Mutual funds to individual and institutional Clients through agency, brokerage, bancassurance and digital partners	• #1 ranked insurance company(2) • 2nd largest mutual fund operation in the country(3)
Hong Kong	• MPF and pension administration to individuals and businesses through agency and brokerage distribution • Individual and group life and health insurance to individuals and businesses through agency and brokerage distribution	• 4th largest provider based on AUM, 2nd based on net inflows(4) • Top 10 in Agency for Life Insurance(5)
Indonesia	• Individual life and health insurance and creditor life insurance through agency, telco arrangements and bancassurance, including a bancassurance partnership with CIMB Niaga, the 5th largest bank in the country	• Ranked in the Top 10 overall(6)
Vietnam	• Individual insurance and pensions distributed through agency, corporate sales, and digital distribution channels and partnerships including a bancassurance agreement with TPBank, a digital leader in Vietnamese banking	• Ranked in the Top 15 overall(7)
Malaysia(8)	• Individual and group insurance through banks and telco arrangements, including an exclusive bancassurance agreement with CIMB Bank, Malaysia's 2nd largest bank, and an agency force in partnership with Principal Asset Management	• 3rd in bancassurance sales(9)
India(10)	• Individual and group insurance, savings and retirement products through agency, brokerage and bancassurance channels • Mutual fund products to both individual and institutional investors through independent financial advisors, banks, and direct distribution channels	• 8th largest life insurance company in India(11) • 4th largest mutual fund operation in the country(12)
China(13)	• Individual and group life and health insurance and savings products distributed through agency, brokerage, bancassurance and digital channels • Institutional asset management, passive third-party asset management and debt financing business through direct distribution	• Top 10 life insurance company in China among multinationals(14)
International	• Individual life insurance solutions for high-net-worth individuals and families residing outside the U.S. and Canada • Manages a block of International wealth investment products closed to new sales	• A leader in international high-net-worth life insurance business

(1) Philippines: Includes a joint venture with the Yuchengco Group - Sun Life Grepa Financial, Inc. (49%).
(2) Insurance Commission of the Philippines, based on third quarter 2019 year-to-date total premium income for Sun Life of Canada (Philippines).
(3) Philippine Investment Funds Association, based on November 2019 ending AUM.
(4) Gain Miles MPF Market Analysis, December 2019.
(5) Insurance Authority of Hong Kong, Provisional Statistics on Hong Kong Long Term Insurance Business, based on third quarter 2019 year-to-date annualized first year premiums.
(6) Indonesia Life Insurance Association industry report, based on third quarter 2019 year-to-date first year premiums.
(7) 2019 annualized first year premiums based on data shared among industry players.
(8) Malaysia: Joint ventures with Khazanah Nasional Berhad and CIMB Group Holdings Berhad - Sun Life Malaysia Assurance Berhad (49%), Sun Life Malaysia Takaful Berhad (49%).
(9) Life Insurance Association of Malaysia and Insurance Services Malaysia Berhad, based on the third quarter 2019 year-to-date annualized first year premium for conventional and takaful business.
(10) India: Joint ventures with the Aditya Birla Group - Aditya Birla Sun Life Insurance Company Limited (49%), Aditya Birla Sun Life Asset Management Company Limited ("Aditya Birla Sun Life AMC Limited") (49%).
(11) Insurance Regulatory Authority of India, based on 2019 first year premiums among private players.
(12) Association of Mutual Funds in India, based on average AUM for the quarter ended December 31, 2019.
(13) China: Joint ventures with the China Everbright Group: Sun Life Everbright Life Insurance Company Limited (24.99%), Sun Life Everbright Asset Management Co., Ltd (24.74%).
(14) China Insurance Regulatory Commission, based on gross premiums for November 2019 year-to-date (excluding universal and variable universal life insurance deposits and pension companies).

---

(1) The Unprecedented Expansion of the Global Middle Class: An Update, Feb 2017, Brookings, Homi Kharas

Financial and Business Results

($ millions)	2019	2018	2017
Insurance and Wealth	**506**	381	326
International[1]	**14**	174	452
Reported net income	**520**	555	778
Less: Market-related impacts[2]	**(66)**	(30)	38
Assumption changes and management actions[2]	**37**	76	284
Other[2][3]	**(1)**	(14)	(5)
Underlying net income[4]	**550**	523	461
Reported ROE (%)[4][5]	**9.5%**	11.3%	14.4%
Underlying ROE (%)[4][5]	**10.0%**	10.6%	8.5%
Insurance Sales[4]	**1,154**	898	811
Wealth Sales[4]	**8,373**	10,101	13,056

(1) Effective January 1, 2018, we transferred our International business unit from the U.S. to Asia, and comparative figures have been changed to conform to the current year presentation.
(2) Represents an adjustment made to arrive at a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document for a breakdown of components within this adjustment.
(3) In 2018, Other amounts pertains to a distribution arrangement in India for asset management.
(4) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.
(5) As a result of a revision of the capital allocation model for Asia, reported and underlying ROEs increased by 1.5% for the year ended 2018 and 2019, relative to 2017.

Profitability

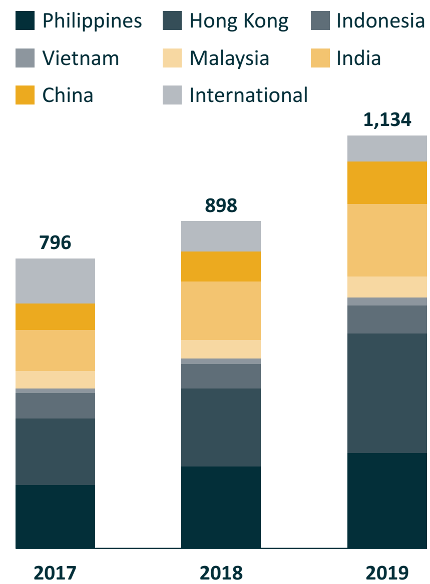
Asia's reported net income decreased by $35 million or 6% in 2019 compared to 2018, reflecting less favourable ACMA and unfavourable market-related impacts, predominantly from interest rates, partially offset by higher acquisition, integration and restructuring costs in 2018. Underlying net income increased by $27 million or 5%, driven by business growth, improved lapse and policyholder behaviour experience and higher AFS gains, partially offset by unfavourable joint venture experience and higher new business strain primarily in International. The impacts of foreign exchange translation increased reported net income and underlying net income by $15 million.

Growth

Asia insurance sales increased by 26%, excluding the favourable impacts of foreign exchange translation of $20 million in 2019 compared to 2018. Individual insurance sales were $1,102 million, an increase of 27%, excluding the favourable impacts of foreign exchange translation of $20 million, driven by growth in all local insurance markets, partially offset by lower sales in International.

Asia wealth sales decreased by 18%, excluding the favourable impacts of foreign exchange translation of $120 million, in 2019 compared to 2018, as a result of lower mutual fund sales in India due to weak market sentiment, partially offset by money market sales in the Philippines and growth in the pension business in Hong Kong.

Constant Currency Insurance Sales ($ millions)



Profitability by Business Unit and Growth by Business Market

Insurance and Wealth

Insurance and Wealth's reported net income increased by $125 million or 33% in 2019 compared to 2018, driven by favourable ACMA impacts, business growth, higher acquisition, integration and restructuring costs in 2018 and favourable lapse and other policyholder behaviour experience, partially offset by unfavourable joint venture experience and unfavourable market-related impacts, predominantly from interest rates.

We continued to build our agency and alternate distribution channels, leverage a more balanced product portfolio and increase efficiency and productivity, while maintaining Client focus.

***Philippines* -** On a local currency basis, individual insurance sales increased by 18% in 2019 compared to 2018. Mutual and managed fund AUM was $2.0 billion as at December 31, 2019, an increase of 43% compared to 2018, measured in local currency, reflecting strong money market sales.

Agency headcount reached approximately 21,000 at the end of 2019, 31% higher than 2018.

***Hong Kong* -** On a local currency basis, individual insurance sales increased by 54% in 2019 compared to 2018, with growth in both the agency and broker channels. AUM in our pension business reached $15.0 billion as at December 31, 2019, an increase of 31% compared to 2018, measured in local currency, and pension net flows increased by 8% compared to 2018.

Agency headcount grew 5% from 2018 to approximately 2,400 at the end of 2019.

Indonesia **-** On a local currency basis, individual life insurance sales in Indonesia increased by 16% in 2019 compared to 2018, with growth across all channels.

Agency headcount was at approximately 5,900 in 2019, a reduction from the previous year end, as we focused on quality and terminated inactive agents.

Vietnam **-** On a local currency basis, individual insurance sales increased by 19% in 2019 compared to 2018, driven by the new broker channel and growth in the agency channel.

Agency headcount was almost 4,300 at the end of 2019, 9% lower than 2018.

Malaysia **-** On a local currency basis, individual insurance sales in Malaysia increased by 19% in 2019 compared to 2018, driven primarily by growth in the bancassurance channel.

Malaysia's agency force, newly established in 2018, surpassed 750 agents.

India **-** On a local currency basis, individual life insurance sales increased by 24% in 2019 compared to 2018, driven by growth in bancassurance through establishment of our relationship with HDFC Bank Limited.

India's agency headcount exceeded 75,000 at the end of 2019, 8% higher than 2018.

On a local currency basis, gross sales of equity and fixed income funds decreased by 41% due to weak market sentiment and volatility.

Total AUM as at December 31, 2019 was $47.3 billion, of which $23.2 billion is reported in our AUM, a decrease of 4% compared to 2018.

China **-** On a local currency basis, sales of individual insurance products by Sun Life Everbright Life Insurance Company Limited ("SLEB") increased by 46% in 2019 compared to 2018, driven by strong performance across all channels except telemarketing.

Agency headcount was almost 13,400 at the end of 2019, 77% higher than 2018.

International

International's reported net income decreased by $160 million in 2019 compared to 2018, reflecting unfavourable ACMA and market-related impacts and lower new business gains, partially offset by improved lapse and other policyholder behaviour experience. Market-related impacts included unfavourable impacts from interest rates and changes in the fair value of investment properties, partially offset by favourable impacts from equity markets.

International life insurance sales were $73 million in 2019, a decrease of $9 million or 11% compared to 2018, due to the competitive environment and market shifts in the first half of 2019.

5. Corporate

Corporate includes the results of our UK business and Corporate Support.

Business Units

Business	Description
UK	• UK has a run-off block of business consisting of approximately 554,000 in-force life and pension policies, with approximately £11 billion of AUM. Since December 2010, UK has been closed to new business and focuses on supporting existing Clients. Most administrative functions have been outsourced to external service providers which are managed by an in-house management team.
Corporate Support	• Corporate Support operations consist of the expenses, debt charges, investment income, capital and other items not allocated to Sun Life's other business segments, as well as the Company's Run-off reinsurance business. Coverage in our Run-off reinsurance business includes long-term care, medical coverage, and guaranteed minimum income and death benefit coverage. The block also includes group long-term disability and personal accident policies which are 100% retroceded.

Financial and Business Results

($ millions)	**2019**	2018	2017
UK	**379**	250	181
Corporate Support	**(224)**	(186)	(282)
Reported net income (loss)	**155**	64	(101)
Less: Market-related impacts(1)	**(2)**	(15)	5
Assumption changes and management actions(1)(2)	**225**	140	55
Acquisition, integration and restructuring(1)(3)	**(27)**	(10)	(55)
U.S. tax reform(1)(2)	**–**	–	(54)
Underlying net income (loss)(4)	**(41)**	(51)	(52)

(1) Represents an adjustment made to arrive at a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document for a breakdown of components within this adjustment.
(2) ACMA in 2017 excludes the $5 million change that is included in U.S. tax reform, shown separately.
(3) In 2017, the amount consists primarily of the impact of a restructuring amount in the fourth quarter of 2017 pertaining to the Company's plan to enhance business processes and organizational structures and capabilities.
(4) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.

Profitability

Corporate's reported net income increased by $91 million in 2019 compared to 2018, driven by the impacts of favourable ACMA predominantly in the UK, improved market-related impacts, primarily from interest rates, and lower integration costs, partially offset by restructuring costs. Underlying net loss improved by $10 million or 20%, driven by higher net benefits from tax-related items, partially offset by lower earnings from the run-off businesses, higher project spend including the adoption of IFRS 17, unfavourable lapse and other policyholder behaviour experience in the UK and unfavourable expense experience. The impacts of foreign exchange translation decreased reported net income by $7 million and increased underlying net loss by $3 million.

Profitability by Business Unit

UK

UK's reported net income increased by $129 million or 52% in 2019 compared to 2018, driven predominantly by favourable ACMA impacts.

Corporate Support

Corporate Support's reported net loss increased by $38 million or 20% in 2019 compared to 2018, reflecting unfavourable expense experience, the impacts of favourable ACMA relating to the termination of assumed business in 2018, higher project spend including the adoption of IFRS 17 and restructuring costs, partially offset by higher net benefits from tax-related items and lower integration costs.

H. Investments

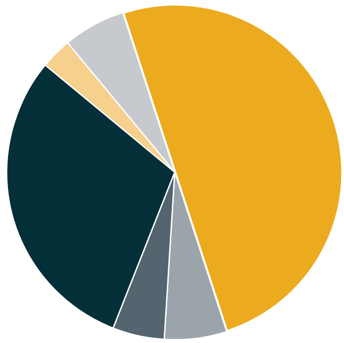
The Company strives to ensure that all general fund investments are properly aligned with business objectives including meeting policyholder obligations and maintaining adequate liquidity at all times. Consideration is given in our investment process to a wide range of factors, including ensuring attractive risk and return profiles, appropriate diversification by asset type, credit exposure and sector, financial condition of issuers and borrowers, quality and value of underlying security and macro- and micro-economic developments and trends including prospects for specific industry sectors. The Risk & Conduct Review Committee of the Board of Directors ("Risk & Conduct Review Committee") approves policies that contain prudent standards and procedures for the investment of our general fund assets. These policies include requirements, restrictions and limitations for interest rate, credit, equity market, real estate market, liquidity, concentration, currency, and derivative risks. Compliance with these policies is monitored on a regular basis and reported annually to the Risk & Conduct Review Committee. The Governance, Nomination & Investment Committee of the Board of Directors monitors the Company's Investment Plan and investment performance, oversees practices, procedures and controls related to the management of the general fund investment portfolio, and reviews corporate governance guidelines and processes.

1. Investment Profile

We had total general fund invested assets of $161.6 billion as at December 31, 2019, compared to $151.7 billion as at December 31, 2018. The increase in general fund invested assets was primarily due to an increase in operating activities and net fair value, offset by the impacts of foreign exchange translation. Our general fund invested assets are well-diversified across investment types, geographies and sectors with the majority of our portfolio invested in fixed income high-quality assets.

Additional detail on our investments is provided in Notes 5 and 6 in our 2019 Annual Consolidated Financial Statements.

The following chart sets out the composition of our general fund invested assets.[1]



	As at December 31, 2019 $161.6 billion	December 31, 2018 $151.7 billion
Cash, cash equivalents and short-term securities	**6%**	6%
Debt securities	**50%**	49%
Equity securities	**3%**	3%
Mortgages and loans	**30%**	31%
Investment properties	**5%**	5%
Other[2]	**6%**	6%

(1) The values and ratios presented are based on the carrying value of the respective asset categories. Generally, the carrying values for invested assets are equal to their fair values; however our mortgages and loans are generally carried at amortized cost. As at December 31, 2019, the fair value of mortgages and loans was $52.0 billion ($48.4 billion as at December 31, 2018) and the carrying value of mortgages and loans was $48.2 billion ($46.8 billion as at December 31, 2018). For invested assets supporting insurance contracts, in the event of default, if the amounts recovered are insufficient to satisfy the related insurance contract liability cash flows that the assets are intended to support, credit exposure may be greater than the carrying value of the assets.

(2) Consists of: Other invested assets (3%), Policy loans (2%), Derivative assets (1%) for both 2019 and 2018.

2. Debt Securities

Our debt securities portfolio is actively managed through a regular program of purchases and sales aimed at optimizing yield, quality and liquidity, while ensuring that it remains well-diversified and duration-matched to insurance contract liabilities. With the exception of certain countries where we have business operations, including Canada, the United States, the United Kingdom and the Philippines, our exposure to debt securities from any single country did not exceed 1% of total invested assets in our 2019 Annual Consolidated Financial Statements.

Debt Securities by Issuer and Industry Sector

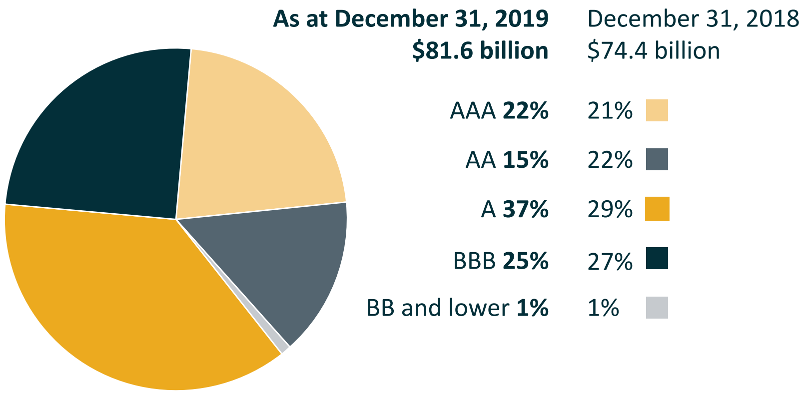
	December 31, 2019		December 31, 2018	
($ millions)	**Total**	**% of Total**	Total	% of Total
Debt securities issued or guaranteed by:				
Canadian federal government	**6,446**	**8%**	5,576	7%
Canadian provincial and municipal government	**14,965**	**18%**	13,065	18%
U.S. government and agency	**3,111**	**4%**	2,907	4%
Other foreign government	**5,917**	**7%**	5,646	8%
Total government issued or guaranteed debt securities	**30,439**	**37%**	27,194	37%
Corporate debt securities by industry sector:[1]				
Financials	**10,926**	**13%**	9,860	13%
Utilities	**7,258**	**9%**	6,881	9%
Industrials	**5,429**	**7%**	4,643	6%
Energy	**4,232**	**5%**	3,968	5%
Communication services	**3,546**	**4%**	3,307	4%
Real estate	**2,963**	**4%**	3,016	4%
Health care	**2,122**	**3%**	2,033	3%
Consumer staples	**1,924**	**2%**	1,882	3%
Materials	**1,543**	**2%**	1,481	2%
Consumer discretionary	**1,487**	**2%**	1,581	2%
Information technology	**1,335**	**2%**	1,231	2%
Total corporate debt securities	**42,765**	**53%**	39,883	53%
Asset-backed securities	**8,402**	**10%**	7,366	10%
Total debt securities	**81,606**	**100%**	74,443	100%

(1) Our grouping of debt securities by sector is based on the Global Industry Classification Standard and S&P Dow Jones Indices.

Debt Securities by Credit Rating

The credit risk ratings in the following chart were established in accordance with the internal rating process described in this MD&A under the heading J - Risk Management - 9 - Risk Categories - Credit Risk Management Governance and Control.

Our debt securities with a credit rating of "A" or higher represented 74% of the total debt securities as at December 31, 2019, compared to 72% as at December 31, 2018. Debt securities with a credit rating of "BBB" or higher represented 99% of total debt securities as at December 31, 2019, consistent with December 31, 2018.



Debt Securities by Geography

The carrying value of FVTPL and AFS debt securities by geographic location is presented in the following table.

	December 31, 2019				December 31, 2018			
($ millions)	**FVTPL debt securities**	**AFS debt securities**	**Total**	**% of Total**	FVTPL debt securities	AFS debt securities	Total	% of Total
Debt securities								
Canada	**28,221**	**5,031**	**33,252**	**41%**	25,091	4,217	29,308	38%
United States	**24,224**	**5,822**	**30,046**	**37%**	21,329	5,917	27,246	37%
Europe	**8,827**	**1,178**	**10,005**	**12%**	8,840	1,278	10,118	14%
Asia	**4,074**	**573**	**4,647**	**6%**	3,673	445	4,118	6%
Other	**2,548**	**1,108**	**3,656**	**4%**	2,469	1,184	3,653	5%
Total debt securities	**67,894**	**13,712**	**81,606**	**100%**	61,402	13,041	74,443	100%

Our gross unrealized losses as at December 31, 2019 for FVTPL and AFS debt securities were $0.1 billion and $0.1 billion, respectively, compared with $1.4 billion and $0.2 billion, respectively, as at December 31, 2018. The decrease in gross unrealized losses was largely due to the impact from declining interest rates and the narrowing of credit spreads.

3. Equities

Our equity portfolio is well-diversified with approximately 45% of our portfolio invested in exchange-traded funds as at December 31, 2019, compared to 50% as at December 31, 2018. Exchange-traded fund holdings are primarily in the TD Emerald U.S. Market Index Fund and S&P/Toronto Stock Exchange ("TSX") 60 Index Fund. The carrying value of equities by issuer geography as at December 31, 2019 is set out in the following table.

Equities by Issuer Geography

	December 31, 2019				December 31, 2018			
($ millions)	**FVTPL equities**	**AFS equities**	**Total**	**% of Total**	FVTPL equities	AFS equities	Total	% of Total
Equity securities								
Canada	**2,813**	**22**	**2,835**	**60%**	2,651	15	2,666	58%
United States	**550**	**137**	**687**	**14%**	508	388	896	19%
Europe	**381**	**6**	**387**	**8%**	371	10	381	8%
Asia	**713**	**148**	**861**	**18%**	469	206	675	15%
Other	**17**	**–**	**17**	**–%**	15	1	16	–%
Total equity securities	**4,474**	**313**	**4,787**	**100%**	4,014	620	4,634	100%

Excluding exchange-traded funds and mutual funds, there were no issuers exceeding 1% of the equity portfolio as at December 31, 2019.

4. Mortgages and Loans

Mortgages and loans in this section are presented at their carrying value in our 2019 Annual Consolidated Financial Statements. Our mortgage portfolio consisted almost entirely of first mortgages and our loan portfolio consisted of private placement loans.

Mortgages and Loans by Geography

The carrying value of mortgages and loans by geographic location is presented in the following table.[(1)]

	December 31, 2019				December 31, 2018			
($ millions)	**Mortgages**	**Loans**	**Total**	**% of Total**	Mortgages	Loans	Total	% of Total
Canada	**9,310**	**13,249**	**22,559**	**47%**	8,557	13,238	21,795	46%
United States	**6,915**	**11,994**	**18,909**	**39%**	7,876	11,458	19,334	41%
Europe	**–**	**4,561**	**4,561**	**9%**	–	3,628	3,628	8%
Asia	**–**	**352**	**352**	**1%**	–	332	332	1%
Other	**–**	**1,841**	**1,841**	**4%**	–	1,733	1,733	4%
Total	**16,225**	**31,997**	**48,222**	**100%**	16,433	30,389	46,822	100%

(1) The geographic location for mortgages is based on the location of the property and for loans it is based on the country of the creditor's parent.

Mortgage Portfolio

As at December 31, 2019, we held $16.2 billion of mortgages, compared to $16.4 billion as at December 31, 2018. Our mortgage portfolio consists entirely of commercial mortgages, as presented in the following table.

	December 31, 2019			December 31, 2018		
($ millions)	**Insured**	**Uninsured**	**Total**	Insured	Uninsured	Total
Mortgages						
Retail	**–**	**3,902**	**3,902**	–	4,202	4,202
Office	**–**	**3,922**	**3,922**	–	4,228	4,228
Multi-family residential	**3,613**	**2,078**	**5,691**	3,196	2,179	5,375
Industrial and land	**–**	**1,898**	**1,898**	–	1,906	1,906
Other	**353**	**459**	**812**	341	381	722
Total mortgages	**3,966**	**12,259**	**16,225**	3,537	12,896	16,433
% of Total mortgages	**24%**	**76%**	**100%**	22%	78%	100%

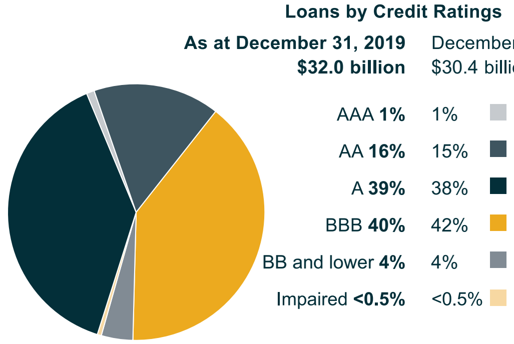
As at December 31, 2019, 35% of our commercial mortgage portfolio consisted of multi-family residential mortgages; there are no single-family residential mortgages. Our uninsured commercial portfolio had a weighted average loan-to-value ratio of approximately 55% as at December 31, 2019, consistent with December 31, 2018. While we generally limit the maximum loan-to-value ratio to 75% at issuance, we may invest in mortgages with a higher loan-to-value ratio in Canada if the mortgage is insured by the Canada Mortgage and Housing Corporation ("CMHC"). The estimated weighted average debt service coverage for our uninsured commercial portfolio is 1.76 times. Of the $3.9 billion of multi-family residential mortgages in the Canadian commercial mortgage portfolio, 93% were insured by the CMHC.

Loan Portfolio

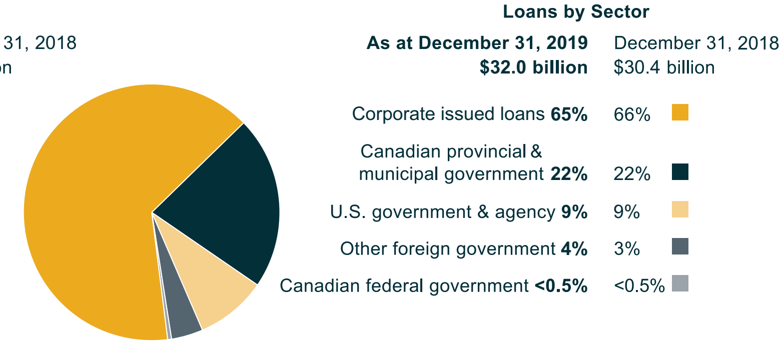
As at December 31, 2019, we held $32.0 billion of loans, compared to $30.4 billion as at December 31, 2018. Private placement loans provide diversification by type of loan, industry segment and borrower credit quality. The private placement loan portfolio consists of senior secured and unsecured loans to large- and mid-market sized corporate borrowers, securitized lease/loan obligations secured by a variety of assets, and project finance loans in sectors such as power and infrastructure. The growth in the portfolio is consistent with our strategy to increase our investments in private placement loans.

The credit risk ratings in the following chart were established in accordance with the internal rating process described in this MD&A under the heading J - Risk Management - 9 - Risk Categories - Credit Risk Management Governance and Control. As at December 31, 2019, 96% of our total loan portfolio is investment grade, consistent with December 31, 2018.

Loans by Credit Ratings



Loans by Sector



Mortgages and Loans Past Due or Impaired

The gross carrying value and allowance for mortgages and loans past due or impaired are presented in the following table.

	December 31, 2019					
	Gross carrying value			**Allowance for losses**		
($ millions)	**Mortgages**	**Loans**	**Total**	**Mortgages**	**Loans**	**Total**
Not past due	**16,148**	**31,911**	**48,059**	**–**	**–**	**–**
Past due:						
Past due less than 90 days	**–**	**–**	**–**	**–**	**–**	**–**
Past due 90 days or more	**–**	**–**	**–**	**–**	**–**	**–**
Impaired	**147**	**133**	**280**	**70(1)**	**47**	**117**
Total	**16,295**	**32,044**	**48,339**	**70**	**47**	**117**

	December 31, 2018					
	Gross carrying value			Allowance for losses		
($ millions)	Mortgages	Loans	Total	Mortgages	Loans	Total
Not past due	16,427	30,332	46,759	–	–	–
Past due:						
Past due less than 90 days	–	14	14	–	–	–
Past due 90 days or more	–	–	–	–	–	–
Impaired	31	93	124	25(1)	50	75
Total	16,458	30,439	46,897	25	50	75

(1) Includes $20 million of sectoral provisions as at December 31, 2019, and $21 million of sectoral provisions as at December 31, 2018.

Our impaired mortgages and loans, net of allowances for losses, were $163 million as at December 31, 2019, compared to $49 million as at December 31, 2018.

5. Derivatives

The fair value of derivative assets held by the Company was $1,548 million, while the fair value of derivative liabilities was $2,040 million as at December 31, 2019, compared to a fair value of derivative assets of $1,112 million and a fair value of derivative liabilities of $2,295 million as at December 31, 2018.

We use derivative instruments to manage risks related to interest rate, equity market and currency fluctuations and in replication strategies to reproduce permissible investments. Our use of derivatives in these risk mitigation strategies does not mitigate all risk exposure; rather, they are used to keep us within our risk tolerance limits.

In addition to the general policies and monitoring, we use a variety of tools in counterparty risk management. Over-the-counter (“OTC”) derivative transactions are executed under International Swaps and Derivatives Association (“ISDA”) Master Agreements. A Credit Support Annex accompanies most of the ISDAs, which establish requirements for collateral.

Derivative Financial Instruments

The values associated with our derivative instruments are presented in the following table. Notional amounts serve as the basis for payments calculated under derivatives contracts and are not exchanged.

($ millions)	**2019**	2018
As at December 31		
Net fair value	**(492)**	(1,183)
Total notional amount	**62,131**	59,198

The net fair value of derivatives was a liability of $492 million as at December 31, 2019, compared to a liability of $1,183 million as at December 31, 2018. The change in net fair value was primarily due to the impact from changes in foreign exchange rates and swap curves.

The total notional amount of our derivatives increased to $62.1 billion as at December 31, 2019 from $59.2 billion as at December 31, 2018. The change in notional amount is mainly attributable to an increase of $5.6 billion in foreign exchange contracts used for hedging foreign currency assets, an increase of $1.3 billion in equity contracts to hedge equity price fluctuations, partially offset by a decrease of $4.0 billion in interest rate contracts primarily due to a reduction in interest rate exposed assets.

Certain of our derivatives are designated in qualifying hedging relationships for accounting purposes, and represented $1.4 billion, or 2.3% of the total notional amount. Derivatives are designated in hedging relationships for accounting purposes to minimize accounting mismatches. These hedging relationships are documented at inception and hedge effectiveness is assessed on a quarterly basis.

Our derivatives designated in qualifying hedging relationships for accounting purposes include interest rate swaps, foreign exchange agreements, equity forwards and, previously, currency swaps. We designate certain interest rate swaps in fair value hedging relationships to hedge interest rate exposure on AFS assets. We also designate certain foreign exchange agreements in fair value and cash flow hedging relationships to manage foreign currency fluctuations associated with AFS assets. Additionally, we designate certain equity forwards in cash flow hedging relationships for anticipated payments of awards under certain stock-based compensation plans.

Credit Equivalent Amount

As the regulator of the Canadian insurance industry, OSFI provides guidelines to quantify the use of derivatives. The credit equivalent amount, a measure used to approximate the potential credit exposure, is determined as the replacement cost of the derivative contracts with a positive fair value plus an amount representing the potential future credit exposure.

The risk-weighted credit equivalent amount is a measure used to determine the amount of capital necessary to support derivative transactions for certain Canadian regulatory purposes. It is determined by weighting the credit equivalent amount according to the nature of the derivative and the creditworthiness of the counterparties.

	2019		2018	
($ millions)	**Credit equivalent amount ("CEA")(1)**	**Risk weighted CEA(1)**	Credit equivalent amount(1)	Risk weighted CEA(1)
Foreign exchange contracts	**666**	**14**	433	12
Interest rate contracts	**79**	**2**	98	3
Equity and other contracts	**51**	**1**	11	–
Total	**796**	**17**	542	15

(1) Amounts presented are net of collateral received.

Credit Default Swaps By Underlying Financial Instrument Credit Rating

Credit default swaps ("CDS") are derivative contracts that transfer credit risk related to an underlying referenced financial instrument from one counterparty to another. The purchaser receives protection against the decline in the value of the referenced financial instrument as a result of specified credit events such as default or bankruptcy. The Company sells credit protection through CDS to replicate credit exposure of an underlying reference security and enhance investment returns. The credit risk ratings of the underlying reference securities for single name contracts were established in accordance with the internal rating process described in section J - Risk Management - 9 - Risk Categories - Credit Risk Management Governance and Control.

The following table provides a summary of the credit default swap protection sold by credit rating of the underlying reference security.

	2019		2018	
($ millions)	**Notional amount**	**Fair value**	Notional amount	Fair value
Single name credit default swap contracts				
AA	**45**	**1**	48	1
A	**574**	**9**	611	9
BBB	**608**	**19**	674	13
Total single name credit default swap contracts	**1,227**	**29**	1,333	23
Credit default swap index contracts	**–**	**–**	23	–
Total credit default swap contracts sold	**1,227**	**29**	1,356	23

Additional detail on our derivative portfolio by derivative type is provided in Note 6.A.iv in our 2019 Annual Consolidated Financial Statements.

6. Investment Properties

Office, retail and industrial properties are the major components of our investment properties portfolio, representing approximately 78% as at December 31, 2019. The increase in our investment property portfolio is predominantly driven by market appraisal gains, partially offset by the impacts of foreign exchange translation and net sales in the year.

Investment Properties by Type and Geography

	December 31, 2019						
($ millions)	**Office**	**Industrial**	**Retail**	**Multi-family residential**	**Other**	**Total**	**% of Total**
Canada	**1,958**	**1,405**	**967**	**1,064**	**460**	**5,854**	**80%**
United States	**772**	**269**	**273**	**–**	**72**	**1,386**	**19%**
Europe	**22**	**13**	**30**	**–**	**1**	**66**	**1%**
Total	**2,752**	**1,687**	**1,270**	**1,064**	**533**	**7,306**	**100%**

	December 31, 2018						
($ millions)	Office	Industrial	Retail	Multi-family residential	Other	Total	% of Total
Canada	1,937	1,119	1,092	900	378	5,426	76%
United States	847	358	338	–	109	1,652	23%
Europe	25	14	38	–	2	79	1%
Total	2,809	1,491	1,468	900	489	7,157	100%

7. Impaired Assets

Financial assets that are classified as FVTPL, which represented 47% of our invested assets as at December 31, 2019, do not have allowances for losses since changes in the fair value of these assets are recorded to income and the assets are recorded at fair value in our 2019 Annual Consolidated Financial Statements. In the event of default, if the amounts recovered are insufficient to satisfy the related insurance contract liability cash flows that the assets are intended to support, credit exposure may be greater than the carrying value of the asset.

In the absence of objective evidence of impairment, impairment losses are not recognized on AFS debt securities, equity securities and other invested assets. If the cost of these assets is greater than their fair values, unrealized losses are recognized in other comprehensive income. Unrealized losses may be due to interest rate fluctuations or depressed fair values in sectors which have experienced strong negative market performance.

Additional detail on our impairment policy is provided in Note 1.iii in our 2019 Annual Consolidated Financial Statements.

8. Asset Default Provision

We make provisions for possible future credit events in the determination of our insurance contract liabilities. The amount of the provision for asset default included in insurance contract liabilities is based on possible reductions in future investment yields that vary by factors such as type of asset, asset credit quality (rating), duration and country of origin. To the extent that an asset is written off, or disposed of, any amounts that were set aside in our insurance contract liabilities for possible future asset defaults in respect of that asset are released.

Our asset default provision reflects the provision relating to future credit events for fixed income assets currently held by the Company that support our insurance contract liabilities. Our asset default provision as at December 31, 2019 was $2,637 million for losses related to possible future credit events for fixed income assets currently held by the Company that support our insurance contract liabilities. This represents 2.3% of the fixed income assets supporting insurance contract liabilities reported on our Consolidated Statements of Financial Position as at December 31, 2019.

Our asset default provision as at December 31, 2019 was $248 million higher than the provision as at December 31, 2018, primarily due to increases in the provisions for assets purchased net of dispositions, partially offset by the release of provisions on fixed income assets supporting our insurance contract liabilities and the impacts of foreign exchange translation.

The following table sets out the changes in our asset default provision for existing fixed income investments.

($ millions)	**2019**	2018
Opening balance	**2,389**	2,288
Purchases, dispositions and net asset movement[(1)]	**612**	205
Changes in assumptions and methodologies	**(53)**	–
Changes in ratings	**57**	47
Release of provisions[(2)]	**(293)**	(266)
Currency	**(75)**	115
Closing balance	**2,637**	2,389

(1) Net movement reflects the fluctuation in the value of FVTPL assets arising from movements in interest rates, credit spreads and other factors that impact the market value of fixed income investments.
(2) This amount represents the orderly release of provisions for future credit events held in insurance contract liabilities.

I. Capital and Liquidity Management

Capital and liquidity management is core to our business as an insurance company. We ensure adequate capital for the protection of our policyholders, Clients and creditors, while managing capital adequacy and allocation across our businesses for the benefit of our shareholders. In addition, we maintain strong financial flexibility by ensuring that sufficient liquid assets are available to cover our anticipated payment obligations and funding requirements. We invest in various types of assets with a view to matching them with liabilities of various durations.

The regulatory environments in which we operate are expected to evolve as governments and regulators work to develop the appropriate level of financial regulation required to ensure that capital, liquidity and risk management practices are sufficient to withstand severe economic downturns.

1. Capital

We have a capital risk policy designed to maintain a strong capital position and to provide the flexibility necessary to take advantage of growth opportunities, to support the risk associated with our businesses and to optimize shareholder return. Our capital risk policy is also intended to provide an appropriate level of risk management over capital adequacy risk, which is defined as the risk that capital is not or will not be sufficient to withstand adverse economic conditions, to maintain financial strength, or to allow the Company and its subsidiaries to take advantage of opportunities for expansion. Our capital base is structured to exceed minimum regulatory and internal capital targets and to maintain strong credit and financial strength ratings, while maintaining a capital-efficient structure. Capital is managed both on a consolidated basis under principles that consider all the risks associated with the business as well as at the business group level under the principles appropriate to the jurisdictions in which we operate. The capital of our foreign subsidiaries is managed on a local statutory basis in a manner commensurate with their individual risk profiles.

Sun Life, including all of its business groups, engages in a capital planning process annually in which capital deployment options, capital raising and dividend recommendations are presented to the Board of Directors. Capital reviews are regularly conducted which consider the potential impacts under various business, interest rate and equity market scenarios. Relevant components of these capital reviews, including dividend recommendations, are presented to the Risk & Conduct Review Committee on a quarterly basis. The Board of Directors is responsible for the approval of our annual capital plan and quarterly shareholder dividends.

The Company's capital risk policy establishes policies, operating guidelines and procedures that govern the management of capital. The capital risk policy is reviewed annually by the Risk & Conduct Review Committee and any changes are approved by the Board of Directors. Our Corporate Treasury and Risk Management functions are responsible for the development and implementation of the capital risk policy.

The Company's capital base consists mainly of common shareholders' equity. Other sources of capital include preferred shareholders' equity, non-controlling interests, participating policyholders' equity and subordinated debt issued by SLF Inc. and Sun Life Assurance. For Canadian regulatory purposes, our capital also includes innovative capital instruments issued by Sun Life Capital Trust and Sun Life Capital Trust II.

The following table summarizes the sources of our capital and our capital position over the past two years. Notes 13, 14, 15 and 21 to our 2019 Annual Consolidated Financial Statements include additional details on our capital.

($ millions)	**2019**	2018
Subordinated debt	**3,538**	3,039
Innovative capital instruments[(1)]	**200**	699
Equity		
Preferred shareholders' equity	**2,257**	2,257
Common shareholders' equity	**21,141**	21,449
Participating policyholders' equity	**1,091**	864
Non-controlling interests' equity	**19**	–
Total equity	**24,508**	24,570
Total capital	**28,246**	28,308
Financial leverage ratio[(2)]	**21.2%**	21.2%

(1) Innovative capital instruments are presented net of associated transaction costs and consist of SLEECS, which were issued by Sun Life Capital Trust and Sun Life Capital Trust II. SLEECS qualify as capital for Canadian regulatory purposes. However, under IFRS they are reported as Senior debentures in our Annual and Interim Consolidated Financial Statements.
(2) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.

Our total capital consists of subordinated debt and other capital instruments, participating policyholders' equity, non-controlling interests and total shareholders' equity, which includes common shareholders' equity and preferred shareholders' equity.

Common shareholders' equity was $21.1 billion as at December 31, 2019, compared with $21.4 billion as at December 31, 2018. The decrease of $0.3 billion was primarily due to common share dividend payments, the impact related to the BGO acquisition[(1)], shares repurchased and cancelled, and other comprehensive loss, largely offset by common shareholders' net income.

(1) For additional information, refer to Note 3 in our 2019 Annual Consolidated Financial Statements.

The table below provides the earliest par call and maturity dates for our subordinated debt, innovative capital instruments and preferred shares outstanding as at December 31, 2019.

Description	Interest Rate	Earliest Par Call Date/Redemption Date(1)	Maturity	Principal/ Face Amount ($ millions)
Subordinated Debt Issued by Sun Life Assurance				
6.30% Debentures, Series 2	6.30%	n/a	2028	150
Subordinated Debt Issued by SLF Inc.				
Series 2007-1	5.40%	May 29, 2037	2042	400
Series 2015-1	2.60%	September 25, 2020	2025	500
Series 2016-1	3.10%	February 19, 2021	2026	350
Series 2016-2	3.05%	September 19, 2023	2028	1,000
Series 2017-1	2.75%	November 23, 2022	2027	400
Series 2019-1	2.38%	August 13, 2024	2029	750
Trust Units Issued by Sun Life Capital Trust				
SLEECS - Series B	7.09%	June 30, 2032	Perpetual	200
Class A Preferred Shares Issued by SLF Inc.				
Series 1	4.75%	Any time	Perpetual	400
Series 2	4.80%	Any time	Perpetual	325
Series 3	4.45%	Any time	Perpetual	250
Series 4	4.45%	Any time	Perpetual	300
Series 5	4.50%	Any time	Perpetual	250
Series 8R(2)	2.275%	June 30, 2020	Perpetual	130
Series 9QR(3)	Floating	June 30, 2020(5)	Perpetual	150
Series 10R(2)	2.842%	September 30, 2021	Perpetual	173
Series 11QR(4)	Floating	September 30, 2021(5)	Perpetual	27
Series 12R(2)	3.806%	December 31, 2021	Perpetual	300

(1) The earliest date on which the Company has the option, but not the obligation, to call securities for redemption at their par value.
(2) On the earliest redemption date and every five years thereafter, the dividend rate will reset to an annual rate equal to the 5-year Government of Canada bond yield plus a spread specified for each series. The specified spread for Class A shares is: Series 8R - 1.41%, Series 10R - 2.17% and Series 12R - 2.73%. On the earliest redemption date and every five years thereafter, holders will have the right, at their option, to convert their shares into the series that is one number higher than their existing series.
(3) Holders of Series 9QR Shares will be entitled to receive quarterly floating rate non-cumulative dividends at an annual rate equal to the then 3-month Government of Canada treasury bill yield plus 1.41%. Holders of the Series 9QR Shares will have the right, at their option, to convert their Series 9QR Shares into Series 8R Shares on June 30, 2020, and on June 30 every five years thereafter.
(4) Holders of Series 11QR Shares will be entitled to receive quarterly floating rate non-cumulative dividends at an annual rate equal to the then 3-month Government of Canada treasury bill yield plus 2.17%. Holders of the Series 11QR Shares will have the right, at their option, to convert their Series 11QR Shares into Series 10R Shares on September 30, 2021, and on September 30 every five years thereafter.
(5) Redeemable on the redemption date and every five years thereafter, in whole or in part, at par, and on any other date at $25.50 per share.

The following table shows the number of common shares and stock options outstanding of SLF Inc. for the last two years.

Number of Common Shares Outstanding

(in millions)	**2019**	2018
Balance, beginning of year	**598.5**	610.5
Stock options exercised	**0.8**	0.4
Common shares repurchased and cancelled	**(11.5)**	(12.5)
Shares issued as consideration for business acquisition	**–**	0.1
Balance, end of year	**587.8**	598.5

Number of Stock Options Outstanding

(in millions)	**2019**	2018
Balance, beginning of year	**3.1**	3.0
Options issued	**0.8**	0.5
Options exercised, forfeited or expired	**(0.8)**	(0.4)
Balance, end of year	**3.1**	3.1

Under our DRIP, Canadian-resident common and preferred shareholders may choose to have their dividends automatically reinvested in common shares of SLF Inc. and may also purchase common shares through our DRIP with cash. For dividend reinvestments, we may, at our option, issue common shares of SLF Inc. from treasury at a discount of up to 5% to the volume-weighted average trading price or direct that common shares be purchased on behalf of participants on the open market through the TSX and alternative Canadian trading platforms (collectively, the “Exchanges”) at the market price. Common shares of SLF Inc. acquired by participants through optional cash purchases may also be issued from treasury or purchased through the Exchanges at SLF Inc.’s option, in either case at no discount. Commencing with the dividends payable on March 31, 2016 and until further notice, common shares purchased under the Plan were purchased on the open market. There are no applicable discounts because the common shares are being purchased on the open market and are not being issued from treasury.

SLF Inc. grants stock options to certain employees. These options are granted at the closing price of SLF Inc.'s common shares on the TSX on the grant date.

As at January 31, 2020, SLF Inc. had 587,902,789 common shares, 3,014,865 options to acquire SLF Inc. common shares and 92,200,000 Class A Shares outstanding.

2. Capital Adequacy

OSFI has indicated that it will review the effectiveness of the LICAT guideline and update it to keep abreast of development in the life insurance industry and evolving risk measurement and management practices.

SLF Inc.

SLF Inc. is a non-operating insurance company and was subject to OSFI's LICAT guideline as at December 31, 2019. In accordance with this guideline, SLF Inc. manages its capital in a manner commensurate with its risk profile and control environment, and SLF Inc.'s regulated subsidiaries comply with the capital adequacy requirements imposed in the jurisdictions in which they operate. SLF Inc.'s consolidated capital position is above its internal target. As at December 31, 2019, SLF Inc.'s LICAT ratio was 143%. For additional information, refer to section F - Financial Strength in this document.

Sun Life Assurance

Sun Life Assurance, SLF Inc.'s principal operating life insurance subsidiary in Canada, was subject to OSFI's LICAT guideline as at December 31, 2019. With a LICAT ratio of 130% as at December 31, 2019, Sun Life Assurance's capital ratio is well above OSFI's supervisory ratio of 100% and regulatory minimum ratio of 90%. The LICAT guideline uses a risk-based approach for measuring specific life insurer risks and for aggregating the results to calculate the amount of a life insurer's regulatory required capital to support these risks. Certain of these risk components, along with available capital, are sensitive to changes in equity markets and interest rates as outlined in the section J - Risk Management of this document. For additional information, refer to section F - Financial Strength in this document.

The following table shows the components of Sun Life Assurance's LICAT ratio for 2019 and 2018.

Sun Life Assurance LICAT Ratio

($ millions)	**2019**	2018
Capital resources		
Retained earnings and contributed surplus	**13,731**	13,338
Adjusted accumulated other comprehensive income	**1,226**	1,405
Common and preferred shares	**5,945**	5,945
Innovative capital instruments and subordinated debt	**350**	849
Other	**45**	59
Less:		
Goodwill	**2,433**	2,552
Non-life investments and other	**2,348**	2,791
Available capital	**16,516**	16,253
Surplus allowance and eligible deposits	**9,359**	8,799
Total Capital resources	**25,875**	25,052
Capital requirements		
Credit, market and insurance risks	**20,223**	19,887
Less: Diversification and other credits	**4,010**	4,292
Segregated fund guarantee risk	**906**	983
Operational risk	**1,785**	1,646
Total before scalar	**18,904**	18,224
Base solvency buffer (Total before scalar x 1.05)	**19,849**	19,136
LICAT ratio	**130%**	131%

Foreign Life Insurance Companies

Foreign subsidiaries and foreign operations of SLF Inc. must comply with local capital or solvency requirements in the jurisdictions in which they operate. Our operations maintained capital levels above the minimum local regulatory requirements during 2019 and 2018. Additional information on capital and regulatory requirements for our foreign subsidiaries and foreign operations is provided in SLF Inc.'s AIF under the heading Regulatory Matters.

In the U.S., as at December 31, 2019, we have two internal reinsurance arrangements with affiliated reinsurance companies, in Delaware and Vermont, relating to our closed block of individual universal life insurance products with no-lapse guarantee benefits issued in the U.S. The Delaware reinsurance structure was established in 2013 and finances excess U.S. statutory reserves for certain universal life policies issued between January 2000 and February 2006. The financing of U.S. statutory reserve requirements in excess of those required under IFRS for the

Delaware reinsurance company is supported by a guarantee from SLF Inc. The Vermont reinsurance structure was established in 2007 for certain policies issued between March 2006 and December 2008. Under the Vermont reinsurance structure, the related excess U.S. statutory reserve requirements are funded through a long-term financing arrangement established with an unrelated financial institution.

3. Shareholder Dividends

The declaration, amount and payment of dividends by SLF Inc. is subject to the approval of our Board of Directors and is dependent on our results of operations, our reported net income, financial condition, cash requirements and contractual restrictions. Capital management activities, as well as regulatory considerations and macro-economic factors including the economic outlook for the jurisdictions in which we do business, are also considered along with other factors. The Board of Directors reviews the level of dividends on a quarterly basis.

A regular and appropriate level of dividend payout and growth provides a stable source of return to common shareholders.

We target a dividend payout ratio of between 40% and 50% based on underlying net income, except where circumstances and the factors noted above would suggest a different ratio.

During 2019, our dividend payout ratio to common shareholders based on our reported net income was 48% and on an underlying net income basis was 41%.

SLF Inc. increased its common shareholders' dividend for the fourth quarter of 2019 to $0.550. Total common shareholder dividends declared in 2019 were $2.100 per share, compared to $1.905 in 2018.

Dividends declared

Amount per share	**2019**	2018	2017
Common shares	**2.100**	1.905	1.745
Class A preferred shares			
Series 1	**1.187500**	1.187500	1.187500
Series 2	**1.200000**	1.200000	1.200000
Series 3	**1.112500**	1.112500	1.112500
Series 4	**1.112500**	1.112500	1.112500
Series 5	**1.125000**	1.125000	1.125000
Series 8R[(1)(2)]	**0.568800**	0.568800	0.568800
Series 9QR[(3)]	**0.772500**	0.656200	0.493900
Series 10R[(1)(4)]	**0.710500**	0.710500	0.710500
Series 11QR[(5)]	**0.962500**	0.846200	0.683900
Series 12R[(1)(6)]	**0.951500**	0.951500	0.951500

(1) On the redemption date and every five years thereafter, the dividend rate will reset to an annual rate equal to the 5-year Government of Canada bond yield plus a yield specified for each series. The specified yield for Class A shares is: Series 8R - 1.41%, Series 10R - 2.17% and Series 12R - 2.73%. On the earliest redemption date and every five years thereafter, holders will have the right, at their option, to convert their shares into the series that is one number higher than their existing series.
(2) The dividend rate was reset on June 30, 2015 to a fixed annual dividend rate of 2.275% until the redemption date June 30, 2020.
(3) Holders of the Series 9QR Shares are entitled to receive quarterly floating rate non-cumulative dividends at an annual rate equal to the then 3-month Government of Canada treasury bill yield plus 1.41%. Holders of the Series 9QR Shares will have the right, at their option, to convert their Series 9QR Shares into Series 8R Shares on June 30, 2020 and on June 30 every five years thereafter.
(4) The dividend rate was reset on September 30, 2016 to a fixed annual dividend rate of 2.842% until the redemption date September 30, 2021.
(5) Holders of the Series 11QR Shares are entitled to receive quarterly floating rate non-cumulative dividends at an annual rate equal to the then 3-month Government of Canada treasury bill yield plus 2.17%. Holders of the Series 11QR Shares will have the right, at their option, to convert their Series 11QR Shares into Series 10R Shares on September 30, 2021 and on September 30 every five years thereafter.
(6) The dividend rate was reset on December 31, 2016 to a fixed annual dividend rate of 3.806% until the redemption date December 31, 2021.

4. Principal Sources and Uses of Funds

Our primary source of funds is cash provided by operating activities, including premiums, investment management fees and net investment income. These funds are used primarily to pay policy benefits, dividends to policyholders, claims, commissions, operating expenses, interest expenses and shareholder dividends. Excess cash flows generated from operating activities are generally invested to support future payment requirements. We also raise funds from time to time, through borrowing and issuing of securities, to finance growth, acquisitions or other needs.

As at December 31, 2019, we maintained net cash, cash equivalents and short-term securities totaling $9.5 billion. In addition to providing for near-term funding commitments, cash, cash equivalents and short-term securities include amounts that support short-term payment obligations.

Net cash, cash equivalents and short-term securities increased by $143 million in 2019. The table below outlines our principal sources and uses of cash.

($ millions)	**2019**	2018
Net cash provided by operating activities	**2,547**	3,834
Net cash provided by (used in) investing activities	**(430)**	(280)
Net cash provided by (used in) financing activities	**(2,436)**	(2,566)
Changes due to fluctuations in exchange rates	**(190)**	250
Increase (decrease) in cash and cash equivalents	**(509)**	1,238
Net cash and cash equivalents, beginning of year	**7,194**	5,956
Net cash and cash equivalents, end of year	**6,685**	7,194
Short-term securities, end of year	**2,860**	2,208
Net cash, cash equivalents and short-term securities, end of year	**9,545**	9,402

5. Liquidity

We generally maintain an overall asset liquidity profile that exceeds requirements to fund insurance contract liabilities under prescribed adverse liability demand scenarios. To strengthen our liquidity further, we actively manage and monitor our:

- Capital levels
- Asset levels
- Matching position
- Diversification and credit quality of investments
- Cash forecasts and actual amounts against established targets

We are subject to various regulations in the jurisdictions in which we operate. The ability of SLF Inc.'s subsidiaries to pay dividends and transfer funds is regulated in certain jurisdictions and may require local regulatory approvals and the satisfaction of specific conditions in certain circumstances. Through effective cash management and capital planning, SLF Inc. ensures that its subsidiaries, as a whole and on a stand-alone basis, are properly funded and maintain adequate liquidity to meet obligations, both individually and in aggregate.

SLF Inc. and its wholly-owned holding companies had $2.3 billion in cash and other liquid assets as at December 31, 2019. See section F - Financial Strength for more information.

We maintain various credit facilities for general corporate purposes, as set out in the table below. Unless otherwise noted, all amounts are in Canadian dollars.

($ millions)	**December 31, 2019**			December 31, 2018		
Credit Facility	**Amount**	**Utilized**	**Expiry**	Amount	Utilized	Expiry
Committed	**US $ 400**	**US $ 2**	**2021**	US $400	US $ 2	2021
Committed	**US $ 600**	**US $ 56**	**2021**			
Uncommitted	**US $ 100**	**US $ 74**	**n/a**	US $100	US $ 74	n/a
Uncommitted	**$227**	**$105**	**n/a**	$225	$110	n/a
Uncommitted	**US $ 25**	**US $ 7**	**n/a**	US $ 25	US $ 9	n/a

The agreements relating to our committed credit facilities contain typical covenants for investment grade companies regarding solvency, credit ratings and financial strength, all of which were met as at December 31, 2019. These covenants include, but are not limited to, the maintenance of total equity by SLF Inc. of at least $12 billion, tested as of the last day of each fiscal quarter. SLF Inc.'s total equity was $24.5 billion as at December 31, 2019.

Our failure to comply with the covenants under the committed credit facility would, subject to grace periods in the case of certain covenants, result in an event of default. This could require us to repay any outstanding borrowings or to cash collateralize letters of credit under the facility. A failure by SLF Inc. (or any of its subsidiaries) to pay an obligation due for an amount exceeding $250 million would also result in an event of default under the committed credit facility described above.

Based on our historical cash flows and liquidity management processes, we believe that the cash flows from our operating activities will continue to provide sufficient liquidity for us to satisfy debt service obligations and to pay other expenses as they fall due.

J. Risk Management

1. Risk Management Framework

The Company has an established Risk Management Framework ("Risk Framework") approved by the Board that prescribes a comprehensive set of protocols and programs that need to be followed in conducting business activities. The risks that arise when providing products and services to Clients, which are in line with our Purpose to help our Clients achieve lifetime financial security and live healthier lives, are managed within these protocols and programs. Effective risk management is critical to the overall profitability, competitive market positioning and long-term financial viability of the Company. While we can't necessarily eliminate all risk, the Risk Framework seeks to ensure that risks to a business undertaking are appropriately managed to achieve the Company's business objectives over time and are not expected to exceed pre-established boundaries for risk taking. The Risk Framework, corporate strategy and business objectives are all aligned and risk management protocols and programs are embedded within every business segment.

2. Risk Governance

Our Risk Framework sets out lines of responsibility and authority for risk-taking, governance and control. These governance requirements are summarized below.

Risk Management Governance Structure

The Board and Management Committees as well as the risks that they oversee are highlighted below.

Board Governance

Business and Strategic Risk	Credit Risk	Market Risk	Insurance Risk	Liquidity Risk	Operational Risk
Board of Directors					
Risk & Conduct Review Committee	Risk & Conduct Review Committee Governance, Nomination & Investment Committee	Risk & Conduct Review Committee	Risk & Conduct Review Committee	Risk & Conduct Review Committee	Risk & Conduct Review Committee Audit Committee Management Resources Committee

Senior Management Committees and Oversight

Business and Strategic Risk	Credit Risk	Market Risk	Insurance Risk	Liquidity Risk	Operational Risk
Executive Risk Committee					
Executive Risk Committee	Investment & Credit Risk Committee	Corporate Asset Liability Management Committee	Insurance Risk Committee	Corporate Asset Liability Management Committee	Operational Risk & Compliance Committee

Business Group Risk Committees and Oversight

Board of Directors

The Board is responsible for ensuring the governance of all risks across the enterprise and has primary responsibility for taking action to ensure risk management policies, programs and practices are in place. By approving our Risk Framework and the Risk Appetite Policy and providing ongoing oversight of the risk management programs, the Board monitors that significant risks are appropriately identified and managed. The Board oversees business and strategic risk through review and approval of the business and strategic plans, and regularly discusses key themes, issues and risks emerging in connection with the design or implementation of these plans. The Board also monitors risk management activities of our subsidiaries and risks posed to the Company through its joint venture arrangements.

The Risk & Conduct Review Committee is a standing committee of the Board whose primary functions are to assist the Board with oversight of the management of current and emerging risks enterprise-wide, to ensure that management has policies in place, processes and controls designed to identify and effectively manage the significant risks to which the Company is exposed and has sufficient capital to underpin those risks. The Committee regularly monitors the Company's risk profile to ensure it is within the agreed risk appetite and that the Company's capital position is in compliance with regulatory capital requirements, and monitors and recommends to the Board for approval, the specific risk limits allocated to the businesses and the annual Capital Plan. The Risk & Conduct Review Committee meets with senior business and functional leaders who have first-hand knowledge of risks and the risk management programs, oversees the effectiveness of the risk management function, and obtains reports from Internal Audit on the effectiveness of risk controls within the business and risk function. It reviews and approves all risk management policies and reviews compliance with those policies. In addition, where the Board has allocated oversight of specific risk management programs to other committees of the Board ("Board Committees"), the Risk & Conduct Review Committee is tasked with providing the Board with an integrated view of oversight of all risk management programs across all Board committees. The committee also oversees compliance with legal and regulatory requirements and the identification and management of compliance risk.

The Governance, Nomination & Investment Committee of the Board is responsible for assisting the Board in: reviewing and monitoring the Company's Investment Plan and investment performance; overseeing investment practices, procedures and controls related to the management of the general fund investment portfolio and the Company's asset management businesses; and reviewing and approving transactions, either separately or jointly with the Risk & Conduct Review Committee, where the acquisition of individual investments for the General Account would, on their own, exceed certain limits or ranges in the Investment and Credit Risk Management Policy. In addition, the Committee is also responsible for developing effective corporate governance guidelines and processes including policies and processes to sustain ethical behaviour, and developing processes to assess the effectiveness of the Board and its Committees.

The Audit Committee of the Board is responsible for assisting the Board in overseeing the integrity of financial statements and related information provided to shareholders and others, compliance with financial regulatory requirements, adequacy and effectiveness of the internal controls implemented and maintained by management, and assessing the qualifications, independence and performance of the external auditor.

The Management Resources Committee of the Board is responsible for assisting the Board in ensuring we have the leadership resources for succession of senior executive positions and programs to effectively attract, retain, develop and reward executives for achieving our strategic objectives. The Management Resources Committee reviews the design, approval and governance of material incentive programs to align business objectives and to ensure that these incentive programs do not encourage excessive risk taking, and reviews the implications of key enterprise risks, including human resources risks, on compensation design and human resources practices. In addition, the Management Resources Committee reviews and makes recommendations to the Board with respect to compensation matters, including the remuneration of executives who have a material impact on the risk exposure of the Company.

Senior Management Committees

The Executive Risk Committee ("ERC") provides executive management oversight of the Company's enterprise risk management activities. This includes the review and articulation of the risk appetite, review that the risk profile is within the agreed risk appetite and policies, processes and controls are in place to identify and effectively manage the significant risks in accordance with the risk appetite and the overall objective of promoting a balanced business and product model to achieve agreed upon risk-adjusted returns and allocate capital accordingly.

The Investment & Credit Risk Committee is responsible for reviewing matters related to the management of the Company's general fund assets which includes providing oversight and direction on the current and potential credit and investment risk exposures facing the Company and mitigating strategies to ensure that effective credit risk management practices and controls are in place.

The Corporate Asset Liability Management Committee is responsible for providing executive oversight and direction for the effective measurement, control and management of the market and liquidity risks in the design and operation of general fund investment strategies for efficiently discharging the Company's general fund liabilities.

The Operational Risk & Compliance Committee is responsible for providing oversight of the Company's operational and compliance risk management practices, current and emerging operational risk exposures, and the processes to ensure ongoing identification of significant operational and compliance risks facing the Company.

The Insurance Risk Committee is responsible for providing oversight and direction on insurance risk exposures facing the Company and to ensure that effective insurance risk management practices and controls are in place. This includes reviewing the current and projected insurance risk profile against limits; engaging in review of topical insurance, reinsurance and underwriting risk issues; and reviewing and recommending changes to the insurance risk measurement methodology to the ERC.

Accountabilities

Primary accountability for risk management is delegated by the Board to our Chief Executive Officer ("CEO"), and the CEO further delegates responsibilities throughout the Company through management authorities and responsibilities. The CEO delegates accountability for risk management to our executive officers, who are accountable for ensuring the management of risks in the scope of their business accountability is in accordance with the Board-approved Risk Framework, Risk Appetite Policy and risk management policies.

3. Risk Universe

As a large financial services organization operating in a complex industry, the Company encounters a variety of risks. We are subject to financial and insurance risks that are connected to our liabilities and with the management and performance of our assets, including how we match returns from assets with the payment of liabilities to our Clients. We also face risks in formulating our business strategy and business objectives, in carrying on our business activities in the pursuit of our strategy and objectives, and from external factors such as changes in the economic, political, competitive, regulatory and environmental landscapes. The Risk Framework covers all risks and these have been grouped into six major categories: credit, market, insurance, business and strategic, operational and liquidity risks. The Risk Framework sets out the key risk management processes in the areas of risk: appetite, identification, measurement, management, monitoring and reporting. The Risk Framework sets out both qualitative and quantitative measures and processes to control the risk the Company will bear in respect of each of these categories of risk and in aggregate.

4. Risk Appetite

Our Risk Appetite Policy defines the amount and type of risk we are willing to accept in pursuit of our business objectives, and is approved by the Board. It is forward-looking and our strategic plan, capital plan, business plan and business objectives are established within its boundaries.

The Company's risk appetite seeks to balance the various needs, expectations, risk and reward perspectives and investment horizons of key stakeholders. In particular, our risk appetite supports the pursuit of shareholder value while ensuring that the Company's ability to pay claims and fulfill policyholder commitments is not compromised.

The Company's risk appetite is the primary mechanism to communicate its risk philosophy and the boundaries of permissible risk-taking across the enterprise. It ensures that business activities are assessed against performance criteria that are appropriately risk-adjusted. Our risk appetite supports the objective of maintaining adequate capital, managing return on equity, managing earnings volatility, managing long-term profitability and managing liquidity. To accomplish this, our risk appetite includes a wide array of qualitative and quantitative standards that reflect the Company's overall risk management principles and values.

We generally accept diversifiable risks and utilize risk pooling to create portfolios with relatively low liability volatility. We take risk where we have internal expertise such as actuarial, underwriting, claims management, investment or distribution or where reinsurance partners are able to supplement our internal expertise. We prefer risks where it is possible to diversify across various segments including products, geographies, distribution channels or asset classes in order to maximize diversification opportunities.

Our Risk Appetite Policy sets out specific constraints which define the aggregate level of risk that the Company is willing to accept. We translate our risk appetite constraints into specific risk limits by risk class and business segment. Our risk profile is measured, managed and monitored regularly to ensure that we operate within our risk appetite. Our risk appetite limits are reviewed periodically to reflect the risks and opportunities inherent in our evolving business strategies and operating environment.

5. Risk Management Policies

In order to support the effective communication, implementation and governance of our Risk Framework, we have codified our processes and operational requirements in a comprehensive series of risk management policies and operating guidelines. These policies and guidelines promote the application of a consistent approach to managing risk exposures across our global business platform. The Board and Board Committees regularly review and approve significant changes to the risk management policies and regularly review management's reporting and attestation on compliance to these policies.

6. Risk Management Process

The risk management process as set out in our Risk Framework is described below:

Risk Identification and Measurement

All business segments employ a common approach to identify and measure risks. Business segments have accountability for identifying and managing risks facing their business. We have a process to identify and monitor emerging risks that may have a material impact on our finances, operations or reputation. We evaluate potential correlations between various risk events and categories, and monitor emerging risks, regulatory and rating agency requirements, and industry developments.

Risk measurement involves determining and evaluating potential risk exposures, and includes a number of techniques such as monitoring key risk indicators, assessing probability and severity of risks, and conducting stress testing.

A robust stress testing program is an essential component of the Company's Risk Framework used to measure, monitor and mitigate the Company's risk exposures and to ensure ongoing capital adequacy under plausible stress events. Stress testing is performed on key metrics such as earnings, regulatory capital ratios and liquidity to identify and monitor potential vulnerabilities to key risk drivers and ensure that the Company is operating within its risk appetite.

We develop and test a range of scenarios based on our internal assessment and regulatory guidance. Sensitivity testing is conducted on a regular basis and measures the earnings and regulatory capital impact from changes in underlying risk factors. Sensitivity testing is performed for individual risks and for consolidated risk exposures at different levels of stress and at various levels of aggregation. Scenario testing involves changes to a number of risk factors to assess the impact of and interaction between these risk factors. These scenarios include integrated scenario testing, reverse scenario testing and key assumption sensitivity testing. We also use the Dynamic Capital Adequacy Testing ("DCAT") process, as required by our regulator, to project income and capital for a five-year period under plausible adverse scenarios. In 2020 the Canadian Institute of Actuaries will replace DCAT with Financial Condition Testing ("FCT"). FCT, similar to DCAT, will continue to act as a stress testing technique for the organization. FCT's testing is broader than DCAT and allows for harmonization with the Company's Own Risk Solvency Assessment ("ORSA").

Risk Management, Monitoring and Reporting

Risk management decisions are formed by evaluating how well the outcomes of the risk measurements and risk assessments for a business activity conform to our risk appetite, including an assessment of risk-adjusted return.

Monitoring processes include oversight by the Board, which is exercised through Board Committees and senior management committees described in the Risk Governance section of this MD&A.

Senior management committees, Board Committees and the Board regularly review reports that summarize our risk profile, including the exposures across our principal risks including any changes in risk trends and emerging risks. These committees also review the effectiveness of the mitigation strategies presented in the reports. On a regular basis, the Board and the Board Committees review and approve any significant changes to key policies for the management of risk and review compliance with these policies.

7. Three Lines of Defence

The Company has adopted the Three Lines of Defence ("LOD") model to provide a consistent, transparent and clearly documented allocation of accountability and segregation of functional responsibilities. This segregation of responsibility helps to establish a robust control framework that promotes transparent and independent challenge of all risk taking activities, and that encourages all functions to engage in self-critical examination to foster continuous improvement of the management of risk in our business.

The **first line of defence** is represented by the business segment management who own the risks that are intrinsic to the business and have the primary responsibility to identify, measure, manage, monitor and report these risks. Some of the first LOD risk related responsibilities include:

- Identification of key and emerging risks;
- Management, mitigation and reporting on risk within their business operations;
- Accountability for business results and the risks taken to achieve those results; and
- Operating within risk appetite and according to risk management policies.

The **second line of defence** includes the Chief Risk Officer ("CRO") and various functional heads who are responsible for providing independent oversight of our Company-wide risk management programs. The CRO is responsible for developing our Risk Framework and Risk Appetite Policy, and for overseeing the development and implementation of risk management strategies aimed at optimizing the risk-return profile of the Company. The CRO is supported by a network of business segment risk officers. The functional heads support the CRO in the implementation and communication of our Risk Framework and Risk Appetite Policy. Some of the key second LOD risk related responsibilities include:

- Establishment of the risk management framework and policies;
- Providing oversight and challenge of first line current and emerging risks; and
- Independent reporting to senior management committees and the Board on the risk profile as measured against stated risk appetite.

The **third line of defence** responsibilities are distinct from first and second LOD responsibilities. The Internal Audit function is the third LOD and is responsible for providing independent assurance to management, the Risk & Conduct Review Committee and OSFI on the design and operational effectiveness of the risk management practices carried out by first LOD and second LOD. Internal Audit provides a quarterly opinion on the effectiveness of internal controls, risk management and governance processes to the Risk & Conduct Review Committee. In addition, the Risk & Conduct Review Committee may engage third-party independent reviews to supplement the third LOD review of the effectiveness of the Company's risk management programs.

8. Risk Culture and Philosophy

We have built a strong corporate culture on a foundation of ethical behaviour, high business standards, integrity and respect. The Board establishes the "tone from the top" and is accountable to ensure that the CEO and senior management create and sustain a culture of integrity throughout the organization. We work together through our focus on diversity, inclusion and sustainability to fulfill our purpose of helping our Clients to achieve lifetime financial security and to live healthier lives.

Risk culture relates to how we behave and respond, in addition to the requirements we set. It enables and rewards taking the right risks in an informed manner. It enables effective challenge and transparency regarding risks and outcomes without fear of reprisal. It drives us to understand Client needs and preferences so that we can act in their best interests. In order to support employees in fulfilling their role, we have taken action to ensure our risk protocols and procedures are well defined and embedded in our day-to-day business activities, assess that appropriate resources and training are provided, establish and communicate a common risk philosophy and a high bar for integrity and conduct, and encourage every employee to openly identify risk exposures and communicate escalating risk concerns. The following six elements support our Risk Culture:

- Establishing tone from the top;
- Encouraging transparency in risk-taking;
- Performing effective challenge in conducting business decisions;
- Aligning incentives and risk management practices;
- Effectively communicating the risk culture expectations; and
- Establishing clear accountabilities.

A key premise of our culture is that all employees have an important role to play in managing the Company's risks. Risk Management is embedded in the Company's culture, which encourages ownership and responsibility for risk management at all levels. Our compensation programs are aligned to the organization's risk management practices through our governance structure for the design and approval of incentive compensation plans and processes used to support the alignment of compensation and risk management. We continuously reinforce and embed the culture through communication and training on risk culture elements at various forums and across various levels through training on the Code of Conduct annually, reinforcing accountability through performance reviews and compensation, and through defining roles, responsibilities and expectations in the risk management policies.

The Company's risk philosophy includes the following core principles:

Strategic Alignment

Our corporate strategy and business objectives are required to be established within the boundaries set out in the Risk Framework and the Risk Appetite Policy. This requires us to consider whether a business activity will result in a risk profile that we are willing to accept and which we are prepared to manage. We have established a range of explicit risk appetite limits and control points for credit, market, insurance, operational and liquidity risks. Business and strategic risk is managed through our strategic and business planning process and through controls over the implementation of these strategic and business plans. Risks associated with activities outside our risk appetite or outside the acceptable defined risks are avoided.

Stakeholder Interests

Our Risk Appetite Policy considers the interests of a large number of key stakeholders, including Clients, policyholders, shareholders, debt-holders, employees, regulators, distributors, rating agencies and other capital markets participants. The policy describes how to balance the needs, expectations, risk and reward perspectives, and investment horizons of these different stakeholders.

Effective risk management requires that objectives and incentives be aligned to ensure management's decisions are consistent with the Company's risk philosophy and risk appetite. To ensure this, the business plans and strategies are independently tested to ensure that they operate within the boundaries and requirements set out in the Risk Framework and the Risk Appetite Policy, and the results of this testing are reported to the Board. Compensation programs for employees are approved by the Board and the Board Committees and are aligned with the Company's risk philosophy, values, business and risk management strategies, and the long-term interests of stakeholders. In establishing annual performance objectives, we consider risk management goals to ensure that business decisions are consistent with the desired risk and return profile of the Company.

Capability Alignment

We seek out profitable risk-taking opportunities in those areas where we have established risk management skills and capabilities. Conversely, we endeavour to avoid or transfer risks that are beyond our risk-taking capability. Our ability to measure and evaluate risks, the quality of our risk governance and control environment, the depth and quality of our risk responses and the robustness of our pricing strategies are particularly important capabilities that we assess.

Portfolio Perspective

In evaluating a particular risk, consideration is given to a portfolio perspective of risk and return including the explicit recognition of the impacts of diversification and concentration and how different risks interact with each other. This perspective is extended to the development of risk mitigation and pricing strategies, recognizing that often the most cost-effective way of managing risk involves utilizing available relationships already inherent in our business.

Risk-Adjusted Returns

The financial return metrics which are used to assess business activities are required to be risk-adjusted. Financial return metrics are developed in consideration of the constraints set out in the Risk Appetite Policy, and reflect the expected costs of mitigation and the cost of risk capital required to support the risk taking activity.

Company Culture

Our Company Culture is the sum of the shared assumptions, values and beliefs that create the unique character of an organization. Our company culture provides a framework that encourages behaviour aligned with goals for long-term value creation. It defines the appropriate behaviour for any given situation, governs the interaction with Clients and affects how employees identify with the organization. Our company culture has significant potential to impact our risk profile. An organization's culture impacts its ability to create value and to protect value. Maintaining the right balance of risk-taking and risk control activities is a key organizational capability and fundamental to Sun Life's long-term sustainable success.

9. Risk Categories

The shaded text and tables in the following section of this MD&A represent our disclosure on credit, market and liquidity risks in accordance with IFRS 7 *Financial Instruments - Disclosures* and includes a discussion on how we measure risk and our objectives, policies and methodologies for managing these risks. The shaded text and tables represent an integral part of our audited annual Consolidated Financial Statements for the year ended December 31, 2019. The shading in this section does not imply that these disclosures are of any greater importance than non-shaded tables and text, and the Risk Management disclosure should be read in its entirety. This information should be considered carefully together with other information in this MD&A and in the 2019 AIF, our Consolidated Financial Statements and other reports and materials that we file with securities regulators.

In this section, segregated funds include segregated fund guarantees, variable annuities and investment products, and includes Run-off reinsurance in Corporate.

Our Risk Framework has grouped all risks into six major risk categories: market, insurance, credit, business and strategic, operational and liquidity risks.

i. Market Risk

Risk Description

We are exposed to financial and capital market risk, which is defined as the risk that the fair value or future cash flows of an insurance contract or financial instrument will fluctuate because of changes or volatility in market prices. Market risk includes equity, interest rate and spread, real estate and foreign currency risks.

Market Risk Management Governance and Control

We employ a wide range of market risk management practices and controls as outlined below:

- Market risk governance practices are in place, including independent monitoring and review and reporting to senior management and the Risk & Conduct Review Committee.
- Risk appetite limits have been established for equity, interest rate, real estate and foreign currency risks.
- Income and regulatory capital sensitivities are monitored, managed and reported against pre-established risk limits.
- Comprehensive asset-liability management and hedging policies, programs and practices are in place.
- Regulatory solvency requirements include risk-based capital requirements and are monitored regularly.
- Product Design and Pricing Policy requires a detailed risk assessment and pricing provisions for material risks.
- Stress-testing techniques, such as DCAT, are used to measure the effects of large and sustained adverse market movements.
- Insurance contract liabilities are established in accordance with Canadian actuarial standards of practice.
- Internal capital targets are established at an enterprise level to cover all risks and are above minimum regulatory and supervisory levels. Actual capital levels are monitored to ensure they exceed internal targets.

Specific market risks and our risk management strategies are discussed below in further detail.

Equity Risk

Equity risk is the potential for financial loss arising from declines or volatility in equity market prices. We are exposed to equity risk from a number of sources. A portion of our exposure to equity risk arises in connection with benefit guarantees on segregated fund contracts and variable annuities. These benefit guarantees may be triggered upon death, maturity, withdrawal or annuitization. The cost of providing for these guarantees is uncertain and will depend upon a number of factors, including general capital market conditions, underlying fund performance, policyholder behaviour and mortality experience, which may result in negative impacts on our net income and capital.

We generate revenue in our asset management businesses and from certain insurance and annuity contracts where fees are levied on account balances that are affected directly by equity market levels. Accordingly, we have further exposure to equity risk as adverse fluctuations in the market value of such assets will result in corresponding adverse impacts on our revenue and net income. In addition, declining and volatile equity markets may have a negative impact on sales and redemptions (surrenders) in these businesses, and this may result in further adverse impacts on our net income and financial position.

We also have direct exposure to equity markets from the investments supporting other general account liabilities, surplus, and employee benefit plans. These exposures fall within our risk-taking philosophy and appetite, and are therefore generally not hedged.

Interest Rate and Spread Risk

Interest rate and spread risk is the potential for financial loss arising from changes or volatility in interest rates or spreads when asset cash flows and the policy obligations they support are not matched. This may result in the need to either sell assets to meet policy payments and expenses or reinvest excess asset cash flows in unfavourable interest rate or spread environments. The impact of changes or volatility in interest rates or spreads is reflected in the valuation of our financial assets and liabilities for insurance contracts.

Our primary exposure to interest rate and spread risk arises from certain general account products and segregated fund contracts which contain investment guarantees in the form of minimum crediting rates, guaranteed premium rates, settlement options and benefit guarantees. If investment returns fall below guaranteed levels, we may be required to increase liabilities or capital in respect of these contracts. The guarantees attached to these products may be applicable to both past premiums collected and future premiums not yet received. Segregated fund contracts provide benefit guarantees that are linked to underlying fund performance and may be triggered upon death, maturity, withdrawal or annuitization. These products are included in our asset-liability management program and the residual interest rate exposure is managed within our risk appetite limits.

Declines in interest rates or narrowing spreads can result in compression of the net spread between interest earned on investments and interest credited to policyholders. Declines in interest rates or narrowing spreads may also result in increased asset calls, mortgage prepayments, and net reinvestment of positive cash flows at lower yields, and therefore adversely impact our profitability and financial position. Negative interest rates may additionally result in losses on our cash deposits and low or negative returns on our fixed income assets impacting our profitability. In contrast, increases in interest rates or a widening of spreads may have a material impact on the value of fixed income assets, resulting in depressed market values, and may lead to lower LICAT ratios or losses in the event of the liquidation of assets prior to maturity.

Significant changes or volatility in interest rates or spreads could have a negative impact on sales of certain insurance and annuity products, and adversely impact the expected pattern of redemptions (surrenders) on existing policies. Increases in interest rates or widening spreads may increase the risk that policyholders will surrender their contracts, potentially forcing us to liquidate assets at a loss and accelerate recognition of certain acquisition expenses. While we have established hedging programs in place and our insurance and annuity products often contain surrender mitigation features, these may not be sufficient to fully offset the adverse impact of the underlying losses.

We also have direct exposure to interest rates and spreads from investments supporting other general account liabilities, surplus and employee benefit plans. Lower interest rates or a narrowing of spreads will result in reduced investment income on new fixed income asset purchases. Conversely, higher interest rates or wider spreads will reduce the value of our existing assets. These exposures fall within our risk-taking philosophy and appetite and are therefore generally not hedged.

A sustained low interest rate environment may adversely impact our earnings, regulatory capital requirements and our ability to implement our business strategy and plans in several ways, including:

- Lower sales of certain insurance and wealth products, which can in turn pressure our operating expense levels;
- Shifts in the expected pattern of redemptions (surrenders) on existing policies;
- Higher new business strain reflecting lower new business profitability;
- Reduced return on new fixed income asset purchases, and higher hedging costs;
- The impact of changes in actuarial assumptions;
- Impairment of goodwill; and
- Additional valuation allowances against our deferred tax assets.

Market Risk Sensitivities

We utilize a variety of methods and measures to quantify our market risk exposures. These include duration management, key rate duration techniques, convexity measures, cash flow gap analysis, scenario testing, and sensitivity testing of earnings and regulatory capital ratios versus risk appetite limits.

Our net income[(1)] is affected by the determination of policyholder obligations under our annuity and insurance contracts. These amounts are determined using internal valuation models and are recorded in our Annual Consolidated Financial Statements, primarily as Insurance contract liabilities. The determination of these obligations requires management to make assumptions about the future level of equity market performance, interest rates, credit and swap spreads and other factors over the life of our products. Differences between our actual experience and our best estimate assumptions are reflected in our Annual Consolidated Financial Statements. Refer to Additional Cautionary Language and Key Assumptions Related to Sensitivities in this section for important additional information regarding these estimates.

The market value of our investments in fixed income and equity securities fluctuates based on movements in interest rates and equity markets. The market value of fixed income assets designated as AFS that are held primarily in our surplus segment increases with declining interest rates and decreases with rising interest rates. The market value of equities designated as AFS and held primarily in our surplus segment increases with rising equity markets and decreases with declining equity markets. Changes in the market value of AFS assets flow through other comprehensive income ("OCI") and are only recognized in net income when realized upon sale, or when considered impaired. The amount of realized gains (losses) recorded in net income in any period is equal to the unrealized gains (losses) or OCI position at the start of the period plus the change in market value during the current period up to the point of sale for those securities that were sold during the period. The sale or impairment of AFS assets held in surplus can therefore have the effect of modifying our net income sensitivity.

We realized $64 million (pre-tax) in net gains on the sale of AFS assets during the fourth quarter of 2019 and $167 million in 2019 ($25 million pre-tax in the fourth quarter of 2018, and $121 million in 2018). The net unrealized (losses) gains or OCI position on AFS fixed income and equity assets were $251 million and $62 million, respectively, after-tax as at December 31, 2019 ($(98) million and $43 million, respectively, after-tax as at December 31, 2018).

(1) Net income in section J - Risk Management in this document refers to common shareholders' net income.

Equity Market Sensitivities

The following table sets out the estimated immediate impact on, or sensitivity of, our net income and OCI and Sun Life Assurance's LICAT ratio to certain instantaneous changes in equity market prices as at December 31, 2019 and December 31, 2018.

As at December 31, 2019 **($ millions, unless otherwise noted)**				
Change in Equity Markets[1]	**25% decrease**	**10% decrease**	**10% increase**	**25% increase**
Potential impact on net income[2][3]	**$ (350)**	**$ (150)**	**$ 100**	**$ 250**
Potential impact on OCI[3]	**$ (50)**	**$ (50)**	**$ 50**	**$ 50**
Potential impact on LICAT[2][4]	**0.5% point decrease**	**0.0% point decrease**	**0.0% point increase**	**0.0% point increase**

As at December 31, 2018 ($ millions, unless otherwise noted)				
Change in Equity Markets[1]	25% decrease	10% decrease	10% increase	25% increase
Potential impact on net income[2][3]	$ (300)	$ (100)	$ 100	$ 250
Potential impact on OCI[3]	$ (100)	$ (50)	$ 50	$ 100
Potential impact on LICAT[2][4]	2.0% point decrease	1.0% point decrease	0.5% point increase	1.0% point increase

(1) Represents the respective change across all equity markets as at December 31, 2019 and December 31, 2018. Assumes that actual equity exposures consistently and precisely track the broader equity markets. Since in actual practice equity-related exposures generally differ from broad market indices (due to the impact of active management, basis risk, and other factors), realized sensitivities may differ significantly from those illustrated above. Sensitivities include the impact of re-balancing equity hedges for dynamic hedging programs at 2% intervals (for 10% changes in equity markets) and at 5% intervals (for 25% changes in equity markets).
(2) The market risk sensitivities include the estimated mitigation impact of our hedging programs in effect as at December 31, 2019 and December 31, 2018, and include new business added and product changes implemented prior to such dates.
(3) Net income and OCI sensitivities have been rounded to the nearest $50 million. The sensitivities exclude the market impacts on the income from our joint ventures and associates, which we account for on an equity basis.
(4) The LICAT sensitivities illustrate the impact on Sun Life Assurance as at December 31, 2019 and December 31, 2018. LICAT ratios are rounded to the nearest 0.5%.

Interest Rate Sensitivities

The following table sets out the estimated immediate impact on, or sensitivity of, our net income and OCI and Sun Life Assurance's LICAT ratio to certain instantaneous changes in interest rates as at December 31, 2019 and December 31, 2018.

Sun Life Assurance's LICAT ratio generally decreases with rising interest rates and increases with declining interest rates, which is opposite to our net income sensitivity. Increases to interest rates will reduce the value of our assets and margins in our actuarial liabilities, resulting in a lower LICAT ratio, while decreases to interest rates will increase the value of our assets and margins in our actuarial liabilities. However, our sensitivity to interest rates may be non-linear, and can change, due to the interrelationships between market rates, actuarial assumptions and LICAT calculations. In particular, changes to market conditions can shift the interest rate scenario applied in the LICAT formula causing a discontinuity where capital requirements change materially.

($ millions, unless otherwise noted)	**As at December 31, 2019**		As at December 31, 2018	
Change in Interest Rates[1]	**50 basis point decrease**	**50 basis point increase**	50 basis point decrease	50 basis point increase
Potential impact on net income[2][3][4]	**$ (150)**	**$ 50**	$ (100)	$ 50
Potential impact on OCI[3]	**$ 250**	**$ (250)**	$ 250	$ (250)
Potential impact on LICAT[2][5]	**2.0% point increase**	**3.0% point decrease**	2.5% point increase	1.5% point decrease

(1) Interest rate sensitivities assume a parallel shift in assumed interest rates across the entire yield curve as at December 31, 2019 and December 31, 2018 with no change to the Actuarial Standards Board ("ASB") promulgated Ultimate Reinvestment Rate ("URR"). Variations in realized yields based on factors such as different terms to maturity and geographies may result in realized sensitivities being significantly different from those illustrated above. Sensitivities include the impact of re-balancing interest rate hedges for dynamic hedging programs at 10 basis point intervals (for 50 basis point changes in interest rates).
(2) The market risk sensitivities include the estimated mitigation impact of our hedging programs in effect as at December 31, 2019 and December 31, 2018, and include new business added and product changes implemented prior to such dates.
(3) Net income and OCI sensitivities have been rounded to the nearest $50 million. The sensitivities exclude the market impacts on the income from our joint ventures and associates, which we account for on an equity basis.
(4) The majority of interest rate sensitivity, after hedging, is attributed to individual insurance products. We also have interest rate sensitivity, after hedging, from our fixed annuity and segregated funds products.
(5) The LICAT sensitivities illustrate the impact on Sun Life Assurance as at December 31, 2019 and December 31, 2018. LICAT ratios are rounded to the nearest 0.5%.

The above sensitivities were determined using a 50 basis point change in interest rates and a 10% change in our equity markets because we believe that these market shocks were reasonably possible as at December 31, 2019. We have also disclosed the impact of a 25% change in equity markets to illustrate that significant changes in equity market levels may result in other than proportionate impacts on our sensitivities.

Credit Spread and Swap Spread Sensitivities

We have estimated the immediate impact or sensitivity of our net income attributable to certain instantaneous changes in credit and swap spreads. The credit spread sensitivities reflect the impact of changes in credit spreads on our asset and liability valuations (including non-sovereign fixed income assets, provincial governments, corporate bonds, and other fixed income assets). The swap spread sensitivities reflect the impact of changes in swap spreads on swap-based derivative positions and liability valuations.

($ millions, unless otherwise noted)	Credit Spread Sensitivities[1]		Swap Spread Sensitivities	
Net income sensitivity[2]	50 basis point decrease	50 basis point increase	20 basis point decrease	20 basis point increase
December 31, 2019	**$ (75)**	**$ 50**	**$ 50**	**$ (50)**
December 31, 2018	$ (75)	$ 75	$ 25	$ (25)

(1) In most instances, credit spreads are assumed to revert to long-term insurance contract liability assumptions generally over a five-year period.
(2) Sensitivities have been rounded to the nearest $25 million.

The credit and swap spread sensitivities assume a parallel shift in the indicated spreads across the entire term structure. Variations in realized spread changes based on different terms to maturity, geographies, asset classes and derivative types, underlying interest rate movements, and ratings may result in realized sensitivities being significantly different from those provided above. The credit spread sensitivity estimates exclude any credit spread impact that may arise in connection with asset positions held in segregated funds. Spread sensitivities are provided for the consolidated entity and may not be proportional across all reporting segments. Refer to Additional Cautionary Language and Key Assumptions Related to Sensitivities in this section for important additional information regarding these estimates.

Market Risk Management Strategies

Market risk is managed at all stages during the product life cycle including product design and development, ongoing review and positioning of our suite of products, and ongoing asset-liability management and hedge re-balancing.

We have implemented asset-liability management and hedging programs involving regular monitoring and adjustment of market risk exposures using assets, derivative instruments and repurchase agreements to maintain market risk exposures within our risk appetite. The general availability and cost of these hedging instruments may be adversely impacted by a number of factors including changes in interest rates, increased volatility in capital markets, and changes in the general market and regulatory environment within which these hedging programs operate. In particular, regulations for OTC derivatives could impose additional costs and could affect our hedging strategy. In addition, these programs may themselves expose us to other risks.

Our market risk management strategies are developed based on policies and operating guidelines at the enterprise level, business segment level and product level. Liabilities having a similar risk profile are grouped together and a customized investment and hedging strategy is developed and implemented to optimize return within our risk appetite limits.

In general, market risk exposure is mitigated by the assets supporting our products. This includes holdings of fixed income assets such as bonds and mortgages. Derivative instruments may supplement these assets to reduce the risk from cash flow mismatches and mitigate the market risk associated with liability features and optionality. The following table sets out the use of derivatives across a number of our products as at December 31, 2019.

Asset-Liability Management Applications for Derivative Usage

The primary uses of derivatives are set out in the table below.

Products/Application	Uses of Derivative	Derivatives Used
General asset-liability management - interest rate risk exposure for most insurance and annuity products	To manage the sensitivity of the duration gap between assets and liabilities to interest rate changes	Interest rate swaps, swaptions, floors and bond futures
Guarantees on insurance and annuity contracts - minimum interest rate guarantees, guaranteed surrender values and guaranteed annuitization options	To limit potential financial losses from significant reductions in asset earned rates relative to contract guarantees	Interest rate swaps, swaptions, floors and bond futures
Segregated fund guarantees	To manage the exposure of product guarantees sensitive to movement in equity market and interest rate levels and currency fluctuations	Put options, call options, futures and swaps on equity indices, interest rate swaps and bond futures, and foreign exchange forwards
Currency exposure in relation to asset-liability management	To reduce the sensitivity to currency fluctuations by matching the value and cash flows of specific assets denominated in one currency with the value and cash flows of the corresponding liabilities denominated in another currency	Currency swaps and forwards
Credit exposure	To replicate credit exposures and enhance investment returns	Credit default swaps

General Account Insurance and Annuity Products

Most of our expected sensitivity to changes in interest rates and about two-thirds of our expected sensitivity to changes in equity markets are derived from our general account insurance and annuity products. We have implemented market risk management strategies to mitigate a portion of the market risk related to our general account insurance and annuity products.

Individual insurance products include universal life and other long-term life and health insurance products. Major sources of market risk exposure for individual insurance products include the reinvestment risk related to future premiums on regular premium policies, asset reinvestment risk on both regular premium and single premium policies and the guaranteed cost of insurance. Interest rate risk for individual insurance products is typically managed on a duration basis, within tolerance ranges set out in the applicable investment policy or guidelines. Targets and limits are established so that the level of residual exposure is commensurate with our risk appetite. Exposures are monitored frequently, and assets are re-balanced as necessary to maintain compliance within policy limits using a combination of assets and derivative instruments. A portion of the longer-term cash flows are backed with equities and real estate.

For participating insurance products and other insurance products with adjustability features, the investment strategy objective is to provide a total rate of return given a constant risk profile over the long term.

Fixed annuity products generally provide the policyholder with a guaranteed investment return or crediting rate. Interest rate risk for these products is typically managed on a duration basis, within tolerance ranges set out in the applicable investment guidelines. Targets and limits are established such that the level of residual exposure is commensurate with our risk appetite. Exposures are monitored frequently, and are re-balanced as necessary to maintain compliance within prescribed tolerances using a combination of fixed income assets and derivative instruments.

Certain insurance and annuity products contain minimum interest rate guarantees. Market risk management strategies are implemented to limit potential financial loss due to reductions in asset earned rates relative to contract guarantees. These typically involve the use of hedging strategies utilizing interest rate derivatives such as interest rate floors, swaps and swaptions.

Certain insurance and annuity products contain features which allow the policyholders to surrender their policy at book value. Market risk management strategies are implemented to limit the potential financial loss due to changes in interest rate levels and policyholder behaviour. These typically involve the use of hedging strategies such as dynamic option replication and the purchase of interest rate swaptions.

Certain products have guaranteed minimum annuitization rates. Market risk management strategies are implemented to limit the potential financial loss and typically involve the use of fixed income assets, interest rate swaps, and swaptions.

Segregated Fund Guarantees

Approximately one-third of our equity market sensitivity and a small amount of interest rate risk sensitivity as at December 31, 2019 are derived from segregated fund products. These products provide benefit guarantees, which are linked to underlying fund performance and may be triggered upon death, maturity, withdrawal or annuitization. The cost of providing these guarantees is uncertain and depends upon a number of factors including general capital market conditions, our hedging strategies, policyholder behaviour and mortality experience, each of which may result in negative impacts on net income and capital.

The following table provides information with respect to the guarantees provided for our segregated fund products by business group.

Segregated Fund Risk Exposures ($ millions)

December 31, 2019	**Fund value**	**Amount at Risk**[(1)]	**Value of guarantees**[(2)]	**Insurance contract liabilities**[(3)]
Canada	**12,131**	**362**	**10,678**	**505**
Asia	**2,337**	**212**	**2,380**	**99**
Corporate[(4)]	**2,302**	**207**	**1,063**	**228**
Total	**16,770**	**781**	**14,121**	**832**

December 31, 2018	Fund value	Amount at Risk[(1)]	Value of guarantees[(2)]	Insurance contract liabilities[(3)]
Canada	11,202	792	10,742	552
Asia	2,798	444	3,165	147
Corporate[(4)]	2,215	277	1,219	255
Total	16,215	1,513	15,126	954

(1) The Amount at Risk represents the excess of the value of the guarantees over fund values on all policies where the value of the guarantees exceeds the fund value. The Amount at Risk is not currently payable as the guarantees are only payable upon death, maturity, withdrawal or annuitization if fund values remain below guaranteed values.
(2) For guaranteed lifetime withdrawal benefits, the value of guarantees is calculated as the present value of the maximum future withdrawals assuming market conditions remain unchanged from current levels. For all other benefits, the value of guarantees is determined assuming 100% of the claims are made at the valuation date.
(3) The insurance contract liabilities represent management's provision for future costs associated with these guarantees and include a provision for adverse deviation in accordance with Canadian actuarial standards of practice.
(4) Corporate includes Run-off reinsurance, a closed block of reinsurance. The Run-off reinsurance business includes risks assumed through reinsurance of variable annuity products issued by various North American insurance companies between 1997 and 2001.

The movement of the items in the table above from December 31, 2018 to December 31, 2019 primarily resulted from the following factors:

(i) the total fund values increased due to an increase in equity markets, which was partially offset by net redemptions from products closed to new business;
(ii) the total amount at risk decreased due to an increase in equity markets and net redemptions from products closed to new business;
(iii) the total value of guarantees decreased due to net redemptions from products closed to new business and the weakening of the U.S. dollar against the Canadian dollar; and
(iv) the total insurance contract liabilities decreased due to an increase in equity markets, which was partially offset by a decrease in interest rates.

Segregated Fund Hedging

Our hedging programs use derivative instruments to mitigate the interest and equity related exposure of our segregated fund contracts. As at December 31, 2019, over 90% of our segregated fund contracts, as measured by associated fund values, were included in a hedging program. While a large percentage of contracts are included in the hedging program, not all of our market risk exposure related to these contracts is hedged. For those segregated fund contracts included in the hedging program, we generally hedge the value of expected future net claims costs and associated margins.

The following table illustrates the impact of our hedging program related to our sensitivity to a 50 basis point decrease in interest rates and a 10% and 25% decrease in equity markets for segregated fund contracts as at December 31, 2019 and December 31, 2018.

Impact of Segregated Fund Hedging

December 31, 2019

($ millions)	**Changes in interest rates[3]**	**Changes in equity markets[4]**	
Net income sensitivity[1][2]	**50 basis point decrease**	**10% decrease**	**25% decrease**
Before hedging	**(150)**	**(150)**	**(400)**
Hedging impact	**150**	**100**	**300**
Net of hedging	**–**	**(50)**	**(100)**

December 31, 2018

($ millions)	Changes in interest rates[3]	Changes in equity markets[4]	
Net income sensitivity[1][2]	50 basis point decrease	10% decrease	25% decrease
Before hedging	(150)	(150)	(450)
Hedging impact	150	100	350
Net of hedging	–	(50)	(100)

(1) Net income sensitivities have been rounded to the nearest $50 million.

(2) Since the fair value of benefits being hedged will generally differ from the financial statement value (due to different valuation methods and the inclusion of valuation margins in respect of financial statement values), this will result in residual volatility to interest rate and equity market shocks in net income and capital. The general availability and cost of these hedging instruments may be adversely impacted by a number of factors, including volatile and declining equity and interest rate market conditions.

(3) Represents a parallel shift in assumed interest rates across the entire yield curve as at December 31, 2019 and December 31, 2018, with no change to the ASB promulgated URR. Variations in realized yields based on factors such as different terms to maturity and geographies may result in realized sensitivities being significantly different from those illustrated above. Sensitivities include the impact of re-balancing interest rate hedges for dynamic hedging programs at 10 basis point intervals (for 50 basis point changes in interest rates).

(4) Represents the change across all equity markets as at December 31, 2019 and December 31, 2018. Assumes that actual equity exposures consistently and precisely track the broader equity markets. Since in actual practice equity-related exposures generally differ from broad market indices (due to the impact of active management, basis risk, and other factors), realized sensitivities may differ significantly from those illustrated above. Sensitivities include the impact of re-balancing equity hedges for dynamic hedging programs at 2% intervals (for 10% changes in equity markets) and at 5% intervals (for 25% changes in equity markets).

Our hedging strategy is applied both at the line of business or product level and at the Company level using a combination of longer-dated put options and dynamic hedging techniques (i.e., frequent re-balancing of short-dated interest rate and equity derivative contracts). We actively monitor our overall market exposure and may implement tactical hedge overlay strategies in order to align expected earnings sensitivities with risk management objectives.

Real Estate Risk

Real estate risk is the potential for financial loss arising from fluctuations in the value of, or future cash flows from, our investments in real estate. We are exposed to real estate risk and may experience financial losses resulting from the direct ownership of real estate investments or indirectly through fixed income investments secured by real estate property, leasehold interests, ground rents, and purchase and leaseback transactions. Real estate price risk may arise from external market conditions, inadequate property analysis, inadequate insurance coverage, inappropriate real estate appraisals, or from environmental risk exposures. We hold direct real estate investments that support general account liabilities and surplus, and fluctuations in value will impact our profitability and financial position. A material and sustained increase in interest rates may lead to deterioration in real estate values. An instantaneous 10% decrease in the value of our direct real estate investments as at December 31, 2019 would decrease net income[1] by approximately $275 million ($275 million decrease as at December 31, 2018). Conversely, an instantaneous 10% increase in the value of our direct real estate investments as at December 31, 2019 would increase net income by approximately $275 million ($275 million increase as at December 31, 2018).

Foreign Currency Risk

Foreign currency risk is the result of mismatches in the currency of our assets and liabilities (inclusive of capital), and cash flows. This risk may arise from a variety of sources such as foreign currency transactions and services, foreign currency hedging, investments denominated in foreign currencies, investments in foreign subsidiaries and net income from foreign operations. Changes or volatility in foreign exchange rates, including a change to currencies that are fixed in value to another currency, could adversely affect our financial condition and results of operations.

As an international provider of financial services, we operate in a number of countries, with revenues and expenses denominated in several local currencies. In each country in which we operate, we generally maintain the currency profile of assets to match the currency of aggregate liabilities and required surplus. This approach provides an operational hedge against disruptions in local operations caused by currency fluctuations. Foreign currency derivative contracts such as currency swaps and forwards are used as a risk management tool to manage the currency exposure in accordance with our Asset Liability Management Policy. As at December 31, 2019 and December 31, 2018, the Company did not have a material foreign currency risk exposure on a functional currency basis.

(1) Net income sensitivities have been rounded to the nearest $25 million.

Changes in exchange rates can affect our net income and surplus when financial results in functional currencies are translated into Canadian dollars. Net income earned outside of Canada is generally not currency hedged and a weakening in the local currency of our foreign operations relative to the Canadian dollar can have a negative impact on our net income reported in Canadian currency. A strengthening in the local currency of our foreign operations relative to the Canadian dollar would have the opposite effect. Regulatory capital ratios could also be impacted by changes in exchange rates.

Additional Cautionary Language and Key Assumptions Related to Sensitivities

Our market risk sensitivities are measures of our estimated change in net income and OCI for changes in interest rates and equity market price levels described above, based on interest rates, equity market prices and business mix in place as at the respective calculation dates. These sensitivities are calculated independently for each risk factor, generally assuming that all other risk variables stay constant. The sensitivities do not take into account indirect effects such as potential impacts on goodwill impairment or valuation allowances on deferred tax assets. The sensitivities are provided for the consolidated entity and may not be proportional across all reporting segments. Actual results can differ materially from these estimates for a variety of reasons, including differences in the pattern or distribution of the market shocks, the interaction between these risk factors, model error, or changes in other assumptions such as business mix, effective tax rates, policyholder behaviour, currency exchange rates and other market variables relative to those underlying the calculation of these sensitivities. The extent to which actual results may differ from the indicative ranges will generally increase with larger capital market movements. Our sensitivities as at December 31, 2018 have been included for comparative purposes only.

We have also provided measures of our net income sensitivity to instantaneous changes in credit spreads, swap spreads, real estate price levels, and capital sensitivities to changes in interest rates and equity price levels. The real estate sensitivities are non-IFRS financial measures. For additional information, see section L - Non-IFRS Financial Measures in this document. The cautionary language which appears in this section is also applicable to the credit spread, swap spread, real estate, and LICAT ratio sensitivities. In particular, these sensitivities are based on interest rates, credit and swap spreads, equity market, and real estate price levels as at the respective calculation dates and assume that all other risk variables remain constant. Changes in interest rates, credit and swap spreads, equity market, and real estate prices in excess of the ranges illustrated may result in other-than-proportionate impacts.

As these market risk sensitivities reflect an instantaneous impact on net income, OCI and Sun Life Assurance's LICAT ratio, they do not include impacts over time such as the effect on fee income in our asset management businesses.

The sensitivities reflect the composition of our assets and liabilities as at December 31, 2019 and December 31, 2018, respectively. Changes in these positions due to new sales or maturities, asset purchases/sales, or other management actions could result in material changes to these reported sensitivities. In particular, these sensitivities reflect the expected impact of hedging activities based on the hedge programs in place as at the December 31 calculation dates. The actual impact of hedging activity can differ materially from that assumed in the determination of these indicative sensitivities due to ongoing hedge re-balancing activities, changes in the scale or scope of hedging activities, changes in the cost or general availability of hedging instruments, basis risk (i.e., the risk that hedges do not exactly replicate the underlying portfolio experience), model risk, and other operational risks in the ongoing management of the hedge programs or the potential failure of hedge counterparties to perform in accordance with expectations.

The sensitivities are based on methods and assumptions in effect as at December 31, 2019 and December 31, 2018, as applicable. Changes in the regulatory environment, accounting or actuarial valuation methods, models, or assumptions (including changes to the ASB promulgated URR) after those dates could result in material changes to these reported sensitivities. Changes in interest rates and equity market prices in excess of the ranges illustrated may result in other than proportionate impacts.

Our hedging programs may themselves expose us to other risks, including basis risk (i.e., the risk that hedges do not exactly replicate the underlying portfolio experience), volatility risk, derivative counterparty credit risk, and increased levels of liquidity risk, model risk and other operational risks. These factors may adversely impact the net effectiveness, costs, and financial viability of maintaining these hedging programs and therefore adversely impact our profitability and financial position. While our hedging programs are intended to mitigate these effects (e.g., hedge counterparty credit risk is managed by maintaining broad diversification, dealing primarily with highly-rated counterparties, and transacting through OTC contracts cleared through central clearing houses, exchange-traded contracts or bilateral OTC contracts negotiated directly between counterparties that include credit support annexes), residual risk, potential reported earnings and capital volatility remain.

For the reasons outlined above, our sensitivities should only be viewed as directional estimates of the underlying sensitivities of each factor under these specialized assumptions, and should not be viewed as predictors of our future net income, OCI, and capital. Given the nature of these calculations, we cannot provide assurance that actual impact will be consistent with the estimates provided.

Information related to market risk sensitivities and guarantees related to segregated fund products should be read in conjunction with the information contained in the sections in this MD&A under the section M - Accounting and Control Matters - 1 - Critical Accounting Policies and Estimates. Additional information on market risk can be found in Note 6 of our 2019 Annual Consolidated Financial Statements and the Risk Factors section in the AIF.

ii. Insurance Risk

Risk Description

Insurance risk is the uncertainty of product performance due to actual experience emerging differently than expected in the areas of policyholder behaviour, mortality, morbidity and longevity. In addition, product design and pricing, expense and reinsurance risks impact multiple risk categories, including insurance risk.

Insurance Risk Management Governance and Control

We employ a wide range of insurance risk management practices and controls, as outlined below:

- Insurance risk governance practices are in place, including independent monitoring and review and reporting to senior management and the Risk & Conduct Review Committee.
- Risk appetite limits have been established for policyholder behaviour, mortality and morbidity, and longevity risks.

- Income and regulatory capital sensitivities are monitored, managed and reported against pre-established risk limits.
- Comprehensive Insurance Risk Policy, guidelines and practices are in place.
- The global underwriting manual aligns underwriting practices with our corporate risk management standards and ensures a consistent approach in insurance underwriting.
- Board-approved maximum retention limits are in place. Amounts issued in excess of these limits are reinsured.
- Detailed procedures, including criteria for approval of risks and for claims adjudication are established and monitored for each business segment.
- Underwriting and risk selection standards are established and overseen by the corporate underwriting and claims risk management function.
- Diversification and risk pooling is managed by aggregation of exposures across product lines, geography and distribution channels.
- The Insurance Risk Policy and Investment & Credit Risk Policy establish acceptance criteria and protocols to monitor the level of reinsurance ceded to any single reinsurer or group of reinsurers.
- Reinsurance counterparty risk is monitored, including annual reporting of reinsurance exposure to the Risk & Conduct Review Committee.
- Concentration risk exposure is monitored on group policies in a single location to avoid a catastrophic event occurrence resulting in a significant impact.
- Various limits, restrictions and fee structures are introduced into plan designs in order to establish a more homogeneous policy risk profile and limit potential for anti-selection.
- Regulatory solvency requirements include risk-based capital requirements and are monitored regularly.
- The Product Design and Pricing Policy requires detailed risk assessment and pricing provision for material risks.
- Company specific and industry level experience studies and sources of earnings analysis are monitored and factored into valuation, renewal and new business pricing processes.
- Stress-testing techniques, such as DCAT, are used to measure the effects of large and sustained adverse movements in insurance risk factors. In 2020, the Canadian Institute of Actuaries will replace DCAT with FCT. FCT, similar to DCAT, will continue to act as a key stress-testing technique for the organization. FCT's testing is broader than DCAT and allows for harmonization with the Company's ORSA.
- Insurance contract liabilities are established in accordance with Canadian actuarial standards of practice.
- Internal capital targets are established at an enterprise level to cover all risks and are above minimum regulatory and supervisory levels. Actual capital levels are monitored to ensure they exceed internal targets.

We use reinsurance to limit losses, minimize exposure to significant risks and to provide additional capacity for growth. Our Insurance Risk Policy sets maximum global retention limits and related management standards and practices that are applied to reduce our exposure to large claims. Amounts in excess of the Board-approved maximum retention limits are reinsured. Effective January 1, 2019, we updated our single life or joint-first-to-die basis retention limit to $40 ($25 in 2018) in Canada and US$40 (US$25 in 2018) outside of Canada. For survivorship life insurance, our maximum global retention limit is $50 ($30 in 2018) in Canada and US$50 (US$30 in 2018) outside of Canada. In certain markets and jurisdictions, retention levels below the maximum are applied. Reinsurance is utilized for numerous products in most business segments, and placement is done on an automatic basis for defined insurance portfolios and on a facultative basis for individual risks with certain characteristics.

Our reinsurance coverage is well diversified and controls are in place to manage exposure to reinsurance counterparties. Reinsurance exposures are monitored to ensure that no single reinsurer represents an undue level of credit risk. This includes performing periodic due diligence on our reinsurance counterparties as well as internal credit assessments on counterparties with which we have material exposure. While reinsurance arrangements provide for the recovery of claims arising from the liabilities ceded, we retain primary responsibility to the policyholders.

Specific insurance risks and our risk management strategies are discussed below in further detail.

Policyholder Behaviour Risk

We can incur losses due to adverse policyholder behaviour relative to the assumptions used in the pricing and valuation of products with regard to lapse of policies or exercise of other embedded policy options.

Uncertainty in policyholder behaviour can arise from several sources including unexpected events in the policyholder's life circumstances, the general level of economic activity (whether higher or lower than expected), changes in the financial and capital markets, changes in pricing and availability of current products, the introduction of new products, changes in underwriting technology and standards, as well as changes in our financial strength or reputation. Uncertainty in future cash flows affected by policyholder behaviour can be further exacerbated by irrational behaviour during times of economic turbulence or at key option exercise points in the life of an insurance contract.

Various types of provisions are built into many of our products to reduce the impact of uncertain policyholder behaviour. These provisions include:

- Surrender charges that adjust the payout to the policyholder by taking into account prevailing market conditions.
- Limits on the amount that policyholders can surrender or borrow.
- Restrictions on the timing of policyholders' ability to exercise certain options.
- Restrictions on both the types of funds Clients can select and the frequency with which they can change funds.
- Policyholder behaviour risk is also mitigated through reinsurance on some insurance contracts.

Internal experience studies are used to monitor, review and update policyholder behaviour assumptions as needed which could result in updates to policy liabilities.

Mortality and Morbidity Risk

Mortality and morbidity risk is the risk that future experience could be worse than the assumptions used in the pricing and valuation of products. Mortality and morbidity risk can arise in the normal course of business through random fluctuation in realized experience, through catastrophes, or in association with other risk factors such as product development and pricing or model risk. Adverse mortality and morbidity experience could also occur through systemic anti-selection, which could arise due to poor plan design, or underwriting process failure or the development of investor-owned and secondary markets for life insurance policies.

The risk of adverse morbidity experience also increases during economic slowdowns, especially with respect to disability coverage, as well as with increases in high medical treatment costs and growth in utilization of specialty drugs. This introduces the potential for adverse financial volatility in our financial results. External factors could adversely affect our life insurance, health insurance, critical illness, disability, long-term care insurance and annuity businesses. Adverse trends in morbidity experience, such as higher disability incidence, increases in high medical treatment costs and growth in utilization of specialty drugs, introduce the potential for adverse volatility in our financial results.

Detailed uniform underwriting procedures have been established to determine the insurability of applicants and to manage exposure to large claims. These underwriting requirements are regularly scrutinized against industry guidelines and oversight is provided through a corporate underwriting and claim management function.

Mortality and morbidity concentration risk is the risk of a catastrophic event, such as natural environmental disasters (for example, earthquakes), human-made disasters (for example, acts of terrorism, military actions, and inadvertent introduction of toxic elements into the environment) as well as pandemics that could occur in geographic locations where there is significant insurance coverage. We do not have a high degree of concentration risk to single individuals or groups due to our well-diversified geographic and business mix. The largest portion of mortality risk within the Company is in North America. Individual and group insurance policies are underwritten prior to initial issue and renewals, based on risk selection, plan design, and rating techniques.

The Insurance Risk Policy approved by the Risk & Conduct Review Committee includes limits on the maximum amount of insurance that may be issued under one policy and the maximum amount that may be retained. These limits vary by geographic region and amounts in excess of limits are reinsured to ensure there is no exposure to unreasonable concentration of risk.

Longevity Risk
Longevity risk is the potential for economic loss, accounting loss or volatility in earnings arising from adverse changes in rates of mortality improvement relative to the assumptions used in the pricing and valuation of products. This risk can manifest itself slowly over time as socioeconomic conditions improve and medical advances continue. It could also manifest itself more quickly, for example, due to medical breakthroughs that significantly extend life expectancy. Longevity risk affects contracts where benefits or costs are based upon the likelihood of survival (for example, annuities, pensions, pure endowments, reinsurance, segregated funds, and specific types of health contracts). Additionally, our longevity risk exposure is increased for certain annuity products such as guaranteed annuity options by an increase in equity market levels.

To improve management of longevity risk, we monitor research in the fields that could result in a change in expected mortality improvement. Stress-testing techniques are used to measure and monitor the impact of extreme mortality improvement on the aggregate portfolio of insurance and annuity products as well as our own pension plans.

Product Design and Pricing Risk
Product design and pricing risk is the risk a product does not perform as expected, causing adverse financial consequences. This risk may arise from deviations in realized experience versus assumptions used in the pricing of products. Risk factors include uncertainty concerning future investment yields, policyholder behaviour, mortality and morbidity experience, sales levels, mix of business, expenses and taxes. Although some of our products permit us to increase premiums or adjust other charges and credits during the life of the policy or contract, the terms of these policies or contracts may not allow for sufficient adjustments to maintain expected profitability. This could have an adverse effect on our profitability and capital position.

Our Product Design and Pricing Policy, approved by the Risk & Conduct Review Committee, establishes the framework governing our product design and pricing practices and is designed to align our product offerings with our strategic objectives and risk-taking philosophy. Consistent with this policy, product development, design and pricing processes have been implemented throughout the Company. New products follow a stage-gate process with defined management approvals based on the significance of the initiative, and each initiative is subject to a risk assessment process to identify key risks and risk mitigation requirements, and is reviewed by multiple stakeholders. Additional governance and control procedures are listed below:

- Pricing models, methods, and assumptions are subject to periodic internal peer reviews.
- Experience studies, sources of earnings analysis, and product dashboards are used to monitor actual experience against those assumed in pricing and valuation.
- On experience rated, participating, and adjustable products, emerging experience is reflected through changes in policyholder dividend scales as well as other policy adjustment mechanisms such as premium and benefit levels.
- Limits and restrictions may be introduced into the design of products to mitigate adverse policyholder behaviour or apply upper thresholds on certain benefits.

Expense Risk
Expense risk is the risk that future expenses are higher than the assumptions used in the pricing and valuation of products. This risk can arise from general economic conditions, unexpected increases in inflation, slower than anticipated growth, or reduction in productivity leading to increases in unit expenses. Expense risk occurs in products where we cannot or will not pass increased costs onto the Client and will manifest itself in the form of a liability increase or a reduction in expected future profits.

We closely monitor expenses through an annual budgeting process and ongoing monitoring of any expense gaps between unit expenses assumed in pricing and actual expenses.

Reinsurance Risk
We purchase reinsurance for certain risks underwritten by our various insurance businesses. Reinsurance risk is the risk of financial loss due to adverse developments in reinsurance markets (for example, discontinuance or diminution of reinsurance capacity, or an increase in the cost of reinsurance), insolvency of a reinsurer or inadequate reinsurance coverage.

Changes in reinsurance market conditions, including actions taken by reinsurers to increase rates on existing and new coverage and our ability to obtain appropriate reinsurance, may adversely impact the availability or cost of maintaining existing or securing new reinsurance capacity, with adverse impacts on our business strategies, profitability and financial position. There is an increased possibility of rate increases or renegotiation of legacy reinsurance contracts by our reinsurers, as the global reinsurance industry continues to review and optimize their business models. In addition, changes to the regulatory treatment of reinsurance arrangements could have an adverse impact on our capital position.

We have an Insurance Risk Policy and an Investment & Credit Risk Policy approved by the Risk & Conduct Review Committee, which set acceptance criteria and processes to monitor the level of reinsurance ceded to any single reinsurer. These policies also set minimum criteria for determining which reinsurance companies qualify as suitable reinsurance counterparties having the capability, expertise, governance practices and financial capacity to assume the risks being considered. Additionally, these policies require that all agreements include provisions to allow action to be taken, such as recapture of ceded risk (at a potential cost to the Company), in the event that the reinsurer loses its legal ability to carry on business through insolvency or regulatory action. Periodic due diligence is performed on the reinsurance counterparties with which we do business and internal credit assessments are performed on reinsurance counterparties with which we have material exposure. Reinsurance counterparty credit exposures are monitored closely and reported annually to the Risk & Conduct Review Committee.

New sales of our products can be discontinued or changed to reflect developments in the reinsurance markets. Rates for our in-force reinsurance treaties can be either guaranteed or adjustable for the life of the ceded policy. In order to diversify reinsurance risk, there is generally more than one reinsurer supporting a reinsurance pool.

Additional information on insurance risk can be found in Note 7 to our 2019 Annual Consolidated Financial Statements and in the Risk Factors section in the AIF.

iii. Credit Risk

Risk Description

Credit risk is the possibility of loss from amounts owed by our borrowers or financial counterparties. We are subject to credit risk in connection with issuers of securities held in our investment portfolio, debtors, structured securities, reinsurers, counterparties (including derivative, repurchase agreement and securities lending counterparties), other financial institutions and other entities. Losses may occur when a counterparty fails to make timely payments pursuant to the terms of the underlying contractual arrangement or when the counterparty's credit rating or risk profile otherwise deteriorates. Credit risk can also arise in connection with deterioration in the value of, or ability to realize, any underlying security that may be used as collateral for the debt obligation. Credit risk can occur as a result of broad economic conditions, challenges within specific sectors of the economy, or from issues affecting individual companies. Events that result in defaults, impairments or downgrades of the securities in our investment portfolio would cause the Company to record realized or unrealized losses and may cause an increase in our provisions for asset default, adversely impacting earnings.

Credit Risk Management Governance and Control

We employ a wide range of credit risk management practices and controls, as outlined below:

- Credit risk governance practices are in place, including independent monitoring and review and reporting to senior management and the Risk & Conduct Review Committee.
- Risk appetite limits have been established for credit risk.
- Income and regulatory capital sensitivities are monitored, managed and reported against pre-established risk limits.
- Comprehensive Investment and Credit Risk Management Policy, guidelines and practices are in place.
- Specific investment diversification requirements are in place, such as defined investment limits for asset class, geography, and industry.
- Risk-based credit portfolio, counterparty, and sector exposure limits have been established.
- Mandatory use of credit quality ratings for portfolio investments has been established and is reviewed regularly. These internal rating decisions for new fixed income investments and ongoing review of existing rating decisions are independently adjudicated by Corporate Risk Management.
- Comprehensive due diligence processes and ongoing credit analyses are conducted.
- Regulatory solvency requirements include risk-based capital requirements and are monitored regularly.
- Comprehensive compliance monitoring practices and procedures including reporting against pre-established investment limits are in place.
- Reinsurance exposures are monitored to ensure that no single reinsurer represents an undue level of credit risk.
- Stress-testing techniques, such as DCAT, are used to measure the effects of large and sustained adverse credit developments. In 2020, the Canadian Institute of Actuaries will replace DCAT with FCT. FCT, similar to DCAT, will continue to act as a key stress-testing technique for the organization. FCT's testing is broader than DCAT and allows for harmonization with the Company's ORSA.
- Insurance contract liabilities are established in accordance with Canadian actuarial standards of practice.
- Internal capital targets are established at an enterprise level to cover all risks and are above minimum regulatory and supervisory levels. Actual capital levels are monitored to ensure they exceed internal targets.

Our core principles of credit risk management include asset diversification, fundamental research and analysis of cash flows, proactive and continuous risk monitoring, active management and relative value assessment, all with the objective of optimizing risk-adjusted returns, with due consideration for the impacts of capital and taxation.

We rate fixed income investments primarily through the use of internally developed scorecards which combine an estimated probability of default and loss given default to determine an expected loss and credit risk rating. This rating is expressed using a 22-point scale that is generally consistent with those used by external rating agencies, and is based on detailed examination of the borrower's, or issuer's, credit quality and the characteristics of the specific instrument. The probability of default assessment is based on borrower-level or issuer-level analysis, which encompasses an assessment of industry risk, business strategy, competitiveness, strength of management and other financial information. The loss given default assessment is based on instrument-level analysis, which considers the impact of guarantees, covenants, liquidity and other structural features. These scorecards provide input to stochastic value-at-risk models and are used to stress test the portfolio, which provide insight into the distribution and characteristics of credit risk within our portfolios. In accordance with our policies and under normal circumstances, our ratings cannot be higher than the highest rating provided by certain Nationally Recognized Statistical Rating Organizations ("NRSROs"). Certain assets, including those in our sovereign debt and asset-backed securities portfolios, are assigned a rating based on ratings provided by NRSROs using a priority sequence order of Standard & Poor's, Moody's, Fitch and DBRS Limited.

Additional information on credit risk can be found in Note 6 to our 2019 Annual Consolidated Financial Statements and in the Risk Factors section in the AIF.

iv. Business and Strategic Risk

Risk Description

Business and strategic risk includes risks related to changes in the economic or political environment, distribution channels or Client behaviour, environmental risks, competitive, legal or regulatory environment and risks relating to the design or implementation of our business strategy.

Business and Strategic Risk Management Governance and Control

We employ a wide range of business and strategic risk management practices and controls, as outlined below:

- Business and strategic risk governance practices are in place, including independent monitoring and review and reporting to senior management, the Board and the Board Committees.
- Business and strategic risk is managed through our strategic and business planning process and controls over the implementation of these plans. These plans are reviewed and discussed at the executive level and the key themes, issues and risks emerging are discussed by the Board and the Board Committees.
- Our business and strategic plans are subject to approval by the Board, which also receives regular reviews of implementation progress against key business plan objectives.
- Comprehensive policies including the Risk Framework, Risk Appetite Policy, Product Design and Pricing Policy, and Capital Risk Policy are in place.
- Our corporate strategy and business objectives are established within the boundaries of the Risk Appetite Policy. Our business strategies and plans are designed to align with our risk appetite, our capital position and our financial performance objectives.
- Our risk appetite is periodically assessed, taking into consideration the economic and regulatory environments in which we operate.
- Merger, acquisition, strategic investments and divestiture transactions are governed by a Board-approved merger and acquisition risk management policy and significant transactions require the approval of the Board.
- Stress-testing techniques, such as DCAT, are used to measure the effects of large and sustained adverse scenarios. In 2020, the Canadian Institute of Actuaries will replace DCAT with FCT. FCT, similar to DCAT, will continue to act as a key stress-testing technique for the organization. FCT's testing is broader than DCAT and allows for harmonization with the Company's ORSA.
- Key and emerging risks are identified, monitored and reported, including emerging regulatory changes that may have a material impact on our finances, operations or reputation.
- Internal capital targets are established at an enterprise level to cover all risks and are above minimum regulatory and supervisory levels. Actual capital levels are monitored to ensure they exceed internal targets.

We regularly review and adapt our business strategies and plans to take account of changes in the external business, economic, political and regulatory environments in which we operate. Our business strategies and plans are designed to align with our risk appetite, our capital position and our financial performance objectives. We periodically reassess our risk appetite taking into consideration the economic, regulatory and competitive environment in which we operate.

Specific business and strategic risks are discussed below in further detail.

Economic and Political Risk

We operate in various geographies and our business and financial operations are susceptible to regional and global economic, political and regulatory changes. We may be affected by economic and capital markets conditions and economic shocks around the globe as a result of increasingly connected global markets. Factors such as changes in interest rates, foreign exchange rates, market volatility, housing prices, consumer spending, saving and debt, business investment and inflation around the globe can affect the business and economic environments in which we operate. Continued economic and political uncertainty may give rise to increased business and strategic risks including those associated with industry restructuring, mergers and acquisitions, changing competitive dynamics and changes in the legal, regulatory and tax regimes in which our businesses operate. In addition, adverse economic conditions often arise in conjunction with volatile and deteriorating capital markets conditions, which can have an adverse impact on Client behaviour and in turn on our sales and profitability, credit and financial strength ratings, and capital and liquidity positions.

Implementation of Business Strategy

Our business strategies and plans are dependent on the successful execution of organizational and strategic initiatives designed to support the growth of our business. Our ability to manage the execution of these initiatives effectively and prioritize initiatives directly affects our ability to execute our strategies. Identifying and implementing the right set of initiatives is critical to achieving our business plan targets. Failure to implement these initiatives could also lead to cost structure challenges.

Distribution Risk

Failure to achieve planned distribution scale or appropriate and compliant distribution of products could materially impact our financial and strategic objectives. This includes the inability to attract and retain intermediaries and agents at a cost that is financially feasible to the Company, or to develop digital sales and Client support capabilities and technologies. Distribution risk may also be influenced where our distribution or product strategy and related services (including digital sales and Client support capabilities and technologies) are not developed, modified or executed in line with our strategic objectives or in consideration of the changes in Client behaviour or our regulatory environment. In addition, the lack of a well-diversified distribution model in the jurisdictions in which we do business may cause over-reliance on agency channel or key partners.

Competition Risk

Competition from insurance companies, banks, asset managers, mutual fund companies, financial planners and other service providers (including new entrants and non-traditional financial services companies) is intense, and could adversely affect our business in certain countries.

The businesses in which we engage are highly competitive and our ability to sell our products is dependent on many factors, including scale, price and yields offered, distribution channels, digital capabilities, financial strength ratings, range of product lines and product quality, brand strength, investment performance, historical dividend levels and the ability to provide value added services to distributors and Clients. In certain markets, some of our competitors may be superior to us on one or more of these factors. Our competitors have significant potential to disrupt our business through targeted strategies to reduce our market share which may include targeting our key people or bancassurance partners and other distributors or aggressively pricing their products. Our ability to achieve our business plans and strategies depends significantly upon our capacity to anticipate and respond quickly to these competitive pressures.

Technology is driving rapid change in the financial services sector and is enabling new entrants to compete or offer services to our competitors to enhance their ability to compete in certain segments of the insurance, wealth and asset management markets. The emergence of new technologies such as robotic process automation, artificial intelligence, blockchain and advanced analytics may have an impact on the financial services sector and how companies interact with their stakeholders. Our current competitors or new entrants may use these or other new technologies to provide services in various areas such as customized pricing, proactive outreach to Clients and targeted marketing in order to strengthen their Client relationships and influence Client behaviour. The impact of disruption from changing technology and innovation by traditional and non-traditional competitors who may offer a better user experience, functionality or lower priced products and may have lower distribution costs will require us to adapt at a more rapid pace and may create margin pressures. The risk of disruption may also impact our distribution models as new and low cost digital-based business models emerge in connection with the distribution of financial services and products, such as insurtechs and robo-advisors. These risks are evolving rapidly with an increasing number of digital users and are difficult to anticipate and respond to proactively, and may adversely impact our profitability and financial position.

Investment Performance

Investment performance risk is the possibility that we fail to achieve the desired return objectives on our investment portfolio, or that our asset management businesses fail to design or execute investment strategies in order to achieve competitive returns on the products and managed accounts offered by these businesses. Failure to achieve investment objectives may adversely affect our revenue and profitability through slower growth prospects and adverse impacts on policyholder or Client behaviour.

Changes in Legal and Regulatory Environment

Most of our businesses are subject to extensive regulation and supervision. Changes to legislation, regulations or government policies, or the manner in which they are interpreted or enforced, may require that we make significant changes to our strategy, may result in increased implementation costs and diversion of resources to manage the change, could impact financial reporting, accounting processes and capital requirements, and could impact the ability of sales intermediaries to distribute our products, all of which could have an adverse effect on our business and operations. Our failure to comply with existing and evolving regulatory requirements could also result in regulatory sanctions and could affect our relationships with regulatory authorities and our ability to execute our business strategies and plans.

These changes could impact our capital requirements, the regulatory framework for our products and services, the regulation of selling practices, sales intermediaries (such as bancassurance) and product offerings (such as coverage for prescription drugs), solvency requirements, executive compensation, corporate governance practices and could impose restrictions on our foreign operations, which may include changes to the limits on foreign ownership of local companies.

Environmental Risk

Our financial performance may be adversely affected if we do not adequately prepare for the direct or indirect negative impacts of environmental events and developments, including those related to impacts of climate change and the transition to a lower-carbon economy. These events and developments may include increased frequency and severity of natural or human-made environmental disasters, longer-term shifts in climate patterns, emerging regulatory and public policy developments, and their impacts on our operations, invested assets, suppliers, Clients and reputation. External factors such as stakeholder expectations around environmental performance, resource constraints and costs associated with adaptation are also potential sources of environmental risk. Risks that affect our Clients and our suppliers could have a negative impact on our operations and performance. These risks are considered in our key risk assessments.

A transition to a lower carbon economy could affect public and private fixed income asset values. Existing portfolio investments in coal, oil sands producers, related fossil fuel industries, railways and pipelines, as well as geographic markets which are dependent on these industries, may pose financial risk as a result of changes in consumer preferences and competition from renewable energy companies leading to stranded assets and lower overall profitability. We incorporate a number of different analyses into our assessment of climate risks through both stand-alone analysis of physical risks by geographic region and through the assessment of carbon transition risks, depending on the industry.

An environmental issue on a property owned, leased or managed by us or on any property with which we are affiliated could have financial or reputational impacts.

We maintain an environmental risk management program to help monitor and manage investment assets (primarily real estate, mortgage and certain private fixed income assets) from losses due to environmental issues and to help ensure compliance with applicable laws. We maintain insurance policies to cover certain environmental risks on owned assets.

Existing and potential environmental risks are incorporated into initial and ongoing reviews and assessments of public fixed income, private fixed income, real estate and commercial mortgage investments and this process is overseen by our Sustainable Investment Council. Our International Sustainability Council convenes on broader environmental and sustainability issues. We report on environmental management annually in our Sustainability Report reviewed by the Governance, Nomination & Investment Committee

We are a supporter of the Task Force on Climate-related Financial Disclosures, and engage in and monitor environmental and climate change developments through membership and participation in the United Nations Environment Programme - Finance Initiative; United Nations-supported Principles for Responsible Investment; and CDP (formerly the Carbon Disclosure Project), as both a signatory and responding company to the annual CDP climate change information request.

Additional information on business and strategic risk can be found in the Risk Factors section in our AIF.

v. Operational Risk

Risk Description

Operational risk is the risk of loss (financial and non-financial) resulting from inadequate or failed internal processes, people and systems or from external events. Operational risk is present in all of our business activities and encompasses a broad range of risks as described below. Operational risk is embedded in the practices utilized to manage other risks and, therefore, if not managed effectively, operational risk can impact our ability to manage other key risks.

Operational Risk Management Governance and Control

We employ a wide range of operational risk management practices and controls, as outlined below:

- Operational risk governance practices are in place, including independent monitoring and review and reporting to senior management and the Board Committees.
- Risk appetite limits have been established in Operational Risk.
- Comprehensive Operational Risk Management Framework, Policies, guidelines and practices are in place.
- Our governance practices, corporate values, Code of Conduct and Company-wide approach to managing risk set the foundation for mitigating operational risks.
- Our Code of Conduct sets the tone for a strong ethical culture, and we regularly review and update the Code of Conduct to ensure that it continues to meet the expectations of regulators and other stakeholders. All our directors and employees must reconfirm annually their understanding of and commitment to comply with the Code of Conduct.
- We have established appropriate internal controls and systems for talent acquisition, rewards and development programs that attract, build and retain top talent and create strong succession plans as well as compensation programs, and we provide ongoing training to our people.
- We conduct regular monitoring of employee engagement to ensure we create and maintain a work environment where all employees are welcome and able to contribute effectively.
- Stress-testing techniques, such as DCAT, are used to measure the effects of large and sustained adverse scenarios. In 2020, the Canadian Institute of Actuaries will replace DCAT with FCT. FCT, similar to DCAT, will continue to act as a key stress-testing technique for the organization. FCT's testing is broader than DCAT and allows for harmonization with the Company's ORSA.
- We mitigate a portion of our operational risk exposure through our corporate insurance program by purchasing insurance coverage that seeks to provide insurance against unexpected material losses resulting from events such as criminal activity, property loss or damage and liability exposures, or that satisfies legal requirements and contractual obligations.
- Internal capital targets are established at an enterprise level to cover all risks and are above minimum regulatory and supervisory levels. Actual capital levels are monitored to ensure they exceed internal targets.

Specific operational risks and our risk management strategies are discussed below in further detail and in the Risk Factor section in the AIF.

Information Security and Privacy Risks

Information and technology are used in almost all aspects of our business and operations. As part of our Client strategy, we continue to enhance the digital side of our business to support and enable new business models and processes, that are more personal, proactive and predictive.

Our business and the successful implementation of our digital strategy are dependent on various factors including maintaining a secure environment for our Clients, employees and other parties' information. This requires the effective and secure use, management and oversight of information and physical assets. We engage with various stakeholders and leverage emerging technologies, including digital, mobile applications, cloud computing, artificial intelligence and robotic process automation. These technologies are used to collect, process and maintain information relating to business transactions and financial reporting, as well as the personal information of our Clients and employees. We also obtain services from a wide range of third-party service providers and have outsourced some business and information technology functions in various jurisdictions.

We continue investing in people, processes and technology to strengthen our abilities to respond to the evolving threat landscape. Sun Life's Information Security framework is overseen by the Chief Information Security Officer, supported by senior leadership and by our Operational Risk Management Framework. Our information security framework and governance controls (policies, procedures, training) are aligned with recognized industry standards and are compliant with applicable laws and regulations.

Our well-established security controls and processes are intent on protecting our information and computer systems and the information entrusted to us by our Clients and employees. Our protection strategy leverages information security risk assessments and privacy impact assessments to evaluate potential risks. The security framework also includes technology and process safeguards and regularly promotes secure behavioural practices. As part of our layered security approach, we deliver general security awareness training sessions to all employees every year that is reinforced with regular awareness resources and activities.

Many jurisdictions in which we do business are developing and implementing cyber security reporting requirements and more stringent consumer privacy legislation. Our global privacy program monitors adherence to our global privacy commitments, local laws and local privacy policies. We have also established a network of privacy officers across the Company who monitor emerging privacy legislation and provide guidance on handling personal information and help manage, report and resolve any privacy incidents that may occur. We also conduct privacy training, provide regular monitoring and reporting and carry cyber risk insurance to help mitigate the impact of privacy incidents.

Human Resources Risk

Our ability to achieve business objectives can be adversely affected if we are unable to attract, retain or effectively deploy resources with the in-depth knowledge and necessary skills required, or are unable to design compensation programs that effectively drive employee behaviour. Failure to manage Human Resources risk can also lead to direct financial and reputational loss including losses arising from activity that is inconsistent with Human Rights or employment laws or health and safety regulations.

To mitigate this risk, we have comprehensive Human Resource policies, practices and programs in place to ensure compliance with employment legislation, minimize the risk of employee misconduct, and proactively develop employee skills, capabilities and behaviours to meet future business needs.

Regulatory Compliance, Legal and Conduct Risk

We are subject to extensive regulatory oversight by insurance and financial services regulators in the jurisdictions in which we conduct business. In recent years, there has been an increased focus by regulators globally on Client fairness, conduct, anti-money laundering, privacy and data governance. Failure to comply with applicable laws or to conduct our business consistent with changing regulatory or public expectations could adversely impact our reputation and may lead to regulatory investigations, examinations, proceedings, settlements, penalties, fines, restrictions on our business, litigation or an inability to carry out our business strategy.

Our Chief Compliance Officer oversees our comprehensive Company-wide compliance framework, which is consistent with regulatory guidance from OSFI and other regulators. This framework promotes proactive, risk-based management of compliance and regulatory risk, and includes Company-wide and business segment policies, standards and operating guidelines, programs to promote awareness of laws and regulations that impact us, ongoing monitoring of emerging legal issues and regulatory changes and training programs. There are also new employee orientation programs that include anti-money laundering and anti-terrorist financing, anti-bribery and corruption, privacy and information security risk management. To ensure effective oversight and implementation, the framework is supported by a network of compliance officers and the general counsel in each business segment. The Chief Compliance Officer reports regularly to the Board and Board Committees on the state of compliance, key compliance risks, emerging regulatory trends, escalation of key issues and key risk indicators.

Execution and Integration Risks Relating to Mergers, Acquisitions, Strategic Investments and Divestitures

We regularly explore opportunities to acquire other financial services businesses or to divest ourselves of all or part of certain businesses, in support of our growth and strategy goals. Any transaction that we enter into introduces the risks related to completing the transactions as planned including effective separation and integration of the transferred businesses, effective or efficient integration, restructuring or reorganization of the businesses after the transactions have closed, and motivating and retaining personnel to effectively execute these transactions. In addition, the integration of operations and differences in organizational culture may require the dedication of significant management resources, which may distract management's attention from our day-to-day business. These risks could have an impact on our business relationship with various stakeholders including future employees, Clients, distributors and partners. Anticipated cost synergies or other expected benefits may not materialize due to a failure to successfully integrate the acquired business with our existing operations.

To mitigate this risk, we have established procedures to oversee the execution and integration of merger and acquisition transactions. Regular updates on the execution and integration risks relating to these transactions are provided to the Board, Board Committees and senior management committees, as appropriate.

Information Technology Risk

The use of technology and computer systems is essential in supporting and maintaining business operations. We use technology to support virtually all aspects of our business and operations. The rapidly changing business environment increases the risk of our technology strategy not being agile enough to adapt to new business demands in a timely manner leading to financial losses, increased costs and the inability to meet Client needs.

To manage the risks associated with our technology infrastructure and applications, we have implemented a number of policies, directives and controls through our technology approval and risk governance model to ensure ongoing systems availability, stability and currency.

Third-Party Risk

We engage in a variety of third-party relationships, including with distributors, independent contractors, outsourcing service providers and suppliers. Our profitability or reputation could be impacted if these third parties are unable to meet their ongoing service commitments or fail to perform to expected standards.

To manage these risks, we have established Company-wide policies and guidelines which are consistent with OSFI's and other local regulatory requirements, and which set out Sun Life's requirements to identify, assess, manage, monitor and report on third-party risks. Sun Life's program includes third-party risk assessments and enhanced due diligence if a supplier will have access to any personal data and/or Sun Life confidential information or access to non-public Sun Life systems. The key elements and risks associated with the third party are documented in the form of a written agreement, and the company monitors performance of its third parties in a manner that is commensurate to the size, risk, scope and complexity of the third-party relationship.

Business Disruption Risk

Our businesses are dependent on the availability of trained employees, physical locations to conduct operations and access to technology. A significant business disruption to our operations can result if one or more of these key elements are negatively impacted. System disruptions as well as unanticipated events, including pandemics, can negatively affect staff, preventing them from getting to work or from operating business processes.

To manage this risk, we have implemented a business continuity program to facilitate the recovery of critical business operations. This program encompasses business continuity, crisis management and disaster recovery planning. Our policy, guidelines and operating procedures establish consistent processes designed to ensure that key business functions can continue and normal operations can resume effectively and efficiently should a major disruption occur. In addition, to regularly update and test business continuity plans for critical business operations, we conduct mandatory business continuity awareness training for all employees annually and have off-site backup facilities and failover capability designed to minimize downtime and accelerate recovery time in the event of a major disruption.

Model Risk

We use complex models to support many business functions including product development and pricing, capital management, valuation, financial reporting, planning, hedging, asset-liability management, risk management and advanced analytics (such as artificial intelligence, predictive modeling and decision making algorithms). Model risk is the risk of loss, either in the form of financial loss, inappropriate or poor business decisions, damage to reputation, or other adverse impact, arising from inaccurate model outputs or incorrect use or interpretation of model outputs.

To manage model risk, we have established robust, Company-wide model risk management procedures over the models' life cycle with respect to building, using, changing and retiring models. The policy and operating guidelines set out minimum, risk-based requirements to ensure that models are effectively controlled, maintained and appropriately understood by users.

Information Management Risk

As an international provider of financial services, we deal with extensive information across a number of countries. Information management risk is the inability to capture, manage, retain and appropriately dispose of business records, the inability to provide data that is fit for purpose, accurate, complete or timely to support business decisions, and the inability to manage data location and cross-border appropriately. Failure to manage these risks could have financial or reputational impacts, and may lead to regulatory proceedings, penalties and litigation.

To manage and monitor information management risk, we have an internal control framework, data governance and record management practices in place. Additional information on operational risk can be found in the Risk Factors section in the AIF.

vi. Liquidity Risk

Risk Description

Liquidity risk is the possibility that we will not be able to fund all cash outflow commitments and collateral requirements as they fall due. This includes the risk of being forced to sell assets at depressed prices resulting in realized losses on sale. This risk also includes restrictions on our ability to efficiently allocate capital among our subsidiaries due to various market and regulatory constraints on the movement of funds. Our funding obligations arise in connection with the payment of policyholder benefits, expenses, reinsurance settlements, asset purchases, investment commitments, interest on debt, and dividends on common and preferred shares. Sources of available cash flow include general fund premiums and deposits, investment related inflows (such as maturities, principal repayments, investment income and proceeds of asset sales), proceeds generated from financing activities, and dividends and interest payments from subsidiaries. We have various financing transactions and derivative contracts under which we may be required to pledge collateral or to make payments to our counterparties for the decline in market value of specified assets. The amount of collateral or payments required may increase under certain circumstances (such as changes to interest rates, credit spreads, equity markets or foreign exchange rates), which could adversely affect our liquidity.

Liquidity Risk Management Governance and Control

We generally maintain a conservative liquidity position and employ a wide range of liquidity risk management practices and controls, which are described below:

- Liquidity risk governance practices are in place, including independent monitoring and review and reporting to senior management and the Risk & Conduct Review Committee.
- Liquidity is managed in accordance with our Asset Liability Management Policy and operating guidelines.
- Liquidity contingency plans are maintained for the management of liquidity in a liquidity event.
- Stress testing is performed by comparing liquidity coverage risk metrics under a one-month stress scenario to our policy thresholds. These liquidity coverage risk metrics are measured and managed at the enterprise and legal entity levels.
- Stress testing of our collateral is performed by comparing collateral coverage ratios to our policy threshold.
- Cash Management and asset-liability management programs support our ability to maintain our financial position by ensuring that sufficient cash flow and liquid assets are available to cover potential funding requirements. We invest in various types of assets with a view of matching them to our liabilities of various durations.
- Internal capital targets are established at an enterprise level to cover all risks and are above minimum regulatory and supervisory levels. Actual capital levels are monitored to ensure they exceed internal targets.
- We actively manage and monitor our capital and asset levels, and the diversification and credit quality of our investments.
- Various credit facilities for general corporate purposes are maintained.

The following table summarizes the contractual maturities of our significant financial liabilities and contractual commitments as at December 31, 2019 and 2018:

Financial Liabilities and Contractual Obligations

December 31, 2019 ($ millions)	**Within 1 year**	**1 year to 3 years**	**3 years to 5 years**	**Over 5 years**	**Total**
Insurance and investment contract liabilities(1)	**$11,931**	**$7,983**	**$8,737**	**$282,336**	**$310,987**
Senior debentures and unsecured financing(2)	**79**	**439**	**131**	**3,179**	**3,828**
Subordinated debt(2)	**114**	**229**	**229**	**4,208**	**4,780**
Bond repurchase agreements	**1,850**	**–**	**–**	**–**	**1,850**
Accounts payable and accrued expenses	**6,114**	**–**	**–**	**–**	**6,114**
Lease liabilities(3)	**153**	**268**	**230**	**463**	**1,114**
Secured borrowings from mortgage securitization	**169**	**426**	**355**	**969**	**1,919**
Borrowed funds(2)	**77**	**57**	**20**	**234**	**388**
Total liabilities	**$20,487**	**$9,402**	**$9,702**	**$291,389**	**$330,980**
Contractual commitments:(4)					
Contractual loans, equities and mortgages	**$ 869**	**$1,039**	**$ 546**	**$ 1,129**	**$ 3,583**
Total contractual commitments	**$ 869**	**$1,039**	**$ 546**	**$ 1,129**	**$ 3,583**

December 31, 2018 ($ millions)	Within 1 year	1 year to 3 years	3 years to 5 years	Over 5 years	Total
Insurance and investment contract liabilities(1)	$11,950	$8,388	$8,653	$264,246	$293,237
Senior debentures and unsecured financing(2)	438	556	234	4,880	6,108
Subordinated debt(2)	103	207	207	3,724	4,241
Bond repurchase agreements	1,824	–	–	–	1,824
Accounts payable and accrued expenses	5,971	–	–	–	5,971
Secured borrowings from mortgage securitization	182	435	187	817	1,621
Borrowed funds(2)	55	49	45	68	217
Total liabilities	$20,523	$9,635	$9,326	$273,735	$313,219
Contractual commitments:(4)					
Contractual loans, equities and mortgages	$ 1,157	$1,044	$ 536	$ 1,063	$ 3,800
Operating leases	138	230	182	506	1,056
Total contractual commitments	$ 1,295	$1,274	$ 718	$ 1,569	$ 4,856

(1) These amounts represent the undiscounted estimated cash flows of insurance and investment contract liabilities on our Consolidated Statements of Financial Position. These cash flows include estimates related to the timing and payment of death and disability claims, policy surrenders, policy maturities, annuity payments, minimum guarantees on segregated fund products, policyholder dividends, amounts on deposit, commissions and premium taxes offset by contractual future premiums and fees on in-force contracts. These estimated cash flows are based on the best estimated assumptions used in the determination of insurance and investment contract liabilities. Due to the use of assumptions, actual cash flows will differ from these estimates.
(2) Payments due based on maturity dates and include expected interest payments. Actual redemption of certain securities may occur sooner as some include an option for the issuer to call the security at par at an earlier date.
(3) Lease liabilities are included on the Consolidated Statements of Financial Position due to the implementation of IFRS 16.
(4) Contractual commitments and operating lease commitments are not reported on our Consolidated Financial Statements. Additional information on these commitments is included in Note 23 of our 2019 Annual Consolidated Financial Statements.

Additional information on liquidity risk can be found in Note 6 to our 2019 Annual Consolidated Financial Statements and the Risk Factors section in the AIF.

vii. Other Risks

International Operations

The future success of our businesses in our international operations depends in large part on our ability to grow and compete in the markets where we operate. Challenges in these markets pose strategic and execution risk including our ability to attract and retain qualified employees and executives with local experience and critical skills, political, legal, economic, competition or other risks, risks associated with joint venture operations, developing and executing our risk management practices, and our ability to attract, retain, expand and diversify distribution channels.

Mergers, Acquisitions, Divestitures and Strategic Investments

We regularly explore opportunities to selectively acquire other financial services businesses or to divest ourselves of all or part of certain businesses, in support of our growth and strategic objectives. These transactions introduce the risk of financial loss due to a potential failure to achieve the expected financial or other strategic objectives. There is a risk that we may be unable to make an appropriate acquisition in a desired market or business line or are unable to realize the financial and strategic benefits of the transactions due to competitive factors, regulatory requirements or other factors. These risks could adversely impact our ability to achieve our financial and strategic objectives.

K. Additional Financial Disclosure

1. Items related to Statement of Operations

i. Business Group Summary Statement of Operations

	2019						2018
($ millions, after-tax)	Canada	U.S.	Asset Management	Asia	Corporate	Total	Total
Net premiums	**12,595**	**5,176**	**–**	**2,408**	**109**	**20,288**	18,642
Net investment income	**6,474**	**2,802**	**83**	**2,865**	**916**	**13,140**	2,389
Fee income	**1,320**	**86**	**4,309**	**531**	**5**	**6,251**	5,966
Revenue	**20,389**	**8,064**	**4,392**	**5,804**	**1,030**	**39,679**	26,997
Gross claims and benefits paid and Changes in insurance/ investment contract liabilities(1)	**16,953**	**7,012**	**–**	**3,926**	**497**	**28,388**	16,056
Operating expenses, commissions and other expenses(2)	**3,536**	**1,621**	**3,229**	**1,424**	**379**	**10,189**	9,451
Reinsurance expenses (recoveries)	**(1,172)**	**(755)**	**–**	**(178)**	**(26)**	**(2,131)**	(2,021)
Total benefits and expenses	**19,317**	**7,878**	**3,229**	**5,172**	**850**	**36,446**	23,486
Income tax expense (benefit)	**15**	**28**	**262**	**51**	**(70)**	**286**	597
Preferred shareholders' dividends	**–**	**–**	**–**	**–**	**95**	**95**	94
Non-controlling interests and participating policyholders' income in net income of subsidiaries	**174**	**(5)**	**4**	**61**	**–**	**234**	298
Reported net income (loss)	**883**	**163**	**897**	**520**	**155**	**2,618**	2,522

(1) Includes changes in reinsurance assets and net transfer to (from) segregated funds.
(2) Includes premium taxes and interest expense.

Canada
Canada's revenue increased by $5.3 billion or 35%, driven by higher net investment income, primarily from increases in the changes in fair value of FVTPL assets in Individual Insurance & Wealth and GRS, and higher net premiums in GB.

U.S.
U.S.'s revenue increased by $2.9 billion or 56%, driven by higher net investment income, primarily from increases in the changes in fair value of FVTPL assets, and higher net premiums in Group Benefits.

Asset Management
Asset Management's revenue increased by $0.3 billion or 6%, driven by higher fee income.

Asia
Asia's revenue increased by $3.3 billion, driven by higher net investment income, primarily from increases in the fair value changes of FVTPL assets, and higher net premiums in Hong Kong.

Corporate
Corporate's revenue increased by $0.9 billion, driven by higher investment income, primarily from increases in the changes in fair value of FVTPL assets.

ii. Revenue

Revenue includes: (i) premiums received on life and health insurance policies and fixed annuity products, net of premiums ceded to reinsurers; (ii) net investment income comprised of income earned on general fund assets, realized gains and losses on AFS assets and changes in the value of derivative instruments and assets designated as FVTPL and the impacts of foreign exchange translation on assets and liabilities; and (iii) fee income received for services provided. Premium and deposit equivalents from ASO, as well as deposits received by the Company on investment contracts such as segregated funds, mutual funds and managed funds are not included in revenue; however, the Company does receive fee income from these contracts, which is included in revenue. Fee income and ASO premium and deposit equivalents are an important part of our business and as a result, revenue does not fully represent sales and other activity taking place during the respective periods.

Net investment income can experience volatility arising from the quarterly fluctuation in the value of FVTPL assets and foreign currency changes on assets and liabilities, which may in turn affect the comparability of revenue from period to period. The change in fair value of FVTPL assets is driven largely by market-related factors such as interest rates, credit spreads and equity returns. The debt and equity securities that support insurance contract liabilities are generally designated as FVTPL and changes in fair values of these assets are recorded in net investment income in our Consolidated Statements of Operations. Changes in the fair values of the FVTPL assets supporting insurance contract liabilities are largely offset by a corresponding change in the liabilities.

Revenue ($ millions)	**2019**	2018	2017
Premiums			
Gross			
Life insurance	**9,470**	8,677	8,831
Health insurance	**9,908**	9,121	8,519
Annuities	**3,302**	3,183	2,488
	22,680	20,981	19,838
Ceded			
Life insurance	**(1,570)**	(1,521)	(1,659)
Health insurance	**(511)**	(489)	(2,554)
Annuities	**(311)**	(329)	(344)
	(2,392)	(2,339)	(4,557)
Net premiums	**20,288**	18,642	15,281
Net investment income (loss)			
Interest and other investment income	**5,855**	5,641	5,413
Fair value(1) and foreign currency changes on assets and liabilities	**7,118**	(3,373)	2,603
Net gains (losses) on AFS assets	**167**	121	195
Net investment income (loss)	**13,140**	2,389	8,211
Fee income	**6,251**	5,966	5,842
Total revenue	**39,679**	26,997	29,334
Adjusted revenue(2)	**32,792**	30,972	29,791

(1) Represents the change in FVTPL assets and liabilities.
(2) Adjusted revenue is a non-IFRS financial measure that excludes from revenue the impacts of Constant Currency Adjustment, FV Adjustment and Reinsurance in Canada's Group Operations Adjustment as described in section L - Non-IFRS Financial Measures in this document.

Revenue increased by $12.7 billion or 47% in 2019 compared to 2018, primarily driven by increases in the fair value of FVTPL assets, predominantly due to the impact of interest rates as well as equity market movements, and increased net premium revenue in Canada, Asia and the U.S. The impacts of foreign exchange translation increased revenue by $422 million. Adjusted revenue increased by $1.8 billion or 6% in 2019 compared to 2018, driven by increased net premium revenue in Canada, Asia and the U.S.

Gross premiums increased by $1.7 billion or 8% in 2019 compared to 2018, driven by increases in Canada, Asia and the U.S.

Ceded premiums of $2.4 billion in 2019 were in line with 2018.

Net investment income increased by $10.8 billion in 2019 compared to 2018, driven by increases in the changes in fair value of FVTPL assets in Canada, Asia, the U.S. and Corporate.

Fee income increased by $0.3 billion or 5% in 2019, compared to 2018, driven by increases in Asset Management and Canada.

iii. Benefits and Expenses

($ millions)	**2019**	2018	2017
Benefits and Expenses			
Gross claims and benefits paid	**17,421**	15,986	15,353
Changes in insurance/investment contract liabilities(1)	**11,404**	378	6,189
Reinsurance expenses (recoveries)	**(2,131)**	(2,021)	(4,373)
Commissions	**2,417**	2,339	2,403
Operating expenses	**7,033**	6,432	6,410
Other(2)	**302**	372	563
Total benefits and expenses	**36,446**	23,486	26,545

(1) Includes increase (decrease) in insurance contract liabilities, decrease (increase) in reinsurance assets, increase (decrease) in investment contract liabilities.
(2) Other includes net transfer to (from) segregated funds, premium taxes and interest expense.

Total benefits and expenses increased by $13.0 billion or 55% in 2019 compared to 2018, primarily driven by increases in the changes in insurance/investment contract liabilities and gross claims and benefits paid.

Gross claims and benefits paid increased by $1.4 billion or 9% in 2019 compared to 2018, driven by increases in the U.S., Asia, and Canada.

Changes in insurance/investment contract liabilities and reinsurance assets increased by $11.0 billion in 2019 compared to 2018, reflecting increases in insurance contract liabilities, primarily due to increases in the changes in fair value of FVTPL assets.

Commission expenses of $2.4 billion were largely unchanged compared to 2018.

Operating expenses increased by $0.6 billion or 9% in 2019 compared to 2018, reflecting higher expenses in line with business growth, and higher project spend, partially offset by lower incentive compensation costs. The impacts of foreign exchange translation increased operating expenses by $101 million. Additional information on operating expenses can be found in Note 18 in our 2019 Annual Consolidated Financial Statements.

Other decreased by $0.1 billion or 19% in 2019 compared to 2018, primarily driven by an increase in net transfers from segregated funds.

iv. Taxes

Income Taxes

In 2019, we had an income tax expense of $286 million on reported net income before taxes of $3,233 million, which resulted in an effective income tax rate of 8.8%. This compares to an income tax expense of $597 million on reported net income before taxes of $3,511 million and an effective income tax rate of 17.0% in 2018.

On an underlying basis[1], in 2019, we had an income tax expense of $525 million on our underlying net income before taxes of $3,717 million, representing an effective income tax rate of 14.1% which is below our expected range of 15% to 20% primarily due to the favourable resolution of Canadian tax matters and higher tax-exempt investment income. This compares to an income tax expense of $642 million on our underlying net income before taxes of $3,731 million and an effective income tax rate of 17.2% in 2018.

See section D - Profitability - v - Income taxes for additional information on our effective tax rates.

Other Taxes

In addition to income taxes, we pay various indirect taxes in jurisdictions in which we carry on business. Indirect taxes include premium taxes, investment income tax, payroll related taxes, property taxes, sales taxes, business taxes and other taxes, as follows:

($ millions)	**2019**	2018
Income tax expense	**286**	597
Indirect taxes		
Premium taxes (net of premium taxes on ceded business)[1]	**375**	345
Payroll taxes	**175**	163
Property taxes	**122**	126
Goods and services tax ("GST"), harmonized tax ("HST") and other sales taxes	**117**	122
Business taxes and other	**43**	38
Total indirect taxes	**832**	794
Total taxes	**1,118**	1,391
Reported effective income tax rate	**8.8%**	17.0%
Total taxes as a percentage of net income before deduction of total taxes	**27.5%**	32.3%

(1) Premium taxes include investment income tax.

2. Items related to Statement of Financial Position

i. Changes in Liabilities and Shareholders' Equity

Insurance contract liabilities balances before Other policy liabilities of $123.9 billion as at December 31, 2019 increased by $9.0 billion compared to December 31, 2018, mainly due to changes in balances on in-force policies (which include fair value changes on FVTPL assets supporting insurance contract liabilities) and balances arising from new policies, partially offset by the impacts of foreign exchange translation.

Total shareholders' equity, including preferred share capital, was $23.4 billion as at December 31, 2019, compared to $23.7 billion as at December 31, 2018. The decrease of $0.3 billion in total shareholders' equity was primarily due to:

(i) common share dividend payments of $1,236 million;
(ii) the impact related to the BGO acquisition of $875 million;
(iii) a decrease of $592 million from the repurchase and cancellation of common shares; and
(iv) a decrease of $564 million from the impacts of foreign exchange translation; largely offset by
(v) shareholders' net income of $2,713 million in 2019, before preferred share dividends of $95 million; and
(vi) net unrealized gains on AFS assets in OCI of $369 million.

ii. Off-Balance Sheet Arrangements

In the normal course of business, we are engaged in a variety of financial arrangements. The principal purposes of these arrangements are to earn management fees and additional spread on a matched book of business and to reduce financing costs.

While most of these activities are reflected on our balance sheet with respect to assets and liabilities, certain of them are either not recorded on our balance sheet or are recorded on our balance sheet in amounts that differ from the full contract or notional amounts. The types of off-balance sheet activities we undertake primarily include asset securitizations and securities lending.

(1) Our effective income tax rate on underlying net income is calculated using underlying net income and income tax expense associated with underlying net income, which excludes amounts attributable to participating policyholders.

Asset Securitizations
In the past, we sold mortgage or bond assets to non-consolidated structured entities, which may also purchase investment assets from third parties. Our securitized AUM held by these non-consolidated structured entities were less than $1 million as at December 31, 2019 and December 31, 2018.

However, the majority of our securitization activities are recorded on our Consolidated Statements of Financial Position. We securitize multi-residential mortgages under the National Housing Act Mortgage-Backed Securities program sponsored by the CMHC. The securitization of the multi-residential mortgages with the CMHC does not qualify for de-recognition and remains on our Consolidated Statements of Financial Position. Additional information on this program can be found in Note 5 to our 2019 Annual Consolidated Financial Statements.

Securities Lending
We lend securities in our investment portfolio to other institutions for short periods to generate additional fee income. We conduct our program only with well-established, reputable banking institutions that carry a minimum credit rating of "AA". Collateral, which exceeds the fair value of the loaned securities, is deposited by the borrower with a lending agent, usually a securities custodian, and maintained by the lending agent until the underlying security has been returned to us. We monitor the fair value of the loaned securities on a daily basis with additional collateral obtained or refunded as the fair value fluctuates. Certain arrangements allow us to invest the cash collateral received for the securities loaned. Loaned securities are recognized in our Consolidated Statements of Financial Position as Invested Assets. As at December 31, 2019, we loaned securities with a carrying value of $2.0 billion for which the collateral held was $2.1 billion. This compares to loaned securities of $2.2 billion, with collateral of $2.3 billion as at December 31, 2018.

iii. Goodwill and Intangibles Impairment
The Company completed its annual goodwill and indefinite life intangible asset impairment testing in the fourth quarter of 2019. There were no goodwill impairment charges in 2019 or 2018. Impairment charges on intangible assets of $15 million were recognized in 2019 and there were no impairment charges in 2018.

iv. Commitments, Guarantees, Contingencies and Reinsurance Matters
In the normal course of business, we enter into leasing agreements, outsourcing arrangements and agreements involving indemnities to third parties. We are also engaged in arbitration proceedings from time to time with certain companies that have contracts to provide reinsurance to the Company. Information regarding our commitments, guarantees and contingencies are summarized in Note 23 to our 2019 Annual Consolidated Financial Statements. A table summarizing our significant financial liabilities and contractual obligations can be found in this MD&A in the section J - Risk Management - 9 - Risk Categories - vi - Liquidity Risk.

3. Fourth Quarter 2019 Profitability

The following table reconciles our net income measures and sets out the impacts that other notable items had on our net income in the fourth quarter of 2019 and 2018. All factors discussed in this document that impact our underlying net income are also applicable to reported net income.

	Q4'19	Q4'18
($ millions, after-tax)		
Reported net income	**719**	580
Less: Market-related impacts(1)	**18**	(153)
Assumption changes and management actions(1)	**(15)**	13
Other adjustments(1)	**(76)**	2
Underlying net income(2)	**792**	718
Reported ROE(2)	**13.6%**	10.9%
Underlying ROE(2)	**15.0%**	13.6%
Experience-related items(3)		
Investing activity	**34**	28
Credit	**47**	23
Mortality	**(3)**	(11)
Morbidity	**(47)**	(12)
Lapse and other policyholder behaviour	**(6)**	(4)
Expenses	**(45)**	(26)
Other experience	**(6)**	44

(1) Represents an adjustment made to arrive at a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document for a breakdown of components within this adjustment.
(2) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.
(3) Experience-related items reflect the difference between actual experience during the reporting period and best estimate assumptions used in the determination of our insurance contract liabilities.

Reported net income increased by $139 million or 24% in the fourth quarter of 2019 compared to the same period in 2018, driven by favourable market-related impacts, primarily from equity markets, partially offset by higher fair value adjustments on MFS's share-based payment awards, unfavourable ACMA impacts and higher acquisition, integration and restructuring costs. Underlying net income increased by $74 million or 10%, driven by business growth, tax benefits in Corporate and favourable credit experience, partially offset by unfavourable morbidity experience in Canada and unfavourable expense experience, predominantly resulting from higher incentive compensation costs reported in Corporate.

In the fourth quarter of 2019, our effective income tax rates on reported net income and underlying net income were 10.8% and 13.9%, respectively.

Performance by Business Group - Fourth Quarter

We manage our operations and report our financial results in five business segments. The following section describes the operations and financial performance of Canada, U.S., Asset Management, Asia and Corporate.

The following table sets out the differences between our reported net income (loss) and underlying net income (loss) by business group.

	Q4'19					
($ millions, after-tax)	**Canada**	**U.S.**	**Asset Management**	**Asia**	**Corporate**	**Total**
Reported net income (loss)	**275**	**131**	**228**	**136**	**(51)**	**719**
Less: Market-related impacts[1]	**6**	**–**	**–**	**5**	**7**	**18**
Assumption changes and management actions[1]	**(1)**	**(3)**	**–**	**(11)**	**–**	**(15)**
Other adjustments[1]	**6**	**(3)**	**(53)**	**(1)**	**(25)**	**(76)**
Underlying net income (loss)[2]	**264**	**137**	**281**	**143**	**(33)**	**792**

	Q4'18					
($ millions, after-tax)	Canada	U.S.	Asset Management	Asia	Corporate	Total
Reported net income (loss)	96	118	244	125	(3)	580
Less: Market-related impacts[1]	(134)	5	–	(22)	(2)	(153)
Assumption changes and management actions[1]	(14)	–	–	9	18	13
Other adjustments[1]	(1)	(8)	17	(2)	(4)	2
Underlying net income (loss)[2]	245	121	227	140	(15)	718

(1) Represents an adjustment made to arrive at a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document for a breakdown of components within this adjustment.
(2) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.

Canada

Canada's reported net income increased by $179 million in the fourth quarter of 2019 compared to the same period in 2018, driven by favourable market-related impacts, predominantly from equity markets, and less unfavourable ACMA. Underlying net income increased by $19 million or 8%, driven by business growth, higher investing activity, favourable credit experience, higher AFS gains and favourable mortality experience, partially offset by unfavourable morbidity experience in GB and a mortgage impairment.

U.S.

U.S.'s reported net income increased by US$10 million ($13 million) or 11% (11%) in the fourth quarter of 2019 compared to the same period in 2018. Market-related impacts, ACMA and integration costs were in line with the same period last year. Underlying net income increased by US$13 million ($16 million) or 14% (13%), driven by favourable morbidity experience and higher AFS gains, partially offset by unfavourable mortality experience in In-force Management. The impacts of foreign exchange translation were in line with the prior year for reported net income and underlying net income.

The after-tax profit margin for Group Benefits[1] was 7.3% as of the fourth quarter of 2019, compared to 6.7% as of the fourth quarter of 2018.

Asset Management

Asset Management's reported net income decreased by $16 million or 7% in the fourth quarter of 2019 compared to the same period in 2018, reflecting higher fair value adjustments on MFS's share-based payment awards. Underlying net income increased by $54 million or 24%, driven by higher ANA in MFS and higher income in SLC Management from the BGO acquisition that closed in 2019. The impacts of foreign exchange translation were in line with the prior year for reported net income and underlying net income.

In U.S. dollars, MFS's reported net income was US$173 million in the fourth quarter of 2019, a decrease of US$16 million or 8% compared to the same period in 2018, reflecting higher fair value adjustments on MFS's share-based payment awards. Underlying net income was US$201 million in the fourth quarter of 2019, an increase of US$34 million or 20%, driven by higher ANA. Pre-tax net operating profit margin ratio for MFS[1] for the fourth quarter of 2019 was 40%, compared to 38% for the fourth quarter of 2018.

SLC Management's reported net loss was $1 million in the fourth quarter of 2019, an improvement of $4 million compared to the same period in 2018, reflecting higher acquisition and integration costs related to the BGO acquisition and the pending InfraRed transaction. Underlying net income was $15 million in the fourth quarter of 2019, an increase of $9 million, driven by net income from the BGO acquisition that closed in 2019.

Asia

Asia's reported net income increased by $11 million or 9% in the fourth quarter of 2019 compared to the same period in 2018, driven by favourable market-related impacts, predominantly from equity markets, largely offset by unfavourable ACMA impacts. Underlying net income

(1) Based on underlying net income, on a trailing four quarters basis, and which is described in section L - Non-IFRS Financial Measures in this document.

increased by $3 million or 2%, driven by business growth, favourable lapse and other policyholder behaviour experience and lower new business strain, partially offset by unfavourable joint venture experience and other investment-related experience. The impacts of foreign exchange translation increased reported net income and underlying net income by $1 million and $2 million, respectively.

Corporate

Corporate's reported net loss increased by $48 million in the fourth quarter of 2019 compared to the same period in 2018, reflecting restructuring costs and the impacts of favourable ACMA in 2018 relating to the termination of assumed business, partially offset by favourable market-related impacts, predominantly from interest rates. Underlying net loss increased by $18 million, reflecting unfavourable expense experience, lower earnings from the run-off businesses and higher project spend including the adoption of IFRS 17, partially offset by tax benefits. The impacts of foreign exchange translation decreased reported net income by $1 million and were in line with the prior year for underlying net income.

4. Fourth Quarter 2019 Growth

Revenue was $8.5 billion in the fourth quarter of 2019, an increase of $345 million or 4% compared to the same period in 2018, driven by increased net premium revenue and fee income, partially offset by larger decreases in the fair value of FVTPL assets. For FVTPL assets, in the fourth quarter of 2019, equity markets were largely stable and the impact of interest rate increases was significant, whereas the fourth quarter of 2018 saw minimal losses as the impact from equity markets was largely offset by the impact of interest rate declines. The impacts of foreign exchange translation increased revenue by $9 million. Adjusted revenue was $10.0 billion in the fourth quarter of 2019, an increase of $1.6 billion or 19% compared to the same period in 2018, driven by increased net premium revenue in Canada, Asia and the U.S. and fee income.

Premiums and deposits was $51.4 billion in the fourth quarter of 2019, an increase of $9.9 billion or 24% compared to the same period in 2018, driven by increased mutual fund sales, managed fund sales, net premium revenue and segregated fund deposits. The impacts of foreign exchange translation increased total premiums and deposits by $3 million. Adjusted premiums and deposits was $51.5 billion in the fourth quarter of 2019, an increase of $9.9 billion or 24% compared to the same period in 2018, driven by increased mutual fund, managed fund sales, net premium revenue and segregated fund deposits.

5. Previous Quarters

The following table provides a summary of our results for the eight most recently completed quarters. A more complete discussion of our historical quarterly results can be found in our interim and annual MD&A for the relevant periods.

	Quarterly results							
($ millions, unless otherwise noted)	**Q4'19**	Q3'19	Q2'19	Q1'19	Q4'18	Q3'18	Q2'18	Q1'18
Total revenue	**8,525**	9,616	10,146	11,392	8,180	5,998	6,826	5,993
Common shareholders' net income (loss)								
Reported	**719**	681	595	623	580	567	706	669
Underlying(1)	**792**	809	739	717	718	730	729	770
Diluted EPS ($)								
Reported	**1.22**	1.15	1.00	1.04	0.96	0.93	1.16	1.09
Underlying(1)	**1.34**	1.37	1.24	1.20	1.19	1.20	1.20	1.26
Basic reported EPS ($)								
Reported	**1.22**	1.15	1.00	1.04	0.96	0.94	1.16	1.10
Reported net income (loss) by segment								
Canada	**275**	223	148	237	96	335	262	249
U.S.	**131**	(186)	94	124	118	(267)	105	96
Asset Management	**228**	221	229	219	244	241	214	210
Asia	**136**	170	134	80	125	164	133	133
Corporate	**(51)**	253	(10)	(37)	(3)	94	(8)	(19)
Total reported net income (loss)	**719**	681	595	623	580	567	706	669
Underlying net income (loss) by segment(1)								
Canada(1)	**264**	268	243	237	245	251	245	295
U.S.(1)	**137**	135	110	150	121	139	125	129
Asset Management(1)	**281**	251	245	227	227	251	216	231
Asia(1)	**143**	138	147	122	140	110	145	128
Corporate(1)	**(33)**	17	(6)	(19)	(15)	(21)	(2)	(13)
Total underlying net income (loss)(1)	**792**	809	739	717	718	730	729	770

(1) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.

Third Quarter 2019

Reported net income increased by $114 million or 20% in the third quarter of 2019 compared to the same period in 2018, driven by improved impacts from ACMA, partially offset by unfavourable market-related impacts, predominantly from interest rates, and higher acquisition costs related to our acquisition of a majority stake in BentallGreenOak. Underlying net income increased by $79 million or 11% in the third quarter of 2019, compared to the same period in 2018, which includes the favourable impact of tax matters from prior years of $78 million - $58 million in Corporate and $20 million in Canada. Underlying net income also reflected business growth, favourable credit experience, a gain from a mortgage investment prepayment in the U.S. and higher available-for-sale gains, offset by unfavourable morbidity experience in Canada and the U.S., and lower investing activity gains.

Second Quarter 2019
Reported net income of $595 million in the second quarter of 2019 decreased $111 million compared to the second quarter of 2018, primarily reflecting unfavourable market-related and ACMA impacts. Underlying net income in the second quarter of 2019 increased $10 million to $739 million compared to the same period in 2018, primarily driven by business growth, favourable expense experience and benefits from tax-related items primarily in the U.S., partially offset by unfavourable morbidity experience in Canada and the U.S., lower new business gains in International in Asia and lower AFS gains in the U.S.

First Quarter 2019
Reported net income of $623 million in the first quarter of 2019 decreased $46 million from the first quarter of 2018, while underlying net income decreased $53 million to $717 million. This variance was primarily due to interest on par seed capital of $110 million in the first quarter of 2018 and unfavourable credit experience, partially offset by favourable mortality, lapse and other policyholder behaviour, investing activity gains, morbidity experience and other experience.

Fourth Quarter 2018
Reported net income was $580 million in the fourth quarter of 2018, an increase compared to the same quarter in 2017, reflecting the $251 million charge in 2017 related to the enactment of the U.S. Tax Cuts and Jobs Act, positive impacts from other adjustments and ACMA, partially offset by market-related impacts. Underlying net income in the fourth quarter of 2018 increased to $718 million compared to 2017, driven by the effect of the lower income tax rate in the U.S., favourable expense experience that resulted from ongoing expense management and lower incentive compensation costs, and other experience, partially offset by mortality and morbidity experience.

Third Quarter 2018
Reported net income was $567 million in the third quarter of 2018, reflecting a $269 million unfavourable change in ACMA compared to the same quarter in 2017. Underlying net income was $730 million, primarily driven by strong business growth, the lower income tax rate in the U.S. and higher investment income on surplus assets, partially offset by new business strain.

Second Quarter 2018
Reported net income was $706 million in the second quarter of 2018, reflecting an $82 million favourable change in market-related impacts compared to the same quarter in 2017. Underlying net income was $729 million, primarily driven by strong business growth and favourable morbidity experience, partially offset by expenses, credit experience and the impacts of investment activity on insurance contract liabilities.

First Quarter 2018
Reported net income was $669 million in the first quarter of 2018, reflecting a $79 million unfavourable change in market-related impacts compared to the same quarter in 2017. Underlying net income was $770 million, primarily driven by interest on par seed capital of $110 million, strong business growth, the lower income tax rate in the U.S., as well as the impacts of investment activity on insurance contract liabilities, partially offset by weaker mortality and lapse experience.

L. Non-IFRS Financial Measures

i. Underlying Net Income and Underlying EPS

Underlying net income (loss) and financial measures based on underlying net income (loss), including underlying EPS or underlying loss per share, and underlying ROE, are non-IFRS financial measures. Underlying net income (loss) removes from reported net income (loss) the impacts of the following items that create volatility in our results under IFRS and when removed assist in explaining our results from period to period:

(a) market-related impacts that differ from our best estimate assumptions, which include: (i) impacts of returns in equity markets, net of hedging, for which our best estimate assumptions are approximately 2% per quarter. This also includes the impact of the basis risk inherent in our hedging program, which is the difference between the return on underlying funds of products that provide benefit guarantees and the return on the derivative assets used to hedge those benefit guarantees; (ii) the impacts of changes in interest rates in the reporting period and on the value of derivative instruments used in our hedging programs including changes in credit and swap spreads, and any changes to the assumed fixed income reinvestment rates in determining the actuarial liabilities; and (iii) the impacts of changes in the fair value of investment properties in the reporting period;

(b) assumption changes and management actions, which include: (i) the impacts of revisions to the methods and assumptions used in determining our liabilities for insurance contracts and investment contracts and (ii) the impacts on insurance contracts and investment contracts of actions taken by management in the current reporting period, referred to as management actions which include, for example, changes in the prices of in-force products, new or revised reinsurance on in-force business, and material changes to investment policies for assets supporting our liabilities; and

(c) Other adjustments:
   (i) certain hedges in Canada that do not qualify for hedge accounting - this adjustment enhances the comparability of our net income from period to period, as it reduces volatility to the extent it will be offset over the duration of the hedges;
   (ii) fair value adjustments on MFS's share-based payment awards that are settled with MFS's own shares and accounted for as liabilities and measured at fair value each reporting period until they are vested, exercised and repurchased - this adjustment enhances the comparability of MFS's results with publicly traded asset managers in the United States;
   (iii) acquisition, integration and restructuring costs (including impacts related to acquiring and integrating acquisitions); and
   (iv) other items that are unusual or exceptional in nature.

All factors discussed in this document that impact our underlying net income are also applicable to reported net income.

All EPS measures in this document refer to fully diluted EPS, unless otherwise stated. As noted below, underlying EPS excludes the dilutive impacts of convertible instruments.

The following table sets out the amounts that were excluded from our underlying net income (loss) and underlying EPS, and provides a reconciliation to our reported net income (loss) and EPS based on IFRS. A reconciliation of our underlying net income to our reported net income for the fourth quarters of 2019 and 2018 is provided in this MD&A in section K - Additional Financial Disclosure - 3 - Fourth Quarter 2019 Profitability.

Reconciliations of Select Net Income Measures

($ millions, unless otherwise noted)	**2019**	2018	2017
Reported net income	**2,618**	2,522	2,149
Market-related impacts			
Equity market impacts			
Impacts from equity market changes	**120**	(159)	68
Basis risk impacts	**7**	(15)	(6)
Equity market impacts	**127**	(174)	62
Interest rate impacts(1)			
Impacts of interest rate changes	**(307)**	(116)	(79)
Impacts of credit spread movements	**(45)**	56	(54)
Impacts of swap spread movements	**4**	(31)	(24)
Interest rate impacts	**(348)**	(91)	(157)
Impacts of changes in the fair value of investment properties	**(16)**	77	88
Less: Market-related impacts	**(237)**	(188)	(7)
Less: Assumption changes and management actions	**(46)**	(155)	81
Other adjustments			
Certain hedges in Canada that do not qualify for hedge accounting	**(5)**	5	(16)
Fair value adjustments on MFS's share-based payment awards	**(64)**	(5)	(81)
Acquisition, integration and restructuring(2)	**(87)**	(82)	(123)
Less: Total of other adjustments	**(156)**	(82)	(220)
Less: U.S. tax reform(3)	**–**	–	(251)
Underlying net income	**3,057**	2,947	2,546
Reported EPS (diluted) ($)	**4.40**	4.14	3.49
Less: Market-related impacts ($)	**(0.39)**	(0.31)	(0.01)
Assumption changes and management actions ($)	**(0.08)**	(0.26)	0.13
Certain hedges in Canada that do not qualify for hedge accounting ($)	**(0.01)**	0.01	(0.03)
Fair value adjustments on MFS's share-based payment awards ($)	**(0.11)**	(0.01)	(0.13)
Acquisition, integration and restructuring ($)	**(0.15)**	(0.14)	(0.20)
U.S. tax reform ($)	**–**	–	(0.41)
Impact of convertible securities on diluted EPS ($)	**(0.02)**	(0.01)	(0.01)
Underlying EPS (diluted) ($)	**5.16**	4.86	4.15

(1) Our exposure to interest rates varies by product type, line of business, and geography. Given the long-term nature of our business, we have a higher degree of sensitivity in respect of interest rates at long durations.

(2) 2019 amounts includes acquisition costs for the BGO acquisition and the pending InfraRed transaction, which includes the unwinding of the discount for the Put option and Deferred payments liability of $16 million. As a result of various initiatives to simplify our organizational structure and drive efficiencies, we also recorded a restructuring charge of $25 million in the fourth quarter of 2019.

(3) The U.S. Tax Cuts and Jobs Act ("U.S. tax reform") legislation signed into law on December 22, 2017, which took effect on January 1, 2018, included a reduction to the U.S. corporate tax rate from 35% to 21% for tax years beginning after 2017, and a number of base broadening measures including provisions limiting the deductibility of certain payments to related foreign taxpayers. Interpretive guidance on the base broadening provisions was issued by the U.S. Treasury late in 2018, however it is in the form of Proposed Regulations and is subject to change. As a result of this legislation, the Company recorded a net charge of $251 million ($444 million pre-tax) in the fourth quarter of 2017. This reflected an after-tax charge of $288 million ($444 million pre-tax) to ACMA, and a one-time charge on the deemed repatriation of foreign earnings of $46 million. These are partially offset by a benefit of $83 million relating to the revaluation of deferred tax balances from 35% to 21%, the $83 million excludes $(30) million relating to the net impact on deferred tax balances attributable to participating policyholders. ACMA in 2017 excludes the $(288) million change that is included in U.S. tax reform, shown separately.

The following table shows the pre-tax amount of underlying net income adjustments:

($ millions, unless otherwise noted)	**2019**	2018	2017
Reported net income (after tax)	**2,618**	2,522	2,149
Underlying net income adjustments (pre-tax):			
Less: Market-related impacts(1)	**(383)**	(179)	(79)
Assumption changes and management actions(1)(2)	**(127)**	(246)	(61)
Other adjustments(1)	**(237)**	(150)	(297)
U.S. tax reform(1)(2)	**–**	–	(444)
Total underlying net income adjustments (pre-tax)	**(747)**	(575)	(881)
Tax-related to underlying net income adjustments	**308**	150	484
Underlying net income(3) (after tax)	**3,057**	2,947	2,546

(1) Represents an adjustment made to arrive at a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document for a breakdown of components within this adjustment.
(2) In 2017, U.S. tax reform of $(444) million (pre-tax) is shown separately, and is excluded from ACMA of $(61) million (pre-tax).
(3) Represents a non-IFRS financial measure. See section L - Non-IFRS Financial Measures in this document.

Tax related to underlying net income adjustments may vary from the expected effective tax rate range reflecting the mix of business based on the Company's international operations. The aggregate tax effect depends on whether the underlying adjustment increases and reductions to pre-tax income occurred in high or low tax jurisdictions.

ii. Additional Non-IFRS Measures

Management also uses the following non-IFRS financial measures:

Return on equity. IFRS does not prescribe the calculation of ROE and therefore a comparable measure under IFRS is not available. To determine reported ROE and underlying ROE, respectively, reported net income (loss) and underlying net income (loss) is divided by the total weighted average common shareholders' equity for the period. The quarterly ROE is annualized.

Financial leverage ratio. This total debt to total capital ratio is ratio of debt plus preferred shares to total capital, where debt consists of all capital qualifying debt securities. Capital qualifying debt securities consist of subordinated debt and innovative capital instruments.

Dividend payout ratio. This is the ratio of dividends paid per share to diluted underlying EPS for the period.

Sales. In Canada, insurance sales consist of sales of individual insurance and group benefits products; wealth sales consist of sales of individual wealth products and sales in GRS. In the U.S., insurance sales consist of sales by Group Benefits. In Asia, insurance sales consist of the individual and group insurance sales by our subsidiaries and joint ventures and associates, based on our proportionate equity interest, in the Philippines, Hong Kong, Indonesia, India, China, Malaysia, and Vietnam and sales from our International business unit; wealth sales consist of Hong Kong wealth sales, Philippines mutual fund sales, wealth sales by our India and China insurance joint ventures and associates, and Aditya Birla Sun Life AMC Limited's equity and fixed income mutual fund sales based on our proportionate equity interest, including sales as reported by our bank distribution partners. Asset Management sales consist of gross sales (inflows) for retail and institutional Clients; unfunded commitments are not included in sales. Sales are also expressed on a constant currency basis, which is a measure of sales that provides greater comparability across reporting periods by excluding the impact of exchange rate fluctuations from the translation of functional currencies to the Canadian dollar. There is no directly comparable IFRS measure.

Value of New Business. VNB represents the present value of our best estimate of future distributable earnings, net of the cost of capital, from new business contracts written in a particular time period, except new business in our Asset Management pillar. The assumptions used in the calculations are generally consistent with those used in the valuation of our insurance contract liabilities except that discount rates used approximate theoretical return expectations of an equity investor. Capital required is based on the higher of Sun Life Assurance's LICAT operating target and local (country specific) operating target capital. VNB is a useful metric to evaluate the present value created from new business contracts. There is no directly comparable IFRS measure.

Adjusted revenue. This measure is an alternative measure of revenue that provides greater comparability across reporting periods, by excluding the impacts of: (i) exchange rate fluctuations, from the translation of functional currencies to the Canadian dollar, for comparisons ("Constant Currency Adjustment"); (ii) Fair value and foreign currency changes on assets and liabilities ("FV Adjustment"); and (iii) reinsurance for the insured business in Canada's GB operations ("Reinsurance in Canada's GB Operations Adjustment").

($ millions)	**2019**	2018	2017
Revenue	**39,679**	26,997	29,334
Less: Constant Currency Adjustment	**349**	–	(34)
FV Adjustment	**7,118**	(3,373)	2,603
Reinsurance in Canada's GB Operations Adjustment	**(580)**	(602)	(3,026)
Adjusted revenue	**32,792**	30,972	29,791

Adjusted premiums and deposits. This measure is an alternative measure of premiums and deposits that provides greater comparability across reporting periods by excluding the impacts of: (i) the Constant Currency Adjustment; and (ii) the Reinsurance in Canada's GB Operations Adjustment.

($ millions)	**2019**	2018	2017
Premiums and deposits	**183,946**	160,108	164,680
Less: Constant Currency Adjustment	**3,426**	–	809
Reinsurance in Canada's GB Operations Adjustment	**(580)**	(602)	(3,026)
Adjusted premiums and deposits	**181,100**	160,710	166,897

Pre-tax net operating profit margin ratio for MFS. This ratio is a measure of the profitability of MFS, which excludes the impact of fair value adjustments on MFS's share-based payment awards, investment income, and certain commission expenses that are offsetting. These commission expenses are excluded in order to neutralize the impact these items have on the pre-tax net operating profit margin ratio and have no impact on the profitability of MFS. There is no directly comparable IFRS measure.

After-tax profit margin for U.S. Group Benefits. This ratio assists in explaining our results from period to period and is a measure of profitability that expresses U.S. employee benefits and medical stop-loss underlying net income as a percentage of net premiums. This ratio is calculated by dividing underlying net income (loss) by net premiums for the trailing four quarters. There is no directly comparable IFRS measure.

Impacts of foreign exchange translation. Items impacting our Consolidated Statements of Operations, such as Revenue, Benefits and expenses, and Total net income (loss), are translated into Canadian dollars using average exchange rates for the respective period. For items impacting our Consolidated Statements of Financial Position, such as Assets and Liabilities, period end rates are used for currency translation purposes.

Several IFRS financial measures are presented on a constant currency adjusted basis to exclude the impacts of foreign exchange translation. These measures are calculated using the average or period end foreign exchange rates, as appropriate, in effect at the date of the comparative period.

Assumption changes and management actions. In this document, the impacts of ACMA on shareholders' net income (after-tax) is included in reported net income and is excluded in calculating underlying net income, as described in Section D - Profitability in this document.

Note 10.A of our 2019 Annual Consolidated Financial Statements shows the pre-tax impacts of method and assumption changes on shareholders' and participating policyholders' insurance contract liabilities net of reinsurance assets, excluding changes in other policy liabilities and assets.

The view in this document of ACMA is the impacts on shareholders' reported net income (after tax). The Annual Consolidated Financial Statement view is a component of the change in total company liabilities. The following table provides a reconciliation of the differences between the two measures:

($ millions)	**2019**	2018	2017
Impacts of method and assumption changes on insurance contract liabilities (pre-tax)(1)	**(13)**	278	173
Less: Participating policyholders(2)	**1**	533	181
Impacts of method and assumption changes excluding participating policyholders (pre-tax)	**(14)**	(255)	(8)
Less: Tax	**(59)**	(90)	(51)
Impacts of method and assumption changes excluding participating policyholders (after-tax)	**45**	(165)	43
Add: Management actions (after-tax)(3)	**19**	23	(243)
Other (after-tax)(4)	**(110)**	(13)	(7)
Assumption changes and management actions (after-tax)(5)(6)(7)	**(46)**	(155)	(207)

(1) Note 10.A of our 2019 Annual Consolidated Financial Statements shows the pre-tax impacts of method and assumption changes on shareholders' and participating policyholders' Insurance contract liabilities net of reinsurance assets, excluding changes in other policy liabilities and assets. The amount shown in the table above is the shareholders' income impacts related to the amount shown in Note 10.A of our 2019 Annual Consolidated Financial Statements.
(2) Adjustment to remove the pre-tax impacts of method and assumption changes on amounts attributed to participating policyholders.
(3) Adjustment to include the after-tax impacts of management actions on insurance contract liabilities and investment contract liabilities which include, for example, changes in the prices of in-force products, new or revised reinsurance on in-force business, and material changes to investment policies for assets supporting our liabilities. In the second quarter of 2017, management actions were mainly in U.S., primarily comprised of the expected impact of recapturing certain reinsurance treaties and the expected cost of reinsurance in certain other treaties.
(4) Adjustments to include the after-tax impacts of method and assumption changes on investment contracts and other policy liabilities.
(5) Includes the tax impacts of assumption changes and management actions on insurance contract liabilities and investment contract liabilities, reflecting the tax rates in the jurisdictions in which we do business.
(6) ACMA is included in reported net income and is excluded in calculating underlying net income, as described in section D - Profitability - 2019 vs. 2018 in this document.
(7) In 2017, the impact on reported net income of an increase of $81 million is presented as an adjustment to arrive at underlying net income as Assumption changes and management actions. The impact on reported net income of a decrease of $288 million ($444 million pre-tax) related to the U.S. tax legislation changes enacted on December 22, 2017, included in the $(207) million above, is included as part of the U.S. tax reform impact that is reported separately as an adjustment to arrive an underlying net income (see section L - Non-IFRS Financial Measures in this document).

Real estate market sensitivities. Real estate market sensitivities are non-IFRS financial measures for which there are no directly comparable measures under IFRS so it is not possible to provide a reconciliation of these amounts to the most directly comparable IFRS measures.

Other. Management also uses the following non-IFRS financial measures for which there are no comparable financial measures in IFRS: (i) ASO premium and deposit equivalents, mutual fund sales, managed fund sales, insurance sales, and total premiums and deposits; (ii) AUM, mutual fund assets, managed fund assets, other AUM, and assets under administration; (iii) the VNB, which is used to measure the estimated lifetime profitability of new sales and is based on actuarial calculations; and (iv) ACMA, which is a component of our sources of earnings disclosure. Sources of earnings is an alternative presentation of our Consolidated Statements of Operations that identifies and quantifies various sources of income. The Company is required to disclose its sources of earnings by its principal regulator, OSFI.

M. Accounting and Control Matters

1. Critical Accounting Policies and Estimates

Our significant accounting and actuarial policies are described in Notes 1, 2, 3, 5, 6, 7 and 10 of our 2019 Annual Consolidated Financial Statements. Management must make judgments involving assumptions and estimates, some of which may relate to matters that are inherently uncertain, under these policies. The estimates described below are considered particularly significant to understanding our financial performance. As part of our financial control and reporting, judgments involving assumptions and estimates are reviewed by the independent auditor and by other independent advisors on a periodic basis. Accounting policies requiring estimates are applied consistently in the determination of our financial results.

Benefits to Policyholders

General

The liabilities for insurance contracts represent the estimated amounts which, together with estimated future premiums and net investment income, will provide for outstanding claims, estimated future benefits, policyholders' dividends, taxes (other than income taxes), and expenses on in-force insurance contracts.

In determining our liabilities for insurance contracts, assumptions must be made about mortality and morbidity rates, lapse and other policyholder behaviour, interest rates, equity market performance, asset default, inflation, expenses, and other factors over the life of our products. Most of these assumptions relate to events that are anticipated to occur many years in the future. Assumptions require significant judgment and regular review and, where appropriate, revision.

We use best estimate assumptions for expected future experience and apply margins for adverse deviations to provide for uncertainty in the choice of the best estimate assumptions. The amount of insurance contract liabilities related to the application of margins for adverse deviations to best estimate assumptions is called a provision for adverse deviations.

Best Estimate Assumptions

Best estimate assumptions are intended to be current, neutral estimates of the expected outcome as guided by Canadian actuarial standards of practice. The choice of best estimate assumptions takes into account current circumstances, past experience data (Company and/or industry), the relationship of past to expected future experience, anti-selection, the relationship among assumptions, and other relevant factors. For assumptions on economic matters, the assets supporting the liabilities and the expected policy for asset-liability management are relevant factors.

Margins for Adverse Deviations

The appropriate level of margin for adverse deviations on an assumption is guided by Canadian actuarial standards of practice. For most assumptions, the standard range of margins for adverse deviations is 5% to 20% of the best estimate assumption, and the actuary chooses from within that range based on a number of considerations related to the uncertainty in the determination of the best estimate assumption. The level of uncertainty, and hence the margin chosen, will vary by assumption and by line of business and other factors. Considerations that would tend to indicate a choice of margin at the high end of the range include:

- The statistical credibility of the Company's experience is too low to be the primary source of data for choosing the best estimate assumption
- Future experience is difficult to estimate
- The cohort of risks lacks homogeneity
- Operational risks adversely impact the ability to estimate the best estimate assumption
- Past experience may not be representative of future experience and the experience may deteriorate

Provisions for adverse deviations in future interest rates are included by testing a number of scenarios of future interest rates, some of which are prescribed by Canadian actuarial standards of practice, and determining the liability based on the range of possible outcomes. A scenario of future interest rates includes, for each forecast period between the statement of financial position date and the last liability cash flow, interest rates for risk-free assets, premiums for asset default, rates of inflation, and an investment strategy consistent with the Company's investment policy. The starting point for all future interest rate scenarios is consistent with the current market environment. If few scenarios are tested, the liability would be at least as great as the largest of the outcomes. If many scenarios are tested, the liability would be within a range defined by the average of the outcomes that are above the 60th percentile of the range of outcomes and the corresponding average for the 80th percentile.

Provisions for adverse deviations in future equity returns are included by scenario testing or by applying margins for adverse deviations. In blocks of business where the valuation of liabilities uses scenario testing of future equity returns, the liability would be within a range defined by the average of the outcomes that are above the 60th percentile of the range of outcomes and the corresponding average for the 80th percentile. In blocks of business where the valuation of liabilities does not use scenario testing of future equity returns, the margin for adverse deviations on common share dividends is between 5% and 20%, and the margin for adverse deviations on capital gains would be 20% plus an assumption that those assets reduce in value by 20% to 50% at the time when the reduction is most adverse. A 30% reduction is appropriate for a diversified portfolio of North American common shares and, for other portfolios, the appropriate reduction depends on the volatility of the portfolio relative to a diversified portfolio of North American common shares.

In choosing margins, we ensure that, when taken one at a time, each margin is reasonable with respect to the underlying best estimate assumption and the extent of uncertainty present in making that assumption, and also that, in aggregate, the cumulative impact of the margins for adverse deviations is reasonable with respect to the total amount of our insurance contract liabilities. Our margins are generally stable over time and are generally only revised to reflect changes in the level of uncertainty in the best estimate assumptions. Our margins tend to be at the high end of the range for expenses and in the mid-range or higher for other assumptions. When considering the aggregate impact of margins, the actuary assesses the consistency of margins for each assumption across each block of business to ensure there is no double counting or omission and to avoid choosing margins that might be mutually exclusive. In particular, the actuary chooses similar margins for blocks of business with similar characteristics, and also chooses margins that are consistent with other assumptions, including assumptions about economic factors. The actuary is guided by Canadian actuarial standards of practice in making these professional judgments about the reasonableness of margins for adverse deviations.

The best estimate assumptions and margins for adverse deviations are reviewed at least annually and revisions are made when appropriate. The choice of assumptions underlying the valuation of insurance contract liabilities is subject to external actuarial peer review.

Critical Accounting Estimates

Significant factors affecting the determination of policyholders' benefits, the methodology by which they are determined, their significance to the Company's financial condition and results of operations are described below.

Non-fixed Income Market Movements

We are exposed to equity markets through our segregated fund products (including variable annuities) that provide guarantees linked to underlying fund performance and through insurance products where the insurance contract liabilities are supported by non-fixed income assets.

For segregated fund products (including variable annuities), we have implemented hedging programs involving the use of derivative instruments to mitigate a large portion of the equity market risk associated with the guarantees. The cost of these hedging programs is reflected in the liabilities. The equity market risk associated with anticipated future fee income is not hedged.

The majority of non-fixed income assets that are designated as FVTPL support our participating and universal life products where investment returns are passed through to policyholders through routine changes in the amount of dividends declared or in the rate of interest credited. In these cases, changes in non-fixed income asset values are largely offset by changes in insurance contract liabilities.

Interest Rates

We generally maintain distinct asset portfolios for each major line of business. In the valuation of insurance contract liabilities, the future cash flows from insurance contracts and the assets that support them are projected under a number of interest rate scenarios, some of which are prescribed by Canadian actuarial standards of practice. Reinvestments and disinvestments take place according to the specifications of each scenario, and the liability is set based on the range of possible outcomes.

For certain products, including participating insurance and certain forms of universal life policies and annuities, policyholders share investment performance through routine changes in the amount of dividends declared or in the rate of interest credited. These products generally have minimum interest rate guarantees.

Hedging programs are in place to help mitigate the impact of interest rate movements.

Mortality

Mortality refers to the rates at which death occurs for defined groups of people. Life insurance mortality assumptions are generally based on the past five to ten years of experience. Our experience is combined with industry experience where our own experience is insufficient to be statistically valid. Assumed mortality rates for life insurance and annuity contracts include assumptions about future mortality improvement based on recent trends in population mortality and our outlook for future trends.

Morbidity

Morbidity refers to both the rates of accident or sickness and the rates of recovery therefrom. Most of our disability insurance is marketed on a group basis. We offer critical illness policies on an individual basis in Canada and Asia, long-term care on an individual basis in Canada, and medical stop-loss insurance is offered on a group basis in the U.S. In Canada, group morbidity assumptions are based on our five-year average experience, modified to reflect any emerging trend in recovery rates. For long-term care and critical illness insurance, assumptions are developed in collaboration with our reinsurers and are largely based on their experience. In the U.S., our experience is used for both medical stop-loss and disability assumptions, with some consideration of industry experience.

Policy Termination Rates

Policyholders may allow their policies to lapse prior to the end of the contractual coverage period by choosing not to continue to pay premiums or by surrendering their policy for the cash surrender value. Assumptions for lapse experience on life insurance are generally based on our five-year average experience. Lapse rates vary by plan, age at issue, method of premium payment, and policy duration.

Premium Payment Patterns

For universal life contracts, it is necessary to set assumptions about premium payment patterns. Studies prepared by industry or the actuarial profession are used for products where our experience is insufficient to be statistically valid. Premium payment patterns usually vary by plan, age at issue, method of premium payment, and policy duration.

Expense

Future policy-related expenses include the costs of premium collection, claims adjudication and processing, actuarial calculations, preparation and mailing of policy statements, and related indirect expenses and overhead. Expense assumptions are mainly based on our recent experience using an internal expense allocation methodology. Inflationary increases assumed in future expenses are consistent with the future interest rates used in scenario testing.

Asset Default

As required by Canadian actuarial standards of practice, insurance contract liabilities include a provision for possible future default of the assets supporting those liabilities. The amount of the provision for asset default included in the insurance contract liabilities is based on possible reductions in future investment yield that vary by factors such as type of asset, asset credit quality (rating), duration, and country of origin. The asset default assumptions are comprised of a best estimate plus a margin for adverse deviations, and are intended to provide for loss of both principal and income. Best estimate asset default assumptions by asset category and geography are derived from long-term studies of industry experience and the Company's experience. Margins for adverse deviation are chosen from the standard range (of 25% to 100%) as recommended by Canadian actuarial standards of practice based on the amount of uncertainty in the choice of best estimate assumption. The credit quality of an asset is based on external ratings if available (public bonds) and internal ratings if not (mortgages and loans). Any assets without ratings are treated as if they are rated below investment grade.

In contrast to asset impairment provisions and changes in FVTPL assets arising from impairments, both of which arise from known credit events, the asset default provision in the insurance contract liabilities covers losses related to possible future (unknown) credit events. Canadian actuarial standards of practice require the asset default provision to be determined taking into account known impairments that are recognized elsewhere on the statement of financial position. The asset default provision included in the insurance contract liabilities is reassessed each reporting period in light of impairments, changes in asset quality ratings, and other events that occurred during the period.

Sensitivities to Best Estimate Assumptions

The sensitivities presented below are forward-looking statements. They include measures of our estimated shareholders' net income sensitivity to changes in the best estimate assumptions in our insurance contract liabilities based on a starting point and business mix as at December 31, 2019 and as at December 31, 2018, reflecting the update of actuarial method and assumption changes described in this MD&A under the heading Assumption Changes and Management Actions and, where appropriate, taking into account hedging programs in place as at December 31, 2019 and December 31, 2018 described in this MD&A under the heading Market Risk. These sensitivities represent the Company's estimate of changes in best estimate assumptions that are reasonably likely based on the Company's and/or the industry's historical experience and industry standards and best practices as at December 31, 2019 and December 31, 2018. We have also disclosed in the table below the impact of a 50 basis point change in risk free interest rates and 25% and 10% changes in equity markets to illustrate the impact of immediate market shocks.

Changes to the starting point for interest rates, equity market prices and business mix will result in different estimated sensitivities. Additional information regarding equity and interest rate sensitivities, including key assumptions, can be found under the heading J - Risk Management - 9 - Risk Categories - Market Risk Sensitivities in this document. The following table summarizes the impact these sensitivities would have on our shareholders' net income.

Critical Accounting Estimate	**Sensitivity**	**2019**	2018
($ millions, after-tax)			
Interest Rates	50 basis point parallel decrease in interest rates across the entire yield curve	**(150)**	(100)
	50 basis point parallel increase in interest rates across the entire yield curve	**50**	50
Equity Markets	25% decrease across all equity markets	**(350)**	(300)
	10% decrease across all equity markets	**(150)**	(100)
	10% increase across all equity markets	**100**	100
	25% increase across all equity markets	**250**	250
	1% reduction in assumed future equity and real estate returns	**(665)**	(560)
Mortality	2% increase in the best estimate assumption for insurance products - where higher mortality would be financially adverse	**(35)**	(35)
	2% decrease in the best estimate assumption for annuity products - where lower mortality would be financially adverse	**(135)**	(120)
Morbidity	5% adverse change in the best estimate assumption	**(205)**	(185)
Policy Termination Rates	10% decrease in the termination rate - where fewer terminations would be financially adverse	**(265)**	(250)
	10% increase in the termination rate - where more terminations would be financially adverse	**(195)**	(195)
Operating Expenses and Inflation	5% increase in unit maintenance expenses	**(170)**	(175)

Fair Value of Assets and Liabilities

Debt securities, equity securities and certain other invested assets are designated as FVTPL or AFS and are recorded at fair value in our Consolidated Statements of Financial Position. Changes in fair value of assets designated as FVTPL, and realized gains and losses on sale of FVTPL assets are recorded in income. Changes in fair value of AFS assets are recorded in OCI. For foreign currency translation, exchange differences calculated on the amortized cost of AFS debt securities are recognized in income and other changes in carrying amount are recognized in OCI. The exchange differences from the translation of AFS equity securities and other invested assets are recognized in OCI. Net impairment losses and realized gains and losses on sale of AFS assets are reclassified from OCI to income.

The fair value of government and corporate debt securities is determined using quoted prices in active markets for identical or similar securities. When quoted prices in active markets are not available, fair value is determined using market standard valuation methodologies, which include discounted cash flow analysis, consensus pricing from various broker dealers that are typically the market makers, or other similar techniques. The assumptions and valuation inputs in applying these market standard valuation methodologies are determined primarily using observable market inputs, which include, but are not limited to, benchmark yields, reported trades of identical or similar instruments, broker-dealer quotes, issuer spreads, bid prices, and reference data including market research publications. In limited circumstances, non-binding broker quotes are used.

The fair value of asset-backed securities is determined using quoted prices in active markets for identical or similar securities, when available, or valuation methodologies and valuation inputs similar to those used for government and corporate debt securities. Additional valuation inputs include structural characteristics of the securities, and the underlying collateral performance, such as prepayment speeds and delinquencies. Expected prepayment speeds are based primarily on those previously experienced in the market at projected future interest rate levels. In instances where there is a lack of sufficient observable market data to value the securities, non-binding broker quotes are used.

The fair value of equity securities is determined using quoted prices in active markets for identical securities or similar securities. When quoted prices in active markets are not available, fair value is determined using equity valuation models, which include discounted cash flow analysis and other techniques that involve benchmark comparison. Valuation inputs primarily include projected future operating cash flows and earnings, dividends, market discount rates, and earnings multiples of comparable companies.

Mortgages and loans are generally carried at amortized cost. The fair value of mortgages and loans, for disclosure purposes, is determined by discounting the expected future cash flows using a current market interest rate applicable to financial instruments with a similar yield, credit quality and maturity characteristics. Valuation inputs typically include benchmark yields and risk-adjusted spreads from current lending activities or loan issuances. The risk-adjusted spreads are determined based on the borrower's credit and liquidity, as well as term and other loan-specific features. Long-term mortgages and loans are generally categorized in Level 3 of the fair value hierarchy. The significant unobservable input is a portion of these risk adjusted spreads at or beyond the 20 year point for mortgages and at or beyond the 10 year point for loans.

Derivative financial instruments are recorded at fair value with changes in fair value recorded in income unless the derivative is part of a qualifying hedging relationship for accounting purposes. The fair value of derivative financial instruments depends upon derivative types. The fair value of exchange-traded futures and options is determined using quoted prices in active markets, while the fair value of OTC derivatives is determined using pricing models, such as discounted cash flow analysis or other market standard valuation techniques, with primarily observable market inputs. Valuation inputs used to price OTC derivatives may include swap interest rate curves, foreign exchange spot and forward rates, index prices, the value of underlying securities, projected dividends, volatility surfaces, and in limited circumstances, counterparty quotes.

The fair value of OTC derivative financial instruments also includes credit valuation adjustments to reflect the credit risk of both the derivative counterparty and ourselves as well as the impact of contractual factors designed to reduce our credit exposure, such as collateral and legal rights of offset under master netting agreements. Inputs into determining the appropriate credit valuation adjustments are typically obtained from publicly available information and include credit default swap spreads when available, credit spreads derived from specific bond yields, or published cumulative default experience data adjusted for current trends when credit default swap spreads are not available.

The fair value of other invested assets is determined using quoted prices in active markets for identical securities or similar securities. When quoted prices in active markets are not available, fair value is determined using equity valuation models, which include discounted cash flow analysis and other techniques that involve benchmark comparison. Valuation inputs primarily include projected future operating cash flows and earnings, dividends, market discount rates, and earnings multiples of comparable companies.

Investment properties are recorded at fair value with changes in fair value recorded in income. The fair value of investment properties is generally determined using property valuation models that are based on expected capitalization rates and models that discount expected future net cash flows at current market interest rates reflective of the characteristics, location, and market of each property. Expected future net cash flows include contractual and projected cash flows and forecasted operating expenses, and take into account interest, rental and occupancy rates derived from market surveys. The estimates of future cash inflows, in addition to expected rental income from current leases, include projected income from future leases based on significant assumptions that are consistent with current market conditions. The future rental rates are estimated based on the location, type and quality of the properties, and take into account market data and projections at the valuation date. The fair values are typically compared to market-based information for reasonability, including recent transactions involving comparable assets. The methodologies and inputs used in these models are in accordance with real estate industry valuation standards. Valuations are prepared externally or internally by professionally accredited real estate appraisers.

The fair value of short-term securities is approximated by their carrying amount adjusted for credit risk where appropriate.

Due to their nature, the fair value of policy loans and cash are assumed to be equal to their carrying values, which is the amount these assets are recorded at in our Consolidated Statements of Financial Position.

Investments for accounts of segregated fund holders are recorded at fair value with changes in fair value recorded in net realized and unrealized gains (losses) within the segregated fund and are not recorded in our Consolidated Statements of Operations. The fair value of investments for accounts of segregated fund holders is determined using quoted prices in active markets or independent valuation information provided by investment managers. The fair value of direct investments within investments for accounts of segregated fund holders, such as short-term securities and government and corporate debt securities, is determined according to valuation methodologies and inputs described above in the respective asset type sections. The fair value of the secured borrowings from mortgage securitization is based on the methodologies and assumptions as described above for asset-backed securities.

The methodologies and assumptions for determining the fair values of investment contract liabilities are included in Note 10.B of our 2019 Annual Consolidated Financial Statements.

We categorize our assets and liabilities carried at fair value, based on the priority of the inputs to the valuation techniques used to measure fair value, into a three-level fair value hierarchy as follows:

Level 1: Fair value is based on the unadjusted quoted prices for identical assets or liabilities in an active market. The types of assets and liabilities classified as Level 1 generally include cash and cash equivalents, certain U.S. government and agency securities, exchange-traded equity securities, and certain segregated and mutual fund units held for account of segregated fund holders.

Level 2: Fair value is based on quoted prices for similar assets or liabilities traded in active markets, or prices from valuation techniques that use significant observable inputs, or inputs that are derived principally from or corroborated with observable market data through correlation or other means. The types of assets and liabilities classified as Level 2 generally include Canadian federal, provincial and municipal government, other foreign government and corporate debt securities, certain asset-backed securities, OTC derivatives, and certain segregated and mutual fund units held for account of segregated fund holders.

Level 3: Fair value is based on valuation techniques that require one or more significant inputs that are not based on observable market inputs. These unobservable inputs reflect our expectations about the assumptions market participants would use in pricing the asset or liability. The types of assets and liabilities classified as Level 3 generally include certain corporate bonds, certain other invested assets, and investment properties.

As pricing inputs become more or less observable, assets are transferred between levels in the hierarchy. Total gains and losses in income and OCI are calculated assuming transfers into or out of Level 3 occur at the beginning of the period. For a financial instrument that transfers into Level 3 during the reporting period, the entire change in fair value for the period is included in the Level 3 reconciliation schedule in Note 5 to our 2019 Annual Consolidated Financial Statements. For transfers out of Level 3 during the reporting period, the change in fair value for the period is excluded from the Level 3 reconciliation schedule in Note 5 to our 2019 Annual Consolidated Financial Statements. Transfers into Level 3 occur when the inputs used to price the financial instrument lack observable market data and as a result, no longer meet the Level 1 or 2 criteria at the reporting date. Transfers out of Level 3 occur when the pricing inputs become more transparent and satisfy the Level 1 or 2 criteria at the reporting date.

Transfers into and out of Level 3 for financial assets were $15 million and $304 million for the year ended December 31, 2019, respectively, compared to $14 million and $380 million, respectively, for the year ended December 31, 2018. The total amount of the net realized/unrealized gains (losses) related to financial instruments transferred out of Level 3 during the period, which were excluded from the Level 3 reconciliation, was a gain of $1 million as at December 31, 2019 compared to a loss of $9 million as at December 31, 2018.

Additional information on the fair value measurement of investments can be found in Note 5 of our 2019 Annual Consolidated Financial Statements.

Impairment

Management assesses debt and equity securities, mortgages and loans and other invested assets for objective evidence of impairment at each reporting date. Financial assets are impaired and impairment losses are incurred if there is objective evidence of impairment as a result of one or more loss events that have an impact on the estimated future cash flows that can be reliably estimated. Objective evidence of impairment generally includes significant financial difficulty of the issuer, including actual or anticipated bankruptcy or defaults and delinquency in payments of interest or principal or disappearance of an active market for the financial assets. All equity instruments in an unrealized loss position are reviewed to determine if objective evidence of impairment exists. Objective evidence of impairment for an investment in an equity instrument or other invested asset also includes, but is not limited to, the financial condition and near-term prospects of the issuer, including information about significant changes with adverse effects that have taken place in the technological, market, economic or legal environment in which the issuer operates, and a significant or prolonged decline in the fair value of an equity instrument or other invested asset below its cost.

Additional information on the impairment of financial assets can be found in Notes 1 and 6 of our 2019 Annual Consolidated Financial Statements.

Goodwill

Goodwill represents the excess of the cost of an acquisition over the fair value of the net identifiable tangible and intangible assets of the acquired businesses. Goodwill is carried at original cost less any impairment subsequently incurred. Goodwill is assessed for impairment annually or more frequently if events or circumstances occur that may result in the recoverable amount of a cash generating unit ("CGU") falling below its carrying value. A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of cash inflows from other groups of assets. The goodwill balances are allocated to either individual or groups of CGUs that are expected to benefit from the synergies of the business combination. Goodwill impairment is quantified by comparing a CGU's or a group of CGU's carrying value to its recoverable amount, which is the higher of fair value less cost to sell and value in use. Impairment losses are recognized immediately and cannot be reversed in future periods.

No impairment charges were recognized in 2019. We had a carrying value of $5.8 billion in goodwill as at December 31, 2019. Additional information on goodwill can be found in Note 9 of our 2019 Annual Consolidated Financial Statements.

Intangible Assets

Intangible assets consist of finite life and indefinite life intangible assets. Finite life intangible assets are amortized on a straight-line basis or using a units-of-production method, over the useful economic lives which are varying periods of up to 40 years. Amortization is charged through operating expenses. The useful lives of finite life intangible assets are reviewed annually, and the amortization is adjusted as necessary. Indefinite life intangibles are not amortized, and are assessed for impairment annually or more frequently if events or changes in circumstances indicate that the asset may be impaired. Impairment is assessed by comparing the carrying values of the indefinite life intangible assets to their recoverable amounts. The recoverable amount is the higher of an asset's fair value less costs to sell and its value in use. If the carrying values of the indefinite life intangibles exceed their recoverable amounts, these assets are considered impaired, and a charge for impairment is recognized in our Consolidated Statements of Operations. The recoverable amount of intangible assets is determined using various valuation models, which require management to make certain judgments and assumptions that could affect the estimates of the recoverable amount. Impairment charges on intangible assets of $15 million were recognized in 2019 and there were no impairment charges in 2018.

As at December 31, 2019 our finite life intangible assets had a carrying value of $1.4 billion, which reflected the value of the field force, asset administration contracts, and Client relationships acquired as part of the Clarica, CMG Asia, Genworth EBG, Ryan Labs, Prime Advisors, Bentall Kennedy, and the U.S. employee benefits business acquisitions, as well as software costs. Our indefinite life intangible assets had a carrying value of $0.6 billion as at December 31, 2019. The value of the indefinite life intangible assets reflected fund management contracts of MFS and BGO.

Income Taxes

Income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities. Deferred income tax is provided using the liability method. Our provision for income taxes is calculated based on the tax rates and tax laws that have been enacted or substantially enacted by the end of the reporting period.

As a multinational organization, we are subject to taxation in numerous jurisdictions. We seek to operate in a tax efficient manner while ensuring that we are in compliance with all laws and regulations. The determination of the required provision for current and deferred income taxes requires that we interpret tax legislation in the jurisdictions in which we operate and that we make assumptions about the expected timing of realization of deferred income tax assets and liabilities. Tax laws are complex and their interpretation requires significant judgment. The provision for income taxes reflects management's interpretation of the relevant tax laws and its best estimate of the income tax implications of the transactions and events during the period. We believe that our provisions for uncertain tax positions appropriately reflect the risk of tax positions that are under audit, dispute or appeal with tax authorities, or which are otherwise considered to involve uncertainty. The adequacy of our tax provision is reviewed at the end of each reporting period. To the extent that our interpretations differ from those of tax authorities or the timing of realization is not as expected, the provision for income taxes may increase or decrease in future periods to reflect actual experience. The amount of any increase or decrease cannot be reasonably estimated.

Deferred income tax assets are recognized for all deductible temporary differences, carry forward of unused tax losses and unused tax credits to the extent that it is probable that taxable profit will be available against which the temporary differences, unused tax losses and unused tax credits can be utilized. At each reporting period, we assess all available evidence, both positive and negative, to determine the amount of deferred income tax assets to be recorded. If it is probable that the benefit of tax losses and tax deductions will not be realized, a deferred income tax asset is not recognized. The assessment requires significant estimates and judgment about future events based on the information available at the reporting date.

From time to time, local governments, in countries in which we operate, enact changes to statutory corporate income tax rates. These changes require us to review and re-measure our deferred tax assets and liabilities as of the date of enactment. As at December 31, 2019, our net deferred tax asset in the Consolidated Statements of Financial Position was $1,049 million, primarily in Canada. Any future tax rate reductions in jurisdictions where we carry a net deferred tax asset, could result in a reduction in the carrying value of the deferred tax asset and a corresponding income tax expense at the time of substantial enactment of a rate reduction.

Pension Plans and Other Post-Retirement Benefits

The Company sponsors defined benefit pension plans and defined contribution plans for eligible employees. All of our material defined benefit plans worldwide are closed to new entrants with new hires participating in defined contribution plans. Our defined benefit pension plans offer benefits based on length of service and final average earnings and certain plans offer some indexation of benefits. We maintain certain supplementary non-contributory defined benefit pension arrangements for eligible employees, which are primarily for benefits which are in excess of local tax limits. In addition to these plans, in some countries the Company sponsors certain post-retirement benefit plans (for medical, dental and/or life insurance benefits) for eligible qualifying employees and their dependents who meet certain requirements.

In Canada, since January 1, 2009, all new employees participate in a defined contribution plan, while existing employees continue to accrue future benefits in the prior plan which provides a defined benefit plan and an optional contributory defined contribution plan.

With the closure of the Canadian defined benefit plans to new entrants, the volatility associated with future service accruals for active members has been limited and will decline over time. As at December 31, 2019, there are no active members in the UK and no active employees accruing future service benefits in the U.S. defined benefit plans.

The major risks remaining in relation to past service obligations are increases in liabilities due to a decline in discount rates, greater life expectancy than assumed and adverse asset returns. We have significantly de-risked the investments of our material defined benefit pension plans Company-wide by systematically shifting the pension asset mix towards liability matching investments. The target for our significant plans is to minimize volatility in funded status arising from changes in discount rates and exposure to equity markets.

Due to the long-term nature of these defined benefit plans, the calculation of benefit expenses and accrued benefit obligations depends on various assumptions, including discount rates, rates of compensation increases, health care cost trend rates, retirement ages, mortality rates and termination rates. Based upon consultation with external pension actuaries, management determines the assumptions used for these plans on an annual basis. The discount rate used for our material defined benefit plans is determined with reference to market yields of high-quality corporate bonds that are denominated in the same currency in which the benefits will be paid, and that have terms to maturity approximating the terms of obligations.

Actual experience may differ from that assumed, which would impact the valuation of defined benefit plans and the level of benefit expenses recognized in future years. Details of our pension and post-retirement benefit plans and the key assumptions used for the valuation these plans are included in Note 25 of our 2019 Annual Consolidated Financial Statements.

2. Changes in Accounting Policies

We have included in this section a summary of changes in accounting policies. Where there are references to Notes, these are part of our 2019 Annual Consolidated Financial Statements.

New and Amended International Financial Reporting Standards Adopted in 2019

The following new and amended IFRS are effective for annual periods beginning on or after January 1, 2019, and did not have a material impact on our Consolidated Financial Statements:

i. IFRS 16 *Leases* ("IFRS 16")

In January 2016, the International Accounting Standards Board ("IASB") issued IFRS 16, which replaces IAS 17 *Leases* ("IAS 17") and related interpretations. IFRS 16 sets out the principles for the recognition, measurement, presentation, and disclosure of leases for both lessees and lessors. For lessees, IFRS 16 removes the classification of leases as either operating or financing and requires that all leases be recognized on the statement of financial position, with certain exemptions allowed by this new standard. The accounting for lessors is substantially unchanged. We adopted IFRS 16 on a modified retrospective basis as at January 1, 2019 and recognized transition adjustments in retained earnings.

We assess whether a contract is, or contains, a lease at the inception of the contract. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. For leases where we act as the lessee, we recognize a right-of-use asset and a lease liability at the commencement date of the lease. The right-of-use asset is initially measured at cost, which is comprised of the initial amount of the lease liability with certain adjustments, and subsequently depreciated using the straight-line method, with depreciation expense included in Operating expenses in the Consolidated Statements of Operations. The lease liability is initially measured at the present value of lease payments over the term of the lease using a discount rate that is based on our incremental borrowing rate. The discount rate is specific to each lease and is determined by various factors, such as the lease term and currency. The lease term includes the non-cancellable period and the optional period where it is reasonably certain we will exercise or not exercise an extension or termination option, considering various factors that create an economic incentive to do so. Subsequently, the lease liability is measured at amortized cost using the effective interest method, with interest charged to Interest expense in the Consolidated Statements of Operations. Lease liabilities and right-of-use assets are remeasured upon lease modifications.

As a result of the adoption of IFRS 16, we recognized right-of-use assets of $744 million and lease liabilities of $880 million, reported in Other assets and Other liabilities, respectively, on our Consolidated Statements of Financial Position. Together with the de-recognition of deferred balances of $105 million previously recognized under IAS 17 and deferred tax impact of $9 million, the adoption of IFRS 16 reduced opening retained earnings by $22 million on an after-tax basis as at January 1, 2019.

On transition to IFRS 16, we applied the practical expedient to use hindsight when determining the lease term of contracts containing extension or termination options. Our weighted-average incremental borrowing rate applied to lease liabilities as at January 1, 2019 was 3.3%. The difference between our lease liabilities at January 1, 2019 of $880 million and our operating lease commitments at December 31, 2018 of $1,056 million is primarily due to the time value of money.

ii. Other New and Amended IFRS

In June 2017, the IASB issued IFRIC 23 *Uncertainty over Income Tax Treatments* ("IFRIC 23"), which was developed by the IFRS Interpretations Committee. IFRIC 23 clarifies how to apply the recognition and measurement requirements in IAS 12 *Income Taxes* when there is uncertainty over income tax treatments, and requires an entity to determine whether tax treatments should be considered collectively or independently. In addition, IFRIC 23 addresses the assumptions an entity should make about the examination of tax treatments by taxation authorities, as well as how an entity should consider changes in facts and circumstances. IFRIC 23 also provides guidance on how to determine taxable profit (tax loss), tax bases, unused tax losses, unused tax credits, and tax rates, based on whether it is probable that a tax authority will accept an uncertain tax treatment used, or proposed to be used, by an entity in its income tax filings. We adopted IFRIC 23 on a cumulative retrospective basis. Adoption of IFRIC 23 did not have a material impact on our Consolidated Financial Statements.

In October 2017, the IASB issued narrow-scope amendments to IAS 28 *Investments in Associates and Joint Ventures*. The amendments clarify that long-term interests in an associate or joint venture to which the equity method is not applied should be accounted for following the requirements of IFRS 9 *Financial Instruments* ("IFRS 9"). These amendments are required to be applied retrospectively with certain exceptions. As we qualified for and have elected to take the IFRS 9 deferral approach, we will continue to apply IAS 39 *Financial Instruments: Recognition and Measurement* ("IAS 39") to the long-term interests in associates or joint ventures covered by these amendments.

In December 2017, the IASB issued *Annual Improvements to IFRSs 2015-2017 Cycle*, which includes minor amendments to four IFRS standards. These amendments were applied prospectively.

In February 2018, the IASB issued *Plan Amendment, Curtailment or Settlement* which amends IAS 19 *Employee Benefits* ("IAS 19"). Under IAS 19, when an amendment, curtailment or settlement of a defined benefit pension plan occurs, the net defined benefit liability or asset is remeasured. The amendments require an entity to use the updated assumptions from this remeasurement to determine current service cost and net interest for reporting periods after the change to the plan. These amendments were applied to plan amendments, curtailments or settlements occurring on or after January 1, 2019.

New and Amended International Financial Reporting Standards to be Adopted in 2020

The following new and amended IFRS were issued by the IASB and are expected to be adopted by us in 2020:

In March 2018, the IASB issued a revised *Conceptual Framework for Financial Reporting* ("Conceptual Framework"), which replaces the *Conceptual Framework for Financial Reporting* issued in 2010. The revised Conceptual Framework includes revised definitions of an asset and a liability, as well as new guidance on measurement, derecognition, presentation and disclosure. The revised Conceptual Framework is effective for annual periods beginning on or after January 1, 2020. We do not expect the adoption of this guideline to have a material impact on our Consolidated Financial Statements.

In October 2018, the IASB issued *Definition of a Business,* which amends IFRS 3 *Business Combinations*. The amendments clarify the definition of a business to assist entities in determining whether a transaction represents a business combination or an acquisition of assets. The amendments are effective for annual periods beginning on or after January 1, 2020, to be applied prospectively. We do not expect the adoption of these amendments to have a material impact on our Consolidated Financial Statements.

In October 2018, the IASB issued *Definition of Material (Amendments to IAS 1 and IAS 8).* The amendments clarify the definition of material and provide guidance to improve consistency in its application in IFRS standards. The amendments are effective for annual periods beginning on or after January 1, 2020. We do not expect the adoption of these amendments to have a material impact on our Consolidated Financial Statements.

In September 2019, the IASB issued the *Interest Rate Benchmark Reform*, which includes amendments to IFRS 9, IAS 39, and IFRS 7 *Financial Instruments: Disclosures*. The amendments clarify that entities can continue to apply certain hedge accounting requirements assuming that the interest rate benchmark on which the hedged cash flows and cash flows from the hedging instrument are based will not be altered as a result of interest rate benchmark reform. The amendments are effective for annual periods beginning on or after January 1, 2020. We are currently assessing the impact of adoption on our Consolidated Financial Statements.

New and Amended International Financial Reporting Standards to be Adopted in 2021 or Later

The following new and amended standards were issued by the IASB and are expected to be adopted by us in 2021 or later:

In July 2014, the IASB issued the final version of IFRS 9, which replaces IAS 39. IFRS 9 includes guidance on the classification and measurement of financial instruments, impairment of financial assets, and hedge accounting. Financial asset classification is based on the cash flow characteristics and the business model in which an asset is held. The classification determines how a financial instrument is accounted for and measured. IFRS 9 also introduces an impairment model for financial instruments not measured at fair value through profit or loss that requires recognition of expected losses at initial recognition of a financial instrument and the recognition of full lifetime expected losses if certain criteria are met. In addition, a new model for hedge accounting was introduced to achieve better alignment with risk management activities. This standard is effective for annual periods beginning on or after January 1, 2018. In October 2017, the IASB issued narrow-scope amendments to IFRS 9. The amendments clarify the classification of certain prepayable financial assets and the accounting of financial liabilities following modification. The amendments are effective for annual periods beginning on or after January 1, 2019. However, pursuant to the aforementioned amendments to IFRS 4, we elected the deferral approach permitted under IFRS 4 *Insurance Contracts* ("IFRS 4") to continue to apply IAS 39. We are currently assessing the impact that IFRS 9, along with these amendments, will have on our Consolidated Financial Statements.

In May 2017, the IASB issued IFRS 17 *Insurance Contracts*, which replaces IFRS 4. IFRS 17 establishes the principles for the recognition, measurement, presentation, and disclosure of insurance contracts. IFRS 17 is effective for annual periods beginning on or after January 1, 2021. In June 2019, the IASB issued an exposure draft ("ED") that proposes targeted amendments to IFRS 17 for public consultation. As part of the ED, the IASB has proposed to defer the effective date by one year to January 1, 2022 as well as extend the deferral option of IFRS 9 for insurers to that same date. The IASB will continue to discuss comments received on the proposals, including comments on the deferral, before finalizing the amendments later in 2020.

IFRS 17 will affect how we account for our insurance contracts and how we report our financial performance in our Consolidated Statements of Operations. Any regulatory and tax regimes that are dependent upon IFRS accounting values will also be impacted. In particular, the introduction of IFRS 17 will require revisions to OSFI's LICAT guideline. OSFI has indicated that, in developing the revisions to align the LICAT guideline with the accounting standard, they intend to maintain capital frameworks with current capital policies and minimize the potential industry-wide capital impacts.

The adoption of IFRS 17 will be a significant change for us and for the industry. In order to ensure effective implementation, we have established a transition program for IFRS 17 and dedicated significant resources to the implementation. IFRS 17 requires a more expansive set of data, calculations, external disclosure, analyses and controls than the current accounting standard. This necessitates new technologies to support computational aspects and controls relevant to managing the business under IFRS 17. As a result, the project to implement IFRS 17 is a multi-year suite of enterprise-wide actions, technology upgrades, policy and process changes, education and change management initiatives. The program is also dependent on external factors, such as the finalization of the proposed amendments to IFRS 17 and the readiness of a tested solution for the Contractual Service Margin ("CSM"). At this point, we cannot reasonably estimate the effect that IFRS 17 will have on our Consolidated Financial Statements.

We continue to assess both the potential financial statement and business implications of the standard and have regular discussions on application and interpretation of IFRS 17 with our peers in Canada through industry and professional associations. We are also monitoring and participating in international developments related to the adoption and interpretation of this standard.

3. Disclosure Controls and Procedures

The Company has established disclosure controls and procedures that are designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the Company's President and CEO, Executive Vice-President and Chief Financial Officer ("CFO"), and Executive Vice-President, Chief Legal Officer and Public Affairs, on a timely basis so that appropriate decisions can be made regarding public disclosure.

An evaluation of the effectiveness of our disclosure controls and procedures, as defined under rules adopted by the Canadian securities regulatory authorities and the SEC, as at December 31, 2019, was carried out under the supervision of and with the participation of the Company's management, including the CEO and the CFO. Based on our evaluation, the CEO and the CFO concluded that the design and operation of these disclosure controls and procedures were effective as at December 31, 2019.

Management's Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of our financial statements in accordance with IFRS.

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

We conducted an assessment of the effectiveness of our internal control over financial reporting, as of December 31, 2019, based on the framework and criteria established in *Internal Control-Integrated Framework (2013)*, issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that assessment, we have concluded that our internal control over financial reporting was effective as of December 31, 2019.

Our internal control over financial reporting, as of December 31, 2019, has been audited by the Company's external auditor, Deloitte LLP, Independent Registered Public Accounting Firm, who also audited our Annual Consolidated Financial Statements for the year ended December 31, 2019. As stated in the Report of Independent Registered Public Accounting Firm, they have expressed an unqualified opinion on our internal control over financial reporting as of December 31, 2019.

Changes in Internal Control over Financial Reporting

No changes were made in our internal control over financial reporting for the period which began on January 1, 2019 and ended December 31, 2019 that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

N. 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 23 of our 2019 Annual Consolidated Financial Statements.

O. Forward-looking Statements

From time to time, the Company makes written or oral forward-looking statements within the meaning of certain securities laws, including the "safe harbour" provisions of the United States Private Securities Litigation Reform Act of 1995 and applicable Canadian securities legislation. Forward-looking statements contained in this document include statements (i) relating to our strategies, financial objectives, future results of operations, and strategic goals; (ii) concerning our medium-term financial objectives which are described in this MD&A under the heading B - Overview - 2 - Financial Objectives, (collectively, our "medium-term financial objectives"); (iii) relating to productivity and expense initiatives, growth initiatives, outlook, and other business objectives; (iv) relating to our expected tax range for future years; (v) relating to our acquisition of a majority stake in InfraRed; (vi) that are predictive in nature or that depend upon or refer to future events or conditions; (vii) set out in this document under the heading J - Risk Management - 9 - Risk Categories - Market Risk - Market Risk Sensitivities - Equity Market Sensitivities and Interest Rate Sensitivities; (viii) relating to cash flows, anticipated payment obligations, funding requirements and our ability to meet these obligations; (ix) relating to tax provisions; (x) relating to risks and uncertainties; and (xi) that include words such as "achieve", "aim", "ambition", "anticipate", "aspiration", "assumption", "believe", "could", "estimate", "expect", "goal", "initiatives", "intend", "may", "objective", "outlook", "plan", "project", "seek", "should", "strategy", "strive", "target", "will" and similar expressions. Forward-looking statements include the information concerning our possible or assumed future results of operations. These statements represent our current expectations, estimates and projections regarding future events and are not historical facts. Forward-looking statements are not a guarantee of future performance and involve risks and uncertainties that are difficult to predict. Future results and shareholder value may differ materially from those expressed in these forward-looking statements due to, among other factors, the matters set out in this document under the headings B - Overview - 2 - Financial Objectives; D - Profitability - 2019 vs. 2018; I - Capital and Liquidity Management; J - Risk Management; and M - Accounting and Control Matters - 1 - Critical Accounting Policies and Estimates and in the AIF under the heading Risk Factors, and the factors detailed in SLF Inc.'s other filings with Canadian and U.S. securities regulators, which are available for review at www.sedar.com and www.sec.gov, respectively.

Medium-Term Financial Objectives

The Company's medium-term financial objectives set out in B - Overview - 2 - Financial Objectives are forward-looking non-IFRS financial measures. Our ability to achieve those objectives is dependent on our success in achieving growth initiatives and business objectives and on certain key assumptions that include: (i) no significant changes in the level of interest rates; (ii) average total equity market return of approximately 8% per annum; (iii) credit experience in line with best estimate actuarial assumptions; (iv) no significant changes in the level of our regulatory capital requirements; (v) no significant changes to our effective tax rate; (vi) no significant increase in the number of shares outstanding; (vii) other key assumptions include: no material changes to our hedging program, hedging costs that are consistent with our best estimate assumptions, no material assumption changes including updates to the economic scenario generator and no material accounting standard changes; and (viii) our best estimate actuarial assumptions used in determining our insurance and investment contract liabilities. Our underlying ROE is dependent upon capital levels and options for deployment of excess capital. Our medium-term financial objectives do not reflect the indirect effects of interest rate and equity market movements including the potential impacts on goodwill or the current valuation allowance on deferred tax assets as well as other items that may be non-operational in nature.

Our target dividend payout ratio of 40%-50% of our underlying net income assumes that economic conditions and our results will enable us to maintain our payout ratio in the target range, while maintaining a strong capital position. The declaration, amount and payment of dividends is subject to the approval of SLF Inc.'s Board of Directors and our compliance with the capital requirements in the Insurance Companies Act (Canada). Additional information on dividends is provided in the section I - Capital and Liquidity Management - 3 - Shareholder Dividends in this MD&A.

Although considered reasonable by the Company, we may not be able to achieve our medium-term financial objectives as the assumptions on which these objectives were based may prove to be inaccurate. Accordingly, our actual results could differ materially from our medium-term financial objectives as described in the section B - Overview - 2 - Financial Objectives in this MD&A. Our medium-term financial objectives do not constitute guidance.

Risk Factors

Important risk factors that could cause our assumptions and estimates, and expectations and projections to be inaccurate and our actual results or events to differ materially from those expressed in or implied by the forward-looking statements contained in this document, including our medium-term financial objectives, are set out below. The realization of our forward-looking statements, including our ability to meet our medium-term financial objectives, essentially depends on our business performance which, in turn, is subject to many risks. Factors that could cause actual results to differ materially from expectations include, but are not limited to: **market risks** - related to the performance of equity markets; changes or volatility in interest rates or credit spreads or swap spreads; real estate investments; and fluctuations in foreign currency exchange rates; **insurance risks** - related to policyholder behaviour; mortality experience, morbidity experience and longevity; product design and pricing; the impact of higher-than-expected future expenses; and the availability, cost and effectiveness of reinsurance; **credit risks** - related to issuers of securities held in our investment portfolio, debtors, structured securities, reinsurers, counterparties, other financial institutions and other entities; **business and strategic risks** - related to global economic and political conditions; the design and implementation of business strategies; changes in distribution channels or Client behaviour including risks relating to market conduct by intermediaries and agents; the impact of competition; the performance of our investments and investment portfolios managed for Clients such as segregated and mutual funds; changes in the legal or regulatory environment, including capital requirements and tax laws; the environment, environmental laws and regulations; **operational risks** - related to breaches or failure of information system security and privacy, including cyber-attacks; our ability to attract and retain employees; legal, regulatory compliance and market conduct, including the impact of regulatory inquiries and investigations; the execution and integration of mergers, acquisitions, strategic investments and divestitures; our information technology infrastructure; a failure of information systems and Internet-enabled technology; dependence on third-party relationships, including outsourcing arrangements; business continuity; model errors; information management; **liquidity risks** - the possibility that we will not be able to fund all cash outflow commitments as they fall due; and **other risks** - tax matters, including estimates and judgments used in calculating taxes; our international operations, including our joint ventures; market conditions that affect our capital position or ability to raise capital; downgrades in financial strength or credit ratings; and the impact of mergers, acquisitions and divestitures.

The following risk factors are related to our acquisition of a majority stake in InfraRed that could have a material adverse effect on our forward-looking statements: (1) the ability of the parties to complete the transaction; (2) failure of the parties to obtain necessary consents and approvals or to otherwise satisfy the conditions to the completion of the transaction in a timely manner, or at all; (3) our ability to realize the financial and strategic benefits of the transaction; (4) the impact of the announcement of the transaction on Sun Life and InfraRed. These risks all could have an impact on our business relationships (including with future and prospective employees, Clients, distributors and partners) and could have a material adverse effect on our current and future operations, financial conditions and prospects.

The Company does not undertake any obligation to update or revise its forward-looking statements to reflect events or circumstances after the date of this document or to reflect the occurrence of unanticipated events, except as required by law.