GREAT-WEST LIFECO INC.

Management's Discussion and Analysis

For the year ended December 31, 2022

MANAGEMENT'S DISCUSSION AND ANALYSIS

FOR THE YEAR ENDED DECEMBER 31, 2022

DATED: FEBRUARY 8, 2023

This Management's Discussion and Analysis (MD&A) presents management's view of the financial condition, financial performance and cash flows of Great-West Lifeco Inc. (Lifeco or the Company) for the three and twelve months ended December 31, 2022 and includes a comparison to the corresponding periods in 2021, to the three months ended September 30, 2022, and to the Company's financial condition as at December 31, 2021, as applicable. This MD&A provides an overall discussion, followed by analysis of the performance of Lifeco's four major reportable segments: Canada, United States (U.S.), Europe and Capital and Risk Solutions.

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BUSINESSES OF LIFECO

Lifeco has operations in Canada, the United States and Europe through The Canada Life Assurance Company (Canada Life), Empower Annuity Insurance Company of America (Empower, formerly known as Great-West Life & Annuity Insurance Company), Putnam Investments, LLC (Putnam) and Irish Life Group Limited (Irish Life).

In Canada, Canada Life offers a broad portfolio of financial and benefit plan solutions for individuals, families, businesses and organizations through two primary business units: Individual Customer and Group Customer. Through the Individual Customer business unit, the Company provides life, disability and critical illness insurance products as well as wealth savings and income products to individual customers. These products are distributed through multiple channels: Advisor Solutions, managing general agencies (MGAs), national accounts and Financial Horizons Group. Through the Group Customer business unit, the Company provides life, accidental death and dismemberment, critical illness, disability, health and dental protection, creditor insurance as well as retirement savings and income and annuity products and other specialty products to group clients in Canada. These products are distributed through an extensive network of group sales offices located across the country through brokers, consultants and financial security advisors.

In the U.S., Empower is a leading provider of employer-sponsored retirement savings plans in the public/non-profit and corporate sectors that offers saving, investment and advisory services through employer-sponsored plans and individual product solutions. This includes the full-service retirement services business of Prudential Financial, Inc. (Prudential) acquired on April 1, 2022. Personal Capital Corporation (Personal Capital) is a hybrid wealth manager that combines a leading-edge digital experience with personalized advice. Empower's products and services are marketed nationwide through its sales force, brokers, consultants, advisors, third-party administrators and financial institutions. Putnam provides investment management services and related administrative functions and distribution services, through a broad range of investment products, including the Putnam Funds, its own family of mutual funds, which are offered to individual and institutional investors.

The Europe segment is comprised of three distinct business units serving customers in the United Kingdom (U.K.), Ireland and Germany, offering individual and group protection and wealth management products, including payout annuity products, equity release mortgages, pensions and investments products. The U.K. and Germany business units operate under the Canada Life brand and the Ireland business unit operates under the Irish Life brand.

The Capital and Risk Solutions segment includes the Reinsurance business unit, which operates primarily in the U.S., Barbados, Bermuda and Ireland. Reinsurance products are provided through Canada Life and its subsidiaries and include both reinsurance and retrocession business transacted directly with clients or through reinsurance brokers. As a retrocessionaire, the Company provides reinsurance to other reinsurers to enable those companies to manage their insurance risk.

Lifeco currently has no other material holdings and carries on no business or activities unrelated to its holdings in Canada Life, Empower, Putnam, Irish Life and their subsidiaries. However, Lifeco is not restricted to investing in those companies and may make other investments in the future.

BASIS OF PRESENTATION AND SUMMARY OF ACCOUNTING POLICIES

The consolidated financial statements of Lifeco, which are the basis for data presented in this report, have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB) unless otherwise noted and are presented in millions of Canadian dollars unless otherwise indicated. This MD&A should be read in conjunction with the Company's annual consolidated financial statements for the period ended December 31, 2022.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

This MD&A contains forward-looking information. Forward-looking information includes statements that are predictive in nature, depend upon or refer to future events or conditions, or include words such as "will", "may", "expects", "anticipates", "intends", "plans", "believes", "estimates", "objective", "target", "potential" and other similar expressions or negative versions thereof. Forward-looking information includes, without limitation, statements about the Company's operations, business (including business mix), financial condition, expected financial performance (including revenues, earnings or growth rates and medium-term financial objectives), ongoing business strategies or prospects, climate-related and diversity-related measures, objectives and targets, anticipated global economic conditions and possible future actions by the Company, including statements made with respect to the expected cost (including deferred consideration), benefits, timing of integration activities and timing and extent of revenue and expense synergies of acquisitions and divestitures, including but not limited to the acquisitions of the full-service retirement business of Prudential, Personal Capital and the retirement services business of Massachusetts Mutual Life Insurance Company (MassMutual), expected capital management activities and use of capital, estimates of risk sensitivities affecting capital adequacy ratios, expected dividend levels, expected cost reductions and savings, expected expenditures or investments (including but not limited to investment in technology infrastructure and digital capabilities and solutions), the timing and completion of the joint venture between Allied Irish Banks plc (AIB) and Canada Life Irish Holding Company Limited, the impact of regulatory developments on the Company's business strategy and growth objectives, the expected impact of the ongoing pandemic health event resulting from the coronavirus (COVID-19) and related economic and market impacts on the Company's business operations, financial results and financial condition. Forward-looking information also includes, without limitation, statements about the expected impact (or lack of impact) of IFRS 17, *Insurance Contracts* and IFRS 9, *Financial Instruments* on the Company's business strategy, financial strength, deployable capital, Life Insurance Capital Adequacy Test (LICAT) ratio, base and net earnings, shareholders' equity, ratings and leverage ratios.

Forward-looking statements are based on expectations, forecasts, estimates, predictions, projections and conclusions about future events that were current at the time of the statements and are inherently subject to, among other things, risks, uncertainties and assumptions about the Company, economic factors and the financial services industry generally, including the insurance, mutual fund and retirement solutions industries. They are not guarantees of future performance, and the reader is cautioned that actual events and results could differ materially from those expressed or implied by forward-looking statements. Many of these assumptions are based on factors and events that are not within the control of the Company and there is no assurance that they will prove to be correct. In particular, statements about the expected impact of IFRS 17 on the Company (including statements about the impact on base and net earnings and the Canada Life Assurance Company LICAT Ratio) are based on the Company’s expected 2023 earnings mix and composition as at the start of 2023, including the reflection of insurance contract earnings on an IFRS 17 basis and adjusted to reflect fully synergized earnings from the acquisitions of MassMutual and Prudential's retirement services businesses, and on current market and economic conditions. Further, the LICAT sensitivities presented in this MD&A have been prepared on the basis of IFRS 4, *Insurance Contracts* and IAS 39, *Financial Instruments: Recognition and Measurement* (IAS 39) and may change on transition to IFRS 17 and IFRS 9. In all cases, whether or not actual results differ from forward-looking information may depend on numerous factors, developments and assumptions, including, without limitation, the severity, magnitude and impact of the COVID-19 pandemic (including the effects of the COVID-19 pandemic and the effects of governments' and other businesses' responses to the COVID-19 pandemic on the economy and the Company's financial results, financial condition and operations), the duration of COVID-19 impacts and the availability and adoption of vaccines, the effectiveness of vaccines, the emergence of COVID-19 variants, geopolitical tensions and related economic impacts, assumptions around sales, fee rates, asset breakdowns, lapses, plan contributions, redemptions and market returns, the ability to integrate the acquisitions of Personal Capital and the retirement services businesses of MassMutual and Prudential, the ability to leverage Empower's, Personal Capital's, MassMutual's and Prudential's retirement services businesses and achieve anticipated synergies, customer behaviour (including customer response to new products), the Company's reputation, market prices for products provided, sales levels, premium income, fee income, expense levels, mortality experience, morbidity experience, policy and plan lapse rates, participant net contribution, reinsurance arrangements, liquidity requirements, capital requirements, credit ratings, taxes, inflation, interest and foreign exchange rates, investment values, hedging activities, global equity and capital markets (including continued access to equity and debt markets), industry sector and individual debt issuers' financial conditions (including developments and volatility arising from the COVID-19 pandemic, particularly in certain industries that may comprise part of the Company's investment portfolio), business competition, impairments of goodwill and other intangible assets, the Company's ability to execute strategic plans and changes to strategic plans, technological changes, breaches or failure of information systems and security (including cyber attacks), payments required under investment products, changes in local and international laws and regulations, changes in accounting policies and the effect of applying future accounting policy changes, changes in actuarial standards, unexpected judicial or regulatory proceedings, catastrophic events, continuity and availability of personnel and third party service providers, the Company's ability to complete strategic transactions and integrate acquisitions, unplanned material changes to the Company's facilities, customer and employee relations or credit arrangements, levels of administrative and operational efficiencies, changes in trade organizations, and other general economic, political and market factors in North America and internationally.

The reader is cautioned that the foregoing list of assumptions and factors is not exhaustive, and there may be other factors listed in other filings with securities regulators, including factors set out in the Company's 2022 Annual MD&A under "Risk Management and Control Practices" and "Summary of Critical Accounting Estimates" and in the Company's annual information form dated February 8, 2023 under "Risk Factors", which, along with other filings, is available for review at www.sedar.com. The reader is also cautioned to consider these and other factors, uncertainties and potential events carefully and not to place undue reliance on forward-looking information.

Other than as specifically required by applicable law, the Company does not intend to update any forward-looking information whether as a result of new information, future events or otherwise.

Important Note Regarding Sustainability Disclosure

Certain forward-looking statements in this MD&A relate to the Company's climate-related and diversity-related measures, objectives, priorities, strategies and commitments or actions that will be taken to achieve them. The climate-related statements include statements with respect to reducing the Company's greenhouse gas (GHG) emissions related to its own activities and energy consumption and achieving net-zero GHG emissions for its operating and financing activities by 2050, the causes and potential impacts of climate change globally, and the Company's approach to identifying and managing climate-related risks and opportunities. The diversity-related statements include statements with respect to growing representation of women and underrepresented minorities in management. The forward-looking climate-related and diversity-related information in this MD&A is presented for the purpose of assisting our stakeholders in understanding how we intend to address climate-related governance, strategy, risks, opportunities, and objectives, and may not be appropriate for other purposes.

Any commitments, goals or targets discussed in this MD&A, including but not limited to the Company's net-zero related commitments and diversity-related measures, are aspirational and may need to be changed or recalibrated as data improve and as climate science, regulatory requirements and market practices regarding standards, methodologies, metrics and measurements evolve. Our climate risk analysis and net-zero strategy remain under development, and the data underlying our analysis and strategy remain subject to evolution over time. We are also continuing to develop our diversity-related data. There is a strong possibility that our expectations, forecasts, estimates, predictions and conclusions may not prove to be accurate and our assumptions may prove to be incorrect, and there is a material risk we will not achieve our climate-related and diversity-related objectives, priorities, strategies and commitments. In addition, many of the assumptions, standards, metrics and measurements used in preparing these forward-looking statements are not audited or independently verified, have limited comparability and continue to evolve.

There are limitations and uncertainties inherent in climate science, climate risk analysis and reporting. There are many factors that are the subject of ongoing climate science and that we cannot foresee or accurately predict, which will impact the Company's ability to achieve its climate-related objectives, priorities, strategies and commitments. There are also many factors which will impact the Company's ability to achieve its diversity-related objectives, priorities, strategies and commitments. These factors include, without limitation, the transition to a low-carbon economy, the need for more and better climate data and standardization of climate-related measurement methodologies, our ability to gather and verify data, our ability to develop indicators to effectively monitor our advancements and assess and manage climate-related risks, the need for active and continued action by stakeholders (including governmental and non-governmental organizations, our counterparties and other businesses and individuals), compliance with our policies and procedures, our ability to recruit and retain key personnel in a competitive environment for talent, technological advancements, the evolution of consumer behaviour, varying decarbonization efforts across economies, the challenges of balancing emission reduction objectives with an orderly, just and inclusive transition and geopolitical factors that impact global energy needs, the legal and regulatory environment, and regulatory compliance considerations.

CAUTIONARY NOTE REGARDING NON-GAAP FINANCIAL MEASURES AND RATIOS

This MD&A contains some non-Generally Accepted Accounting Principles (GAAP) financial measures and non-GAAP ratios as defined in National Instrument 52-112 “Non-GAAP and Other Financial Measures Disclosure”. Terms by which non-GAAP financial measures are identified include, but are not limited to, "base earnings (loss)", "base earnings (loss) (US$)", "core net earnings (loss)", "premiums and deposits", "assets under management" and "assets under administration". Terms by which non-GAAP ratios are identified include, but are not limited to, “base earnings per common share (EPS)”, “base return on equity (ROE)”, "base dividend payout ratio" and “effective income tax rate – base earnings – common shareholders “. Non-GAAP financial measures and ratios are used to provide management and investors with additional measures of performance to help assess results where no comparable GAAP (IFRS) measure exists. However, non-GAAP financial measures and ratios do not have standard meanings prescribed by GAAP (IFRS) and are not directly comparable to similar measures used by other companies. Refer to the "Non-GAAP Financial Measures and Ratios" section in this MD&A for the appropriate reconciliations of these non-GAAP financial measures to measures prescribed by GAAP as well as additional details on each measure and ratio.

CONSOLIDATED OPERATING RESULTS

Selected consolidated financial information
(in Canadian $ millions, except for per share amounts)

	As at or for the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Earnings					
Base earnings[1]	**$ 892**	$ 688	$ 825	**$ 3,219**	$ 3,260
Net earnings - common shareholders	**1,026**	688	765	**3,219**	3,128
Per common share					
Basic:					
Base earnings[2]	**0.957**	0.738	0.887	**3.455**	3.507
Net earnings	**1.101**	0.738	0.822	**3.455**	3.365
Diluted net earnings	**1.100**	0.738	0.820	**3.452**	3.360
Dividends paid	**0.490**	0.490	0.490	**1.960**	1.804
Book value[3]	**26.60**	25.61	24.71		
Base return on equity[2]	**13.6 %**	13.5 %	14.6 %		
Return on equity[3]	**13.6 %**	12.7 %	14.0 %		
Total net premiums	**$ 8,544**	$ 13,921	$ 12,989	**$ 52,821**	$ 52,813
Total premiums and deposits[1]	**44,165**	44,265	47,654	**174,179**	168,803
Fee and other income	**1,979**	1,897	1,885	**7,598**	7,294
Net policyholder benefits, dividends and experience refunds	**16,193**	14,162	12,241	**58,132**	47,252
Total assets per financial statements	**$ 701,455**	$ 672,764	$ 630,488		
Total assets under management[1]	**1,033,189**	991,905	1,007,643		
Total assets under administration[1,4]	**2,497,712**	2,384,273	2,291,592		
Total equity	**$ 32,318**	$ 31,361	$ 30,483		
The Canada Life Assurance Company consolidated LICAT Ratio[5]	**120 %**	118 %	124 %		

1 This metric is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.
2 This metric is a non-GAAP ratio. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.
3 Refer to the "Glossary" section of this document for additional details on the composition of this measure.
4 2021 comparative figures have been restated to include Financial Horizons Group and Excel Private Wealth Inc. assets under administration in the Canada segment.
5 The Life Insurance Capital Adequacy Test (LICAT) Ratio is based on the consolidated results of The Canada Life Assurance Company (Canada Life), Lifeco's major Canadian operating subsidiary. The LICAT Ratio is calculated in accordance with the Office of Superintendent of Financial Institutions' Guideline - Life Insurance Capital Adequacy Test. Refer to the "Capital Management and Adequacy" section of this document for additional details.

LIFECO 2022 HIGHLIGHTS

Financial Performance

- For the twelve months ended December 31, 2022, base earnings per common share were $3.455 compared to $3.507 a year ago, reflecting the Company's strong performance, against a backdrop of market volatility and elevated inflation, supported by a diversified business portfolio and operational discipline. 2022 base earnings included a net provision for estimated claims resulting from the impact of Hurricane Ian of $128 million after-tax in the Capital and Risk Solutions segment. The third quarter of 2021 also included a provision for major weather events for $61 million. For the twelve months ended December 31, 2022, base earnings of $3,219 million were down $41 million or 1% compared to 2021 base earnings of $3,260 million.

- For the twelve months ended December 31, 2022, net earnings per common share were $3.455, compared to $3.365 for the previous year, an increase of 3%. In 2022, in addition to base earnings, Lifeco's net earnings included transaction, restructuring and integration costs of $180 million compared to $255 million in 2021, primarily related to recent acquisitions in the United States and Europe segments. 2022 net earnings also included a net positive $84 million impact from tax legislative changes in the Canada segment compared to a net negative impact of $21 million in the Europe segment in 2021. These items were partially offset by market-related impacts on liabilities of negative $33 million compared to positive $24 million in 2021.
- The Company maintained its strong capital position as evidenced by a Life Insurance Capital Adequacy Test (LICAT) Ratio at December 31, 2022 of 120% for Canada Life, Lifeco's major operating subsidiary, which exceeded the OSFI Supervisory Target Total Ratio of 100%, and Supervisory Minimum Total Ratio of 90%.
- For the twelve months ended December 31, 2022, Lifeco's combined quarterly dividends paid to common shareholders increased by 8.6% to $1.960 per share.
- The Company's financial leverage ratio at December 31, 2022 was 34.4% compared to 33.2% in the previous year. The increase was primarily due to a temporary increase in short-term debt to fund the acquisition of the retirement services business of Prudential and the issuance of a €500 million senior 4.70% euro bond on November 16, 2022. The Company currently expects to redeem the €500 million senior 2.50% euro bond at maturity on April 18, 2023, which would reduce pro forma leverage at December 31, 2022 by 1.1%.

Medium-Term Financial Objectives

The Company introduced medium-term financial objectives in 2021, with medium-term defined as 3 to 5 years. The Company aims to create value through disciplined capital deployment to achieve, over the medium-term, 8-10% base EPS growth per annum, 14-15% base return on equity (ROE) and to deliver strong cash generation.

	1-Year	5-Year
Medium-Term Financial Objectives	**Base[1]**	**Base[1]**
8-10% base EPS growth per annum[1]	(1.5)%	8.8% CAGR[2]
14-15% base ROE[1]	13.6%	13.1% average
Target dividend payout ratio 45-55% of base earnings[1]	56.7%	58.3% average
Net Financial Highlights	**Net**	**Net**
Net EPS growth per annum	2.7%	9.7% CAGR
Net ROE	13.6%	13.5% average
Dividend payout ratio[3]	56.7%	56.7% average

[1] This metric is a non-GAAP ratio. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details. Upon adoption of the IFRS 17, *Insurance Contracts* accounting standard effective January 1, 2023, the Company will increase the target range for its base ROE objective to 16-17% reflecting changes to shareholders' equity on transition.

[2] 2017 base earnings were calculated by excluding items from net earnings as discussed in the "Non-GAAP Financial Measures and Ratios" section of this document. In addition, the Company excluded earnings related to the business transferred to Protective Life under an indemnity reinsurance agreement in 2019 to provide a more accurate comparison for the 5-year growth rate. 2017 base earnings were $2,244 million and base earnings per share was $2.269 compared to net earnings of $2,149 million and net earnings per share of $2.173. Items excluded from 2017 base earnings included a positive impact on actuarial assumption changes and management actions of $243 million, a negative impact on market-related impacts on liabilities of $3 million, restructuring and integration costs of $160 million, a net charge on business disposition of $122 million, a net charge on tax legislative impacts of $216 million and $163 million of earnings related to the business transferred to Protective Life in 2019.

[3] Refer to the "Glossary" section of this document for additional details on the composition of this measure.

2022 DEVELOPMENTS

Strategic Highlights and Transactions

The Company announced the following strategic business transactions in the U.S., Canada and Ireland to add scale, grow and extend their businesses.

United States

On April 1, 2022, a Lifeco subsidiary, Empower Annuity Insurance Company of America (formerly Great-West Life & Annuity Insurance Company), which operates primarily as "Empower", completed the acquisition of the full-service retirement services business of Prudential Financial, Inc. (Prudential). With the completion of the acquisition, Empower's reach in the U.S. has expanded to approximately 81,000 workplace savings plans as of December 31, 2022.

The Company funded the total transaction value of US$3,480 million with US$1,193 million of limited recourse capital notes and US$823 million of short-term debt, in addition to existing resources.

Empower anticipates realizing cost synergies through the migration of Prudential's retirement services business onto Empower's recordkeeping platform. Estimated run-rate cost synergies of US$180 million are expected to be phased in over 24 months primarily when systems migrations are completed. As of December 31, 2022, US$43 million of pre-tax run rate cost synergies have been achieved. Revenue synergies of US$20 million are expected on a run-rate basis by the end of 2024 and are expected to grow to US$50 million by 2026.

The Company completed the integration of Massachusetts Mutual Life Insurance Company's retirement business (MassMutual) as of December 31, 2022, and has achieved US$160 million of final pre-tax run rate cost synergies in line with original expectations. In the fourth quarter of 2022 pre-tax run rate cost synergies increased US$59 million pre-tax compared to US$101 million pre-tax as of September 30, 2022. Empower is on track to achieve run rate revenue synergies of US$30 million pre-tax in 2024 and revenue synergies are expected to continue to grow beyond 2024.

In July 2022, Empower initiated a new brand identity, with the name “Empower” replacing “Empower Retirement", capturing the essence of the company’s mission: to increase people’s financial confidence and successfully achieve short and long-term financial wellness goals on their path to retirement. The change also simplifies customer connections and better represents the company's expansion into financial wellness. The Company believes the new public-facing brand name will help to continue to drive business growth as it more accurately reflects its broadening stature and rapid growth.

Canada

On April 4, 2022, Canada Life and ClaimSecure Inc. (ClaimSecure) launched SecurePak, a bundled offering of Canada Life's insurance benefits and ClaimSecure's health and dental claims adjudication services. SecurePak offers plan sponsors the advantage of modernized claims processing through ClaimSecure and the security of Canada Life's pooled products for plans in the small-case market with 25 to 200 plan members.

On October 1, 2022, Plan Member as Customers was rebranded as Freedom Experience. The Company is leveraging this brand by renaming several direct-to-consumer products distributed by Group Customer with the Freedom Experience brand. A dedicated team will be focused on distributing these products and bringing the Freedom Experience to Canadians.

Europe

In Q4 2022, Irish Life completed the portfolio transfer of Ark Life Assurance Company dac (Ark Life), which was integrated into Irish Life's Retail division effective October 1, 2022. This follows the purchase of Ark Life on November 1, 2021 by Irish Life Group Limited. During the fourth quarter of 2022, Ark Life changed its legal name to Irish Life Ark Dublin dac.

Capital Transactions
On November 16, 2022, the Company completed the offering of €500 million senior 4.70% euro bonds maturing on November 16, 2029. Net proceeds of the transaction are being used for general corporate purposes.

On March 30, 2022, Great-West Lifeco U.S. LLC, a subsidiary of the Company, established a 2-year US$500 million non-revolving credit facility with interest on the drawn balance equal to a float rate based on the Adjusted Term Secured Overnight Financing Rate (SOFR). The facility is fully and unconditionally guaranteed by the Company. The $645 million (US$500 million) facility was fully drawn, along with $416 million (US$323 million) from an existing revolving credit facility to finance a portion of the Prudential retirement service business acquisition on the acquisition date.

On July 1, 2022, Great-West Lifeco U.S. LLC made an initial payment of US$150 million on its existing revolving credit facility, followed by a final payment of US$173 million on December 30, 2022. As at December 31, 2022, the $675 million (US$500 million) facility remained fully drawn and the existing revolving credit facility balance was nil.

Macroenvironmental Risks
While governments in different regions have now moved to ease COVID-19 pandemic restrictions, many factors continue to extend economic uncertainty. Global financial markets continue to be volatile, in part due to Russia's military invasion of Ukraine and the related sanctions. This volatility has contributed to global supply chain disruptions and in turn, elevated levels of inflation, prompting central banks to raise interest rates in response in many of the countries in which the Company operates.

The outlook for financial and real estate markets over the short and medium-term remains highly uncertain and the Company actively monitors events and information globally. To date, net impacts have been modest, reflecting the Company's diversified business and portfolio investments. The Company continues to manage risks of changes to mortality and longevity rates as well as to monitor financial market conditions and heightened cyber and global supply chain risks which could negatively affect the Company's financial outlook, results and operations.

The Company’s well-diversified businesses, combined with business strength, resilience and experience managing through market volatility, puts the Company in a strong position in the current environment to leverage opportunities for the future. Lifeco's strategies are resilient and flexible, positioning the Company to navigate current market conditions and continue to identify and pursue opportunities, including organic growth and acquisition activities, while supporting customers and employees in an evolving environment.

Update on Transition to IFRS 17 and IFRS 9

As noted in the "Accounting Policies" section of this document, IFRS 17, *Insurance Contracts* (IFRS 17) has replaced IFRS 4, *Insurance Contracts* (IFRS 4) effective January 1, 2023. While the new standard will change the recognition and measurement of insurance contracts and the corresponding presentation and disclosures in the Company's financial statements, it is not expected to have a material financial impact or to change the Company's underlying business strategy. IFRS 9, *Financial Instruments* (IFRS 9) has replaced IAS 39, *Financial Instruments: Recognition and Measurement* effective January 1, 2023, and is not expected to lead to a material change in the level of invested assets. Upon adoption of IFRS 17 and IFRS 9, the Company expects an increase in net earnings volatility.

The Company will report under the new standards for the first time for the quarter ended March 31, 2023. The Company continues to evaluate the impact of the adoption of these standards. Based on analysis to date, the expected impacts of the adoption of IFRS 17 include:

- Businesses now representing approximately 65% of base earnings[1,2] are expected to experience limited or no impact;
- The January 1, 2022 shareholders' equity is expected to decrease by approximately 12% on the adoption of IFRS 17 on January 1, 2023 in line with original expectations, primarily due to the establishment of the contractual service margin (CSM), partially offset by the removal of provisions no longer required under IFRS 17;
- The CSM established for in-force contracts as at January 1, 2022 was $6.3 billion associated with the shareholders' account and $2.3 billion associated with the participating account. This does not include the CSM on in-force segregated fund business which does not have a material impact on capital or opening equity;
- Low-single digit percentage decrease in proforma base earnings[1,2] is expected as a result of transition with no material change to base earnings trajectory; however, increased volatility in net earnings is expected driven by the de-linking of asset and liability measurement. Actual differences between IFRS 4 and IFRS 17 results in any given period will vary depending on the composition of earnings drivers;
- Medium-term financial objectives for base EPS[3] growth and base dividend payout ratio[3] remain unchanged;
- Medium-term financial objective for base ROE[3] is increased by 2% to 16-17% reflecting the change in shareholders' equity; and
- Financial strength will be maintained and a positive impact of approximately 10 points to the March 31, 2023 Canada Life consolidated LICAT Ratio is expected[4] based on the 2023 LICAT Guideline and current market and economic conditions.

1 This metric is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.

2 Proforma base and net earnings are calculated based on the expected 2023 earnings mix and composition as at the start of 2023, including the reflection of insurance contract earnings on an IFRS 17 basis and adjusted to reflect fully synergized earnings from the acquisitions of MassMutual's and Prudential's retirement services businesses. Many of these estimates and assumptions are based on factors and events that are not within the control of the Company's management and there is no assurance that they will prove to be correct. Refer to "Cautionary Note regarding Forward-looking Information" and "Cautionary Note regarding Non-GAAP Financial Measures and Ratios" at the beginning of this document.

3 This metric is a non-GAAP ratio. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.

4 Actual impact will depend on market and economic conditions and the Company's operating results at the time of transition.

Outlook for 2023

Refer to Cautionary Note regarding Forward-looking Information and Cautionary Note regarding Non-GAAP Financial Measures and Ratios at the beginning of this document.

In 2022, Lifeco's solid results, despite challenging market conditions, reflected the resilience of its diversified business portfolio and focus on operational efficiency. In 2023, Lifeco will continue to center its efforts on managing current challenges and adapting to an uncertain environment. Focused on the customer and leveraging its risk and investment expertise, Lifeco will continue to make disciplined choices consistent with its four value-creation priorities to drive growth across its business portfolio. The priorities represent areas of strength where the Company is committed to investing to create shareholder value:

- Continue to scale and leverage millions of customer relationships to capture value through advice-based wealth and insurance solutions;
- Deliver efficient and effective advice, solutions and service for customers through multiple digitally-enabled channels;
- Extend workplace participant relationships into lifetime customer relationships through hybrid advice, solutions and services; and
- Leverage risk and investment expertise to enable and augment wealth and insurance solutions.

The Company intends to invest strategically, both organically and through acquisitions, to drive growth and productivity, while maintaining strong risk and expense discipline, to deliver sustainable long-term value to its customers and shareholders.

With the acquisitions announced and completed in 2021 and 2022, the Company will continue to focus on completing and integrating acquisitions to enhance the customer experience and realize target synergies to maximize contributions to earnings in 2023.

In 2023, the Company will continue to expand its analytical capabilities following the successful implementation of accounting changes related to IFRS 17 and IFRS 9, which are effective on January 1, 2023.

In Canada, the Company will continue to leverage the strength of the Canada Life brand to develop innovative products and services, broaden and deepen its distribution channels and ultimately, better serve its customers. Specifically, in its Individual Customer business, Canada Life will continue to advance on its strong advisor value proposition across all channels with a comprehensive range of individual insurance and individual wealth management products, ensuring the best tools and strategies are in place to drive long-term financial security for its customers. In its Group Customer business, Canada Life will continue to invest in new digital capabilities and innovative benefits solutions, driving enhanced personalization and insights for its clients and their plan members, while improving efficiency and customer service. Group Customer plans to capitalize on its recent acquisition of ClaimSecure and leverage newly acquired capabilities to offer an enhanced product shelf as well as grow in the third party administrator business segment. Operational resiliency and disciplined expense management across Canada Life's diversified portfolio of products and services will also be key to delivering strong financial results in 2023 in Canada.

In the U.S., Empower expects continued investments in improving customer web experiences, including adding innovative capabilities and ease of service products with the aim of increasing customer retention and ultimately increasing participant retirement savings by helping customers better understand their current financial needs through financial advice and goal setting. Empower also expects continued growth in retail by leveraging the capabilities of Personal Capital to deliver hybrid digital advice and wealth management solutions to drive increased retail penetration. Similar to the recent Personal Capital and MassMutual business acquisitions, additional cost synergies related to Prudential are anticipated to be realized throughout 2023 and the first half of 2024 as the migration of Prudential's retirement services business onto Empower's recordkeeping platform continues. Putnam is focused on innovative product and service offerings to drive strong investment performance and enhanced brand recognition while managing firm-wide expenses, as it seeks to further build a scalable and profitable asset management franchise.

In the United Kingdom (U.K.), the Company is focusing on the growing retirement market by developing solutions for individuals who require additional pension flexibility and further develop its presence in the bulk annuity market. In Ireland, the focus will be on strengthening positions in the wealth and employee benefits consulting markets following recent acquisitions in 2020 and 2021 and leveraging technology to enhance the customer experience. In Germany, the Company plans to grow its assets under management and market share through the continued investment and innovation in product development, service enhancement and distribution.

In Capital and Risk Solutions, the Reinsurance business unit will continue to support its clients in existing markets and explore opportunities in new geographies where the Company's innovative reinsurance solutions can be deployed to support clients' evolving needs.

BASE AND NET EARNINGS

Consolidated base earnings and net earnings of Lifeco include the base earnings and net earnings of Canada Life (and its operating subsidiaries), Empower and Putnam, together with Lifeco's Corporate operating results.

Base earnings[1] and Net earnings - common shareholders

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Base earnings (loss)[1]					
Canada	**$ 295**	$ 283	$ 317	**$ 1,146**	$ 1,220
United States	**185**	204	156	**652**	671
Europe	**239**	200	213	**892**	830
Capital and Risk Solutions	**187**	1	145	**532**	547
Lifeco Corporate	**(14)**	—	(6)	**(3)**	(8)
Lifeco base earnings[1]	**$ 892**	$ 688	$ 825	**$ 3,219**	$ 3,260
Items excluded from base earnings					
Actuarial assumption changes and other management actions[2]	**$ 49**	$ 68	$ 23	**$ 129**	$ 134
Market-related impacts on liabilities[2]	**38**	(45)	20	**(33)**	24
Transaction costs related to acquisitions[3]	**(5)**	20	(74)	**(49)**	(189)
Restructuring and integration costs	**(32)**	(43)	(15)	**(131)**	(66)
Tax legislative changes impact	**84**	—	—	**84**	(21)
Net gain/charge on business dispositions[4]	**—**	—	(14)	**—**	(14)
Items excluded from Lifeco base earnings	**$ 134**	$ —	$ (60)	**$ —**	$ (132)
Net earnings (loss) - common shareholders					
Canada	**$ 380**	$ 160	$ 307	**$ 1,116**	$ 1,187
United States	**162**	164	92	**460**	499
Europe	**287**	249	239	**984**	976
Capital and Risk Solutions	**211**	115	133	**662**	532
Lifeco Corporate	**(14)**	—	(6)	**(3)**	(66)
Lifeco net earnings - common shareholders	**$ 1,026**	$ 688	$ 765	**$ 3,219**	$ 3,128

1 This metric is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.
2 Refer to the "Glossary" section of this document for additional details on the composition of this measure.
3 The transaction costs relate to acquisitions in the U.S. segment (the full-service retirement business of Prudential, Personal Capital and the retirement services business of MassMutual) as well as acquisitions in the Europe segment. In addition, the twelve months ended December 31, 2021 included a provision for payments relating to the Company's acquisition of Canada Life.
4 For the three and twelve months ended December 31, 2021, net gain/charge on business dispositions includes a $14 million net charge on business disposition in the Europe Corporate business unit.

The information in the table above is a summary of results for base and net earnings of the Company. Additional commentary regarding base and net earnings is included in the "Segmented Operating Results" section.

Base earnings
Base earnings for the fourth quarter of 2022 of $892 million ($0.957 per common share) increased by $67 million or 8% from $825 million ($0.887 per common share) a year ago. The increase was primarily due to strong new business growth and favourable longevity and improved claims experience on the U.S. life business in the Capital and Risk Solutions segment, Prudential related base earnings of $64 million (US$47 million) as well as favourable investment and longevity experience in the Europe segment. The increase was partially offset by lower fee income driven by lower assets as well as less favourable mortality and investment experience in the Canada segment.

For the twelve months ended December 31, 2022, Lifeco's base earnings were $3,219 million ($3.455 per common share) compared to $3,260 million ($3.507 per common share) a year ago. The decrease was primarily due to lower fee income driven by lower assets, negative currency movement impacts, less favourable mortality, morbidity and investment experience in the Canada segment and the net provision for estimated claims resulting from the impact of Hurricane Ian of $128 million after-tax in the Capital and Risk Solutions segment. These items were partially offset by changes in certain tax estimates and higher earnings on surplus in the Canada segment, favourable investment and mortality experience in the Europe segment and base earnings related to the Prudential acquisition in the U.S. segment.

Net earnings
Lifeco's net earnings for the three month period ended December 31, 2022 of $1,026 million ($1.101 per common share) increased by $261 million or 34% compared to $765 million ($0.822 per common share) a year ago. The increase was primarily due to an increase in base earnings as well as more favourable market-related impacts on liabilities and actuarial assumption changes. In addition, the Company had a net favourable impact of revaluation of net deferred tax assets and actuarial liabilities resulting from an increase to the Canadian federal corporation tax rate substantively enacted during the fourth quarter of 2022. These items were partially offset by higher restructuring and integration costs in the U.S. segment.

For the twelve months ended December 31, 2022, Lifeco's net earnings were $3,219 million ($3.455 per common share) compared to $3,128 million ($3.365 per common share) a year ago. The 3% increase was primarily due to lower Personal Capital transaction costs as well as the net favourable impact of revaluation of net deferred tax assets and actuarial liabilities discussed for the in-quarter results. The increase was partially offset by lower base earnings, negative currency movement impacts as well as unfavourable market-related impacts on liabilities driven by property cash flows in the Europe segment as well as market volatility resulting in hedge ineffectiveness.

Lifeco's net earnings for the three month period ended December 31, 2022 of $1,026 million ($1.101 per common share) increased by $338 million or 49% compared to $688 million ($0.738 per common share) in the previous quarter. Net earnings for the third quarter of 2022 included a net provision for estimated claims resulting from the impact of Hurricane Ian of $128 million after-tax in the Capital and Risk Solutions segment. The increase also reflects new business growth in the Capital and Risk Solutions segment, changes in certain tax estimates in the Canada segment as well as favourable market-related impacts on liabilities.

Actuarial Assumption Changes and Other Management Actions
The impact of actuarial assumption changes resulting from an increase to the Canadian statutory income tax rate is reported under ‘Tax legislative changes impact’ within items excluded from base earnings.

For the three months ended December 31, 2022, other actuarial assumption changes and other management actions resulted in a positive net earnings impact of $49 million. This compares to a positive impact of $23 million for the same quarter last year and a positive impact of $68 million for the previous quarter.

In the Europe segment, net earnings were positively impacted by $37 million, primarily due to management actions including the completion of the Ark Life acquisition and integration in Ireland. In the Capital and Risk Solutions segment, net earnings were positively impacted by $10 million, primarily due to updated annuitant mortality assumptions, partially offset by updated expense assumptions. In the Canada segment, there were no material updates other than the changes related to the Canadian tax rate.

For the twelve months ended December 31, 2022, other actuarial assumption changes and management actions resulted in a positive net earnings impact of $129 million, compared to positive $134 million for the same period in 2021.

In the Capital and Risk Solutions segment, net earnings were positively impacted by $129 million for the twelve months ended December 31, 2022, primarily due to updated annuitant mortality assumptions, partly offset by updated life mortality and expense assumptions. In the Europe segment, net earnings were positively impacted by $117 million, primarily due to updated annuitant mortality assumptions and management actions including the completion of the Ark Life acquisition and integration in Ireland. In the Canada segment, net earnings were negatively impacted by $117 million, primarily due to updated policyholder behaviour assumptions, partially offset by updated life mortality assumptions and model refinements.

Market-Related Impacts

In the regions where the Company operates, average equity market indices for the three months ended December 31, 2022 were down by 16% in the U.S. (as measured by S&P 500), 11% in broader Europe (as measured by EURO STOXX 50), 7% in Canada (as measured by S&P TSX) and consistent in the U.K. (as measured by FTSE 100) compared to the same period in 2021. The major equity indices finished the fourth quarter of 2022 up 14% in broader Europe, 8% in the U.K., 7% in the U.S. and 5% in Canada compared to September 30, 2022. For the twelve months ended December 31, 2022, average equity market levels were lower in the U.S., broader Europe, Canada and remained consistent in the U.K. compared to the same period in 2021.

Market-related impacts on liabilities positively impacted net earnings by $38 million in the fourth quarter of 2022 (positive impact of $20 million in the fourth quarter of 2021), primarily reflecting the impact of equity markets and interest rate movements on the value of segregated fund and variable annuity guarantees, including hedge ineffectiveness, partially offset by the impact of updated cash flow projections for real estate which support insurance contract liabilities in the Europe segment.

For the twelve months ended December 31, 2022, market-related impacts on liabilities negatively impacted net earnings by $33 million (positive impact of $24 million in 2021). The 2022 year-to-date negative impact was primarily due to the negative impact of equity markets and interest rate movements on the value of segregated fund and variable annuity guarantees, including hedge ineffectiveness.

In countries where the Company operates, interest rates increased during 2022, resulting in a modest positive impact on net earnings reflecting higher income on surplus assets, partially offset by lower fees on fixed income products. In order to mitigate the Company's exposure to interest rate fluctuations, the Company follows disciplined processes for matching asset and liability cash flows. As a result, the impact of changing interest rates is mostly mitigated in the current period, with the impact of changes in fair values of bonds backing insurance contract liabilities mostly offset by a corresponding change in the insurance contract liabilities.

For a further description of the Company's sensitivity to equity market and interest rate fluctuations, including expanded sensitivity disclosure as a result of current market conditions, refer to "Financial Instruments Risk Management", note 8 to the Company's December 31, 2022 annual consolidated financial statements.

Foreign Currency

The average currency translation rate for the fourth quarter of 2022 increased for the U.S. dollar and decreased for the British pound and the euro compared to the fourth quarter of 2021. The overall impact of currency movement on the Company's net earnings for the three months ended December 31, 2022 was a decrease of $4 million (decrease of $95 million year-to-date) compared to translation rates a year ago.

From September 30, 2022 to December 31, 2022, the market rates at the end of the reporting period used to translate the U.S. dollar assets and liabilities to the Canadian dollar decreased, while the euro and British pound increased. The movements in end-of-period exchange rates impact the translation of foreign operations, including related hedge activities, resulting in post-tax unrealized foreign exchange gains of $183 million in-quarter ($613 million net unrealized gains year-to-date) recorded in other comprehensive income.

Translation rates for the reporting period and comparative periods are detailed in the "Translation of Foreign Currency" section.

Credit Markets

Credit markets impact on common shareholders' net earnings (after-tax)

	Impairment (charges) / recoveries	Changes in provisions for future credit losses[1]	Total	Impairment (charges) / recoveries	Changes in provisions for future credit losses[1]	Total
	For the three months ended December 31, 2022			**For the twelve months ended December 31, 2022**		
Canada	$ (1)	$ 1	$ —	$ (1)	$ 2	$ 1
United States	(11)	—	(11)	(12)	11	(1)
Europe	(2)	2	—	(5)	—	(5)
Capital and Risk Solutions	—	—	—	—	(1)	(1)
Total	**$ (14)**	**$ 3**	**$ (11)**	**$ (18)**	**$ 12**	**$ (6)**
	For the three months ended December 31, 2021			For the twelve months ended December 31, 2021		
Total	$ (2)	$ 3	$ 1	$ (14)	$ (6)	$ (20)

[1] Impact of changes in credit ratings in the Company's fixed income portfolio on provisions for future credit losses in insurance contract liabilities.

In the fourth quarter of 2022, the Company experienced net charges on impaired investments, including dispositions, which negatively impacted common shareholders' net earnings by $14 million ($2 million net negative impact in the fourth quarter of 2021), primarily due to charges on impaired commercial mortgages. Net charges on impaired investments reflect net allowances for credit losses included in net investment income and the associated release of actuarial provisions for future credit losses, as applicable. Separately, related to non-impaired invested assets, changes in credit ratings in the Company's fixed income portfolio resulted in a net decrease in provisions for future credit losses in insurance contract liabilities, which positively impacted common shareholders' net earnings by $3 million ($3 million positive impact in the fourth quarter of 2021), primarily due to upgrades of certain corporate bond and commercial mortgage holdings.

For the twelve months ended December 31, 2022, the Company experienced net charges on impaired investments, including dispositions, which negatively impacted common shareholders' net earnings by $18 million ($14 million net negative impact in 2021), primarily due to the same reasons discussed for the in-quarter results. Separately, related to non-impaired invested assets, changes in credit ratings in the Company's fixed income portfolio resulted in a net decrease in provisions for future credit losses in insurance contract liabilities, which positively impacted common shareholders' net earnings by $12 million year-to-date ($6 million net negative impact in 2021), primarily due to the same reasons discussed for the in-quarter results.

There could be negative impacts from downgrades in future periods resulting from certain economies that are materially affected by inflationary pressures or geopolitical tensions.

INCOME TAXES

The Company's effective income tax rate on earnings attributable to common shareholders and total Lifeco earnings are presented below.

Effective income tax rate	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Base earnings - Common shareholders[1]	**11.6 %**	6.4 %	9.4 %	**9.6 %**	9.5 %
Net earnings - Common shareholders	**7.7 %**	(3.3)%	9.8 %	**5.9 %**	9.9 %
Net earnings - Total Lifeco	**9.9 %**	1.5 %	3.8 %	**6.2 %**	7.9 %

1 This metric is a non-GAAP ratio. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.

The Company's effective income tax rates are generally lower than the statutory income tax rate of 27.5% due to benefits related to non-taxable investment income and lower income tax in certain foreign jurisdictions.

A Canadian federal corporate income tax rate change, enacted in 2022 (effective after April 7, 2022), increased the statutory income tax rate from 26.5% to 28.0% (prorated to 27.5% in 2022).

In the fourth quarter of 2022, the effective income tax rate on base earnings for the common shareholders of 11.6% was up from 9.4% in the fourth quarter of 2021, primarily due to changes in certain tax estimates. In the fourth quarter of 2022, the effective income tax rate on net earnings for the common shareholders of 7.7% was down from 9.8% in the fourth quarter of 2021, primarily due to the revaluation of a net deferred tax asset resulting from the increase to the Canadian statutory income tax rate as well as jurisdictional mix of earnings. These items were partially offset by changes in certain tax estimates.

In the fourth quarter of 2022, the overall effective income tax rate on net earnings of 9.9%, was up from 3.8% in the fourth quarter of 2021, primarily due to changes in certain tax estimates as well as the revaluation of a net deferred tax liability resulting from the increase to the Canadian statutory income tax rate.

The Company had an effective income tax rate on base earnings for the common shareholders of 9.6% for the twelve months ended December 31, 2022, which was comparable to 9.5% for the same period last year. The Company had an effective income tax rate on net earnings for the common shareholders of 5.9%, down from 9.9% for the same period last year, primarily due to the revaluation of a net deferred tax asset resulting from the increase to the Canadian statutory income tax rate, as well as jurisdictional mix of earnings.

The Company had an overall effective income tax rate on net earnings of 6.2% for the twelve months ended December 31, 2022, down from 7.9% for the same period last year, primarily due to jurisdictional mix of earnings and changes in certain tax estimates.

Refer to note 26 to the Company's December 31, 2022 annual consolidated financial statements for further details.

In December 2021, the Organization for Economic Co-operation and Development (OECD) published model rules outlining a structure for a new global minimum tax regime to be implemented by all participating countries at an agreed future date, currently expected to be 2024. Detailed commentary on the rules was released by the OECD during 2022. The Canadian government confirmed its commitment to implement the global minimum tax, with implementation, including timing, to be coordinated with international partners. Canadian legislation is expected in 2023. In December 2022, the European Union adopted a directive that member countries must enact the 15% minimum tax into their national laws by end of 2023. The U.K. plans to implement the minimum tax effective for 2024. At this point, the countries where the Company currently operates have all indicated their participation; however, none have implemented legislation. A number of these countries currently operate at a lower tax rate than the proposed minimum, and when legislation is enacted the Company expects an increase in the effective income tax rate. The Company is awaiting the legislation and detailed guidance to assess the full implications in the jurisdictions in which the Company operates.

The U.S. Inflation Reduction Act of 2022, signed into law in August 2022 and effective January 1, 2023, introduced a 15% corporate alternative minimum tax on financial statement income. While it is expected that this tax will advance cash tax payments, the Company does not expect there will be any impact on its overall effective income tax rate.

TOTAL NET PREMIUMS, PREMIUMS AND DEPOSITS AND SALES

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Total net premiums					
Canada	**$ 4,582**	$ 3,597	$ 4,114	**$ 15,103**	$ 13,900
United States[1]	**(5,515)**	2,327	611	**2,025**	4,518
Europe	**1,025**	786	1,042	**3,962**	4,862
Capital and Risk Solutions	**8,452**	7,211	7,222	**31,731**	29,533
Total net premiums	**$ 8,544**	$ 13,921	$ 12,989	**$ 52,821**	$ 52,813
Premiums and deposits[2]					
Canada	**$ 8,212**	$ 7,136	$ 7,918	**$ 30,727**	$ 29,357
United States	**20,249**	22,957	24,932	**82,099**	79,896
Europe	**7,252**	6,961	7,582	**29,622**	30,017
Capital and Risk Solutions	**8,452**	7,211	7,222	**31,731**	29,533
Total premiums and deposits[2]	**$ 44,165**	$ 44,265	$ 47,654	**$ 174,179**	$ 168,803
Sales[3,4]					
Canada	**$ 4,029**	$ 3,087	$ 4,881	**$ 14,639**	$ 16,425
United States	**40,278**	35,854	40,104	**165,268**	204,584
Europe	**6,438**	6,582	6,493	**27,280**	26,613
Total sales[3,4]	**$ 50,745**	$ 45,523	$ 51,478	**$ 207,187**	$ 247,622

1 On December 31, 2022, Empower completed two separate agreements to cede, via indemnity reinsurance, insurance contract liabilities to a non-related party. As a result of the transaction, the Company recognized an increase of $8,005 million to ceded premiums, as well as a decrease of $8,005 million to total paid or credited to policyholders. Refer to note 3(d) of the Company's December 31, 2022 annual consolidated financial statements for further details.

2 This metric is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.

3 Sales is not a relevant measure for the Capital and Risk Solutions segment due to the nature of operations.

4 Refer to the "Glossary" section of this document for additional details on the composition of this measure.

The information in the table above is a summary of results for the Company's total net premiums, premiums and deposits and sales. Additional commentary regarding total net premiums and sales is included, as applicable, in the "Segmented Operating Results" section.

NET INVESTMENT INCOME

Net investment income

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Investment income earned (net of investment properties expenses)	**$ 2,327**	$ 2,262	$ 1,647	**$ 8,489**	$ 6,481
Net Allowances for credit losses on loans and receivables	**(20)**	(11)	(2)	**(42)**	(30)
Net realized gains (losses)	**(56)**	(1)	42	**(58)**	139
Regular investment income	**2,251**	2,250	1,687	**8,389**	6,590
Investment expenses	**(75)**	(54)	(50)	**(243)**	(197)
Regular net investment income	**2,176**	2,196	1,637	**8,146**	6,393
Changes in fair value through profit or loss	**1,373**	(5,642)	1,611	**(23,903)**	(2,083)
Total net investment income	**$ 3,549**	$ (3,446)	$ 3,248	**$ (15,757)**	$ 4,310

Total net investment income in the fourth quarter of 2022 increased by $301 million compared to the same quarter last year. The changes in fair value in the fourth quarter of 2022 were an increase of $1,373 million compared to $1,611 million for the fourth quarter of 2021. In the fourth quarter of 2022, the net increase to fair values was primarily due to a decline in U.S. and U.K. corporate bond yields. In the fourth quarter of 2021, the net increase to fair values was primarily due to a decline in bond yields across all geographies and an increase in Canadian equity markets.

Regular net investment income in the fourth quarter of 2022 of $2,176 million increased by $539 million compared to the same quarter last year. The increase was primarily due to income earned on bonds and mortgages acquired through the Prudential acquisition, partially offset by lower net realized gains. Net realized gains (losses) include losses on available-for-sale securities of $29 million for the fourth quarter of 2022 compared to gains of $8 million for the same quarter last year.

For the twelve months ended December 31, 2022, total net investment income decreased by $20,067 million compared to the same period last year. The changes in fair value for the twelve month period in 2022 were a decrease of $23,903 million compared to $2,083 million during the same period in 2021. The changes in fair value were primarily due to a greater increase in bond yields across all geographies driven by higher interest rates resulting from elevated inflation and also due to a decline in the Canadian equity markets over the year, compared to a smaller increase in bond yields across all geographies, partially offset by an increase in Canadian equity markets in 2021.

Regular net investment income for the twelve months ended December 31, 2022 of $8,146 million increased by $1,753 million compared to the same period last year. The increase was primarily due to the same reasons discussed for the in-quarter results. Net realized gains (losses) include losses on available-for-sale securities of $44 million for the twelve months ended December 31, 2022 compared to gains of $27 million for the same period last year.

FEE AND OTHER INCOME

In addition to providing traditional risk-based insurance products, the Company also provides certain products on a fee-for-service basis. The most significant of these products are segregated funds and mutual funds, for which the Company earns investment management fees on assets managed and other fees, as well as administrative services only (ASO) contracts, under which the Company provides group benefit plan administration on a cost-plus basis.

Fee and other income

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Canada					
Segregated funds, mutual funds and other	**$ 425**	$ 427	$ 452	**$ 1,725**	$ 1,765
Administrative services only (ASO) contracts	**67**	63	69	**263**	226
	492	490	521	**1,988**	1,991
United States					
Segregated funds, mutual funds and other	**1,156**	1,095	998	**4,271**	3,880
Europe					
Segregated funds, mutual funds and other	**328**	312	364	**1,334**	1,415
Capital and Risk Solutions					
Reinsurance and other	**3**	—	2	**5**	8
Total fee and other income	**$ 1,979**	$ 1,897	$ 1,885	**$ 7,598**	$ 7,294

The information in the table above is a summary of gross fee and other income for the Company. Additional commentary regarding fee and other income is included, as applicable, in the "Segmented Operating Results" section.

NET POLICYHOLDER BENEFITS, DIVIDENDS AND EXPERIENCE REFUNDS

Net policyholder benefits, dividends and experience refunds

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Canada	**$ 3,190**	$ 2,561	$ 2,522	**$ 10,608**	$ 10,171
United States	**4,140**	3,687	1,654	**13,472**	7,310
Europe	**1,022**	765	1,000	**3,518**	3,909
Capital and Risk Solutions	**7,841**	7,149	7,065	**30,534**	25,862
Total	**$ 16,193**	$ 14,162	$ 12,241	**$ 58,132**	$ 47,252

Net policyholder benefits, dividends and experience refunds include life and health claims, policy surrenders, maturities, annuity payments, segregated fund guarantee payments, policyholder dividends and experience refund payments. The amounts do not include payments for ASO contracts, segregated funds or mutual funds.

For the three months ended December 31, 2022, net policyholder benefits, dividends and experience refunds were $16.2 billion, an increase of $4.0 billion from the same quarter last year, driven by higher net policyholder benefits. The increase in net policyholder benefits was primarily due to the addition of the Prudential business in the U.S. segment as well as new reinsurance agreements and volume changes relating to existing business in the Capital and Risk Solutions segment. The increase was partially offset by lower surrenders in the U.S. segment.

For the twelve months ended December 31, 2022, net policyholder benefits, dividends and experience refunds were $58.1 billion, an increase of $10.9 billion from the same period last year, driven by higher net policyholder benefits. The increase in net policyholder benefits was primarily due to the same reasons discussed for the in-quarter results.

OTHER BENEFITS AND EXPENSES

Other benefits and expenses

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Operating and administrative expenses	**$ 1,943**	$ 1,711	$ 1,688	**$ 7,109**	$ 6,337
Commissions	**715**	628	717	**2,675**	2,664
Premium taxes	**139**	123	134	**497**	500
Amortization of finite life intangible assets and impairment reversal	**93**	101	89	**373**	336
Financing charges	**114**	98	89	**398**	328
Restructuring and integration expenses	**43**	58	21	**178**	90
Total	**$ 3,047**	$ 2,719	$ 2,738	**$ 11,230**	$ 10,255

Other benefits and expenses for the fourth quarter of 2022 of $3,047 million increased by $309 million compared to the fourth quarter of 2021, primarily due to higher operating and administrative expenses. The fourth quarter of 2022 included Prudential operating and administrative expenses of $211 million. In addition, higher operating and administrative expenses were due to business growth at Empower.

For the twelve months ended December 31, 2022, other benefits and expenses increased by $975 million to $11,230 million compared to the same period last year, primarily due to higher operating and administrative expenses as discussed for the in-quarter results. The twelve months ended December 31, 2022 included Prudential operating and administrative expenses of $604 million. In addition, restructuring and integration expenses increased compared to the same period last year, primarily due to the acquisition of Prudential. The Company completed the integrations of Personal Capital and MassMutual during the fourth quarter of 2022.

CONSOLIDATED FINANCIAL POSITION

ASSETS

Assets under administration[1]

	As at December 31, 2022				
	Canada	**United States**	**Europe**	**Capital and Risk Solutions**	**Total**
Assets					
Invested assets	$ 90,751	$ 98,929	$ 39,420	$ 8,738	$ 237,838
Goodwill and intangible assets	5,794	7,966	3,053	—	16,813
Other assets	4,721	37,584	8,994	7,608	58,907
Investments on account of segregated fund policyholders	93,816	166,274	127,807	—	387,897
Total assets	195,082	310,753	179,274	16,346	701,455
Other assets under management[2]	4,057	277,138	50,539	—	331,734
Total assets under management[1]	199,139	587,891	229,813	16,346	1,033,189
Other assets under administration[2]	26,344	1,426,834	11,345	—	1,464,523
Total assets under administration[1]	$ 225,483	$ 2,014,725	$ 241,158	$ 16,346	$ 2,497,712

	As at December 31, 2021				
	Canada	United States	Europe	Capital and Risk Solutions	Total
Assets					
Invested assets	$ 92,400	$ 55,376	$ 48,669	$ 9,359	$ 205,804
Goodwill and intangible assets	5,722	5,826	3,047	—	14,595
Other assets	4,323	30,090	10,220	8,037	52,670
Investments on account of segregated fund policyholders	101,537	116,919	138,963	—	357,419
Total assets	203,982	208,211	200,899	17,396	630,488
Other assets under management[2]	5,742	310,933	60,480	—	377,155
Total assets under management[1]	209,724	519,144	261,379	17,396	1,007,643
Other assets under administration[2,3]	29,615	1,241,974	12,360	—	1,283,949
Total assets under administration[1,3]	$ 239,339	$ 1,761,118	$ 273,739	$ 17,396	$ 2,291,592

1 This metric is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.
2 Refer to the "Glossary" section of this document for additional details on the composition of this measure.
3 2021 comparative figures have been restated to include Financial Horizons Group and Excel Private Wealth Inc. assets under administration in the Canada segment.

Total assets under administration (AUA) at December 31, 2022 increased by $206.1 billion to $2.5 trillion compared to December 31, 2021, due to the Prudential acquisition during the second quarter of 2022 as well as the impact of currency movement in the U.S. segment. These items were partially offset by the impacts of lower equity market levels, higher interest rates and the impact of currency movement in the Europe segment. The Prudential acquisition added $119 billion in total assets, $1 billion in other assets under management and $267 billion in other assets under administration to the U.S. segment as at December 31, 2022.

For additional details on assets acquired through business acquisitions, refer to "Business Acquisitions and Other Transactions", note 3 in the Company's December 31, 2022 annual consolidated financial statements.

Invested Assets

The Company manages its general fund assets to support the cash flow, liquidity and profitability requirements of the Company's insurance and investment products. The Company's investment policies are designed to be prudent and conservative, so that assets are not unduly exposed to concentration, credit or market risks. Within the framework of the Company's policies, the Company implements strategies and reviews and adjusts them on an ongoing basis considering liability cash flows and capital market conditions. The majority of investments of the general fund are in medium-term and long-term fixed-income investments, primarily bonds and mortgages, reflecting the characteristics of the Company's liabilities.

Invested asset distribution

	As at December 31, 2022					
	Canada	**United States**	**Europe**	**Capital and Risk Solutions**	**Total**	
Bonds						
Government & related	**$ 19,936**	**$ 4,901**	**$ 14,621**	**$ 4,011**	**$ 43,469**	**18 %**
Corporate & other	**30,848**	**67,668**	**13,852**	**3,750**	**116,118**	**49**
Sub-total bonds	**50,784**	**72,569**	**28,473**	**7,761**	**159,587**	**67**
Mortgages	**17,106**	**15,955**	**6,105**	**363**	**39,529**	**17**
Stocks	**12,400**	**1,378**	**490**	**—**	**14,268**	**6**
Investment properties	**5,759**	**33**	**2,552**	**—**	**8,344**	**3**
Sub-total portfolio investments	**86,049**	**89,935**	**37,620**	**8,124**	**221,728**	**93**
Cash and cash equivalents	**1,444**	**3,561**	**1,798**	**487**	**7,290**	**3**
Loans to policyholders	**3,258**	**5,433**	**2**	**127**	**8,820**	**4**
Total invested assets	**$ 90,751**	**$ 98,929**	**$ 39,420**	**$ 8,738**	**$ 237,838**	**100 %**

	As at December 31, 2021					
	Canada	United States	Europe	Capital and Risk Solutions	Total	
Bonds						
Government & related	$ 21,863	$ 4,313	$ 19,411	$ 5,289	$ 50,876	25 %
Corporate & other	31,409	36,515	18,265	3,547	89,736	43
Sub-total bonds	53,272	40,828	37,676	8,836	140,612	68
Mortgages	16,703	6,170	5,891	88	28,852	14
Stocks	13,036	673	474	—	14,183	7
Investment properties	4,913	8	2,842	—	7,763	4
Sub-total portfolio investments	87,924	47,679	46,883	8,924	191,410	93
Cash and cash equivalents	1,392	2,581	1,784	318	6,075	3
Loans to policyholders	3,084	5,116	2	117	8,319	4
Total invested assets	$ 92,400	$ 55,376	$ 48,669	$ 9,359	$ 205,804	100 %

At December 31, 2022, total invested assets were $237.8 billion, an increase of $32.0 billion from December 31, 2021. The increase in invested assets was primarily due to bonds and mortgages acquired through the Prudential acquisition, partially offset by a decline in the fair value of bonds resulting from an increase in bond yields across all geographies. The distribution of assets has not changed significantly and remains heavily weighted to bonds and mortgages.

Bond portfolio – It is the Company's policy to acquire primarily investment grade bonds subject to prudent and well-defined investment policies. Modest investments in below investment grade rated securities may occur while not changing the overall discipline and conservative approach to the investment strategy. The total bond portfolio, including short-term investments, was $159.6 billion or 67% of invested assets at December 31, 2022 compared to $140.6 billion or 68% at December 31, 2021. The increase in the bond portfolio was primarily due to bonds acquired through the Prudential acquisition, partially offset by a decline in fair values resulting from an increase in bond yields across all geographies. The overall quality of the bond portfolio remained high, with 99% of the portfolio rated investment grade and 71% rated A or higher.

Bond credit ratings reflect bond rating agency activity up to December 31, 2022. Management continues to closely monitor bond rating agency activity and general market conditions as economies emerge from the pandemic and are now being impacted by geopolitical tensions.

Bond portfolio quality	As at December 31, 2022		As at December 31, 2021	
AAA	**$ 25,399**	**16 %**	$ 20,254	14 %
AA	**32,244**	**20**	35,460	25
A	**55,063**	**35**	48,764	35
BBB	**45,080**	**28**	35,098	25
BB or lower	**1,801**	**1**	1,036	1
Total	**$ 159,587**	**100 %**	$ 140,612	100 %

At December 31, 2022, non-investment grade bonds were $1.8 billion or 1.1% of the bond portfolio compared to $1.0 billion or 0.7% of the bond portfolio at December 31, 2021. The increase in non-investment grade bonds was primarily due to bonds acquired through the Prudential acquisition.

Mortgage portfolio – It is the Company's practice to acquire high-quality commercial mortgages meeting strict underwriting standards and diversification criteria. The Company has a well-defined risk-rating system, which it uses in its underwriting and credit monitoring processes for commercial loans. Residential loans are originated by the Company's mortgage specialists in accordance with well-established underwriting standards and are well diversified across each geographic region, including specific diversification requirements for non-insured mortgages. Equity release mortgages are originated in the Europe segment following well-defined lending criteria and held in the Canada, Europe and Capital and Risk Solutions segments. Equity release mortgages are loans provided to people who want to continue living in their homes while accessing some of the underlying equity value in their homes. Loans are typically repaid when the borrower dies or moves into long-term care.

Mortgage portfolio	As at December 31, 2022				As at December 31, 2021	
Mortgage loans by type	**Insured[1]**	**Non-insured**	**Total**		Total	
Single family residential	**$ 418**	**$ 1,438**	**$ 1,856**	**5 %**	$ 1,979	7 %
Multi-family residential	**2,718**	**7,628**	**10,346**	**26**	7,601	26
Equity release	**—**	**3,365**	**3,365**	**9**	2,609	9
Commercial	**—**	**23,962**	**23,962**	**60**	16,663	58
Total	**$ 3,136**	**$ 36,393**	**$ 39,529**	**100 %**	$ 28,852	100 %

[1] Insured mortgages include mortgages where insurance is provided by a third party and protects the Company in the event that the borrower is unable to fulfill their mortgage obligations.

The total mortgage portfolio was $39.5 billion or 17% of invested assets at December 31, 2022, compared to $28.9 billion or 14% of invested assets at December 31, 2021. The increase in the mortgage portfolio was primarily related to mortgages acquired through the Prudential acquisition. The Canada segment ceased residential mortgage origination in November 2022. Total insured loans were $3.1 billion or 8% of the mortgage portfolio. The equity release mortgages had a weighted average loan-to-value, calculated as the weighted average of the total outstanding loan balance divided by the appraised value of the properties, of 36% (31% at December 31, 2021).

Commercial mortgages

	As at December 31, 2022					As at December 31, 2021				
	Canada	**U.S.**	**Europe**	**Capital and Risk Solutions**	**Total**	Canada	U.S.	Europe	Capital and Risk Solutions	Total
Retail & shopping centres	**$ 3,712**	**$ 1,167**	**$ 951**	**$ 2**	**$ 5,832**	$ 3,770	$ 521	$ 991	$ 2	$ 5,284
Industrial	**3,654**	**5,845**	**704**	**34**	**10,237**	3,126	1,430	617	30	5,203
Office buildings	**1,695**	**2,846**	**1,150**	**19**	**5,710**	2,088	1,282	1,209	18	4,597
Other	**65**	**1,420**	**698**	**—**	**2,183**	380	463	736	—	1,579
Total	**$ 9,126**	**$ 11,278**	**$ 3,503**	**$ 55**	**$ 23,962**	$ 9,364	$ 3,696	$ 3,553	$ 50	$ 16,663

Throughout 2022, commercial real estate office markets in Europe and North America showed signs of slowdown due to dampened demand from a continued lag faced by employers on return-to-office plans, leading to higher vacancy rates and deteriorating operating performance, driven as well by challenging economic and capital market conditions. This has resulted in certain valuation reductions for the underlying office properties in 2022 reflecting the current outlook. The Company is monitoring and will work proactively with borrowers to manage exposures. It is the Company's practice to acquire high-quality commercial mortgages meeting strict underwriting standards and diversification criteria. The Company has a well-defined risk-rating system, which it uses in its underwriting and credit monitoring processes for commercial loans.

Equity portfolio – The total equity portfolio was $22.6 billion or 9% of invested assets at December 31, 2022 compared to $21.9 billion or 11% of invested assets at December 31, 2021. The equity portfolio consists of publicly traded stocks, privately held stocks and investment properties. The decrease in publicly traded stocks of $1.0 billion was primarily due to market value declines and the increase in privately held stocks of $1.1 billion was primarily due to purchases. The increase in investment properties of $0.6 billion was mainly the result of property acquisitions.

Equity portfolio

	As at December 31, 2022		As at December 31, 2021	
Equity portfolio by type				
Publicly traded stocks	**$ 11,380**	**50 %**	$ 12,424	57 %
Privately held stocks	**2,888**	**13**	1,759	8
Sub-total	**14,268**	**63**	14,183	65
Investment properties	**8,344**	**37**	7,763	35
Total	**$ 22,612**	**100 %**	$ 21,946	100 %

Investment properties[1]

	As at December 31, 2022				As at December 31, 2021			
	Canada	**U.S.**	**Europe**	**Total**	Canada	U.S.	Europe	Total
Industrial	**$ 2,304**	**$ —**	**$ 900**	**$ 3,204**	$ 1,740	$ —	$ 1,009	$ 2,749
Office buildings	**1,260**	**25**	**564**	**1,849**	1,384	—	626	2,010
Retail	**218**	**—**	**765**	**983**	227	—	848	1,075
Other	**1,977**	**8**	**323**	**2,308**	1,562	8	359	1,929
Total	**$ 5,759**	**$ 33**	**$ 2,552**	**$ 8,344**	$ 4,913	$ 8	$ 2,842	$ 7,763

[1] The Capital and Risk Solutions segment does not hold any investment properties.

Throughout 2022, commercial real estate office markets in Europe and North America showed signs of slowdown due to dampened demand from a continued lag faced by employers on return-to-office plans, leading to higher vacancy rates and deteriorating operating performance, driven as well by challenging economic and capital market conditions. This has resulted in certain valuation reductions in 2022 reflecting the current outlook for office properties. As market conditions evolve, the Company may be required to apply further valuation reductions.

Impaired investments – Impaired investments include bonds in default, mortgages in default or in the process of foreclosure and other assets where management no longer has reasonable assurance that all contractual cash flows will be received.

Impaired investments

	As at December 31, 2022				As at December 31, 2021			
	Gross amount	**Impairment recovery**	**Impairment provision**	**Carrying amount**	Gross amount	Impairment recovery	Impairment provision	Carrying amount
Fair value through profit or loss	**$ 16**	**$ —**	**$ (5)**	**$ 11**	$ 18	$ 1	$ (5)	$ 14
Available-for-sale	**—**	**—**	**—**	**—**	6	1	—	7
Loans and receivables	**56**	**—**	**(16)**	**40**	99	—	(28)	71
Total	**$ 72**	**$ —**	**$ (21)**	**$ 51**	$ 123	$ 2	$ (33)	$ 92

The gross amount of impaired investments totaled $72 million or 0.1% of invested assets at December 31, 2022 compared to $123 million or 0.1% at December 31, 2021, a net decrease of $51 million. The decrease in impaired investments was primarily due to the disposal of an impaired commercial mortgage in the Canada segment.

The impairment provision at December 31, 2022 was $21 million compared to $33 million at December 31, 2021. The decrease was primarily due to the disposal of an impaired commercial mortgage in the Canada segment. These assets remain impaired based on impairment factors as described in the "Summary of Critical Accounting Estimates" section of this document and in note 2 of the Company's December 31, 2022 annual consolidated financial statements.

Provision for future credit losses

As a component of insurance contract liabilities, the total actuarial provision for future credit losses is determined consistent with the Canadian Institute of Actuaries' Standards of Practice and includes provisions for adverse deviation. The provisions reflect the current credit ratings and potential future rating migration. No provision is held for government or government related debt rated A+ or higher where the issuer is monetarily sovereign.

At December 31, 2022, the total actuarial provision for future credit losses in insurance contract liabilities was $3,223 million compared to $3,271 million at December 31, 2021, a decrease of $48 million, primarily due to interest rate movements and the impact of currency movements, partially offset by the acquisition of Prudential.

The aggregate of impairment provisions of $21 million ($33 million at December 31, 2021) and actuarial provisions for future credit losses in insurance contract liabilities of $3,223 million ($3,271 million at December 31, 2021) represents 1.5% of bond and mortgage assets, including funds held by ceding insurers, at December 31, 2022 (1.8% at December 31, 2021).

Derivative Financial Instruments

There were no major changes to the Company's policies and procedures with respect to the use of derivative financial instruments in 2022. The Company's derivative transactions are generally governed by International Swaps and Derivatives Association, Inc. (ISDA) Master Agreements, which provide for legally enforceable set-off and close-out netting of exposure to specific counterparties in the event of an early termination of a transaction, which includes, but is not limited to, events of default and bankruptcy. In the event of an early termination, the Company is permitted to set off receivables from a counterparty against payables to the same counterparty, in the same legal entity, arising out of all included transactions. The Company's ISDA Master Agreements may include Credit Support Annex provisions, which require both the pledging and accepting of collateral in connection with its derivative transactions.

At December 31, 2022, total financial collateral, including initial margin and overcollateralization, received on derivative assets was $1,348 million ($318 million at December 31, 2021) and pledged on derivative liabilities was $754 million ($480 million at December 31, 2021). The increase in collateral received on derivatives assets was primarily driven by the impact of the U.S. dollar strengthening against the British pound and euro on cross-currency swaps that pay British pounds and euros and receive U.S. dollars. The increase in collateral pledged on derivative liabilities was primarily driven by the impact of increases to market interest rates on interest rate swaps that receive fixed and pay floating rates.

During the twelve month period ended December 31, 2022, the outstanding notional amount of derivative contracts increased by $10.0 billion to $46.6 billion, primarily due to increases to cross-currency swaps related to the Prudential acquisition and regular hedging activities.

The Company's exposure to derivative counterparty credit risk, which reflects the current fair value of those instruments in a gain position, increased to $2,314 million at December 31, 2022 from $967 million at December 31, 2021. The increase was primarily driven by the impact of the U.S. dollar strengthening against the British pound and euro on cross-currency swaps that pay British pounds and euros and receive U.S. dollars. There were no changes to derivative counterparty ratings during the fourth quarter of 2022 and all had investment grade ratings as of December 31, 2022. Refer to "Financial Instruments Risk Management", note 8 in the Company's December 31, 2022 annual consolidated financial statements for details of the Company's derivative counterparties' ratings.

Goodwill and intangible assets

Goodwill and intangible assets	As at December 31	
	2022	2021
Goodwill	**$ 10,604**	$ 9,081
Indefinite life intangible assets	**2,882**	2,786
Finite life intangible assets	**3,327**	2,728
Total	**$ 16,813**	$ 14,595

The Company's goodwill and intangible assets relate primarily to business acquisitions made by the Company, including the recent acquisitions of Personal Capital, MassMutual and Prudential. Goodwill and intangible assets of $16.8 billion at December 31, 2022 increased by $2.2 billion from December 31, 2021. Goodwill increased by $1.5 billion, finite life intangible assets increased by $0.6 billion and indefinite life intangible assets increased by $0.1 billion, primarily due to the acquisition of Prudential and the impact of currency movement.

In the fourth quarter of 2022, the Company conducted its annual impairment testing of goodwill and intangible assets based on September 30, 2022 asset balances. It was determined that the recoverable amounts of cash generating unit (CGU) groupings for goodwill and CGUs for intangible assets were in excess of their carrying values and there was no evidence of impairment. Recoverable amount is based on fair value less cost of disposal.

Refer to note 10 in the Company's December 31, 2022 annual consolidated financial statements for further details of the Company's goodwill and intangible assets. Also, refer to the "Summary of Critical Accounting Estimates" section of this document for details on impairment testing of these assets.

Other general fund assets

Other general fund assets

	As at December 31	
	2022	2021
Reinsurance assets	**$ 25,018**	$ 21,138
Funds held by ceding insurers	**15,186**	17,194
Premiums in course of collection, accounts and interest receivable	**6,980**	6,366
Other assets	**6,798**	4,522
Derivative financial instruments	**2,314**	967
Deferred tax assets	**1,152**	1,057
Owner occupied properties	**724**	736
Fixed assets	**399**	422
Current income taxes	**336**	268
Total	**$ 58,907**	$ 52,670

Total other general fund assets at December 31, 2022 were $58.9 billion, an increase of $6.2 billion from December 31, 2021. The increase was primarily due to an increase of $3.9 billion in reinsurance assets, an increase of $2.3 billion in other assets as well as an increase of $1.3 billion in derivative financial instruments, partially offset by a decrease of $2.0 billion in funds held by ceding insurers. The increase in reinsurance assets was driven by two separate agreements completed by Empower to cede, via indemnity reinsurance, insurance contract liabilities to a non-related party, partially offset by fair value adjustments driven by an increase in bond yields.

Other assets comprise several items including prepaid expenses and accounts receivable. Refer to note 12 in the Company's December 31, 2022 annual consolidated financial statements for a breakdown of other assets.

Investments on account of segregated fund policyholders

Segregated funds

	As at December 31	
	2022	2021
Mutual funds	**$ 168,459**	$ 133,916
Stocks and units in unit trusts	**117,878**	134,568
Bonds	**69,371**	60,647
Investment properties	**13,035**	12,776
Cash and other	**10,607**	10,010
Mortgage loans	**2,159**	2,377
Sub-total	**$ 381,509**	$ 354,294
Non-controlling mutual funds interest	**6,388**	3,125
Total	**$ 387,897**	$ 357,419

Investments on account of segregated fund policyholders, which are measured at fair value, increased by $30.5 billion to $387.9 billion at December 31, 2022 compared to December 31, 2021. The increase was primarily due to an increase of $77.7 billion related to business acquisitions, driven by the acquisition of Prudential and the impact of currency movement of $9.5 billion. The increase was partially offset by the combined impact of net investment income and market value losses of $53.7 billion, net withdrawals of $6.2 billion as well as non-controlling mutual funds interest of $3.3 billion.

Other assets under management[1]

Other assets under management

	As at December 31	
	2022	2021
Mutual funds		
Blend equity	**$ 18,864**	$ 22,334
Growth equity	**18,744**	26,605
Equity value	**31,686**	30,479
Fixed-income	**36,444**	46,246
Exchange Traded Funds	**230**	58
Money market	**232**	199
Empower Funds[2]	**58,247**	57,749
Sub-total	**$ 164,447**	$ 183,670
Institutional assets		
Equity	**$ 104,602**	$ 126,064
Fixed-income	**59,843**	60,681
Other	**2,842**	6,740
Sub-total	**$ 167,287**	$ 193,485
Total other assets under management	**$ 331,734**	$ 377,155

1 Refer to the "Glossary" section of this document for additional details on the composition of this measure.
2 At December 31, 2022, Empower funds exclude $26.4 billion of Putnam managed funds ($24.9 billion at December 31, 2021), which are included in the categories above.

Total other assets under management decreased by $45.4 billion, primarily due to market movement and net cash outflows, partially offset by the impact of currency movement. Empower includes proprietary mutual funds of $1 billion acquired in the Prudential acquisition as at December 31, 2022.

LIABILITIES

Total liabilities

	As at December 31	
	2022	2021
Insurance and investment contract liabilities	**$ 247,698**	$ 220,833
Other general fund liabilities	**33,542**	21,753
Investment and insurance contracts on account of segregated fund policyholders	**387,897**	357,419
Total	**$ 669,137**	$ 600,005

Total liabilities increased by $69.1 billion to $669.1 billion at December 31, 2022 from December 31, 2021.

Insurance and investment contract liabilities increased by $26.9 billion. The increase was primarily due to $44.2 billion acquired through the Prudential acquisition, the impacts of new business, and the strengthening of the U.S. dollar, partially offset by fair value adjustments.

Investment and insurance contracts on account of segregated fund policyholders increased by $30.5 billion, primarily due to an increase of $77.7 billion related to the acquisition of Prudential, the impact of currency movement of $9.5 billion and non-controlling mutual funds interest of $3.3 billion. The increase was partially offset by the combined impact of net investment income and market value losses of $53.7 billion and net withdrawals of $6.2 billion.

Other general fund liabilities increased by $11.8 billion, primarily due to an increase of $6.7 billion in funds held under reinsurance contracts driven by two separate agreements completed by Empower to cede, via indemnity reinsurance, insurance contract liabilities to a non-related party. In addition, other liabilities increased by $2.7 billion and debentures and other debt instruments increased $1.7 billion.

Insurance and investment contract liabilities represent the amounts that, together with estimated future premiums and investment income, will be sufficient to pay estimated future benefits, dividends and expenses on policies in-force. Insurance and investment contract liabilities are determined using generally accepted actuarial practices, according to standards established by the Canadian Institute of Actuaries. Also, refer to the "Summary of Critical Accounting Estimates" section of this document for further details.

Assets supporting insurance and investment contract liabilities

		Non-Participating				
	Participating Account	Canada	United States	Europe	Capital and Risk Solutions	Total
As at December 31, 2022						
Bonds	**$ 25,462**	**$ 21,731**	**$ 58,238**	**$ 24,270**	**$ 5,374**	**$ 135,075**
Mortgage loans	**12,313**	**4,287**	**12,616**	**6,105**	**224**	**35,545**
Stocks	**8,226**	**2,764**	**817**	**388**	**—**	**12,195**
Investment properties	**4,527**	**715**	**—**	**2,345**	**—**	**7,587**
Other assets[1]	**10,881**	**2,559**	**33,329**	**4,307**	**6,220**	**57,296**
Total	**$ 61,409**	**$ 32,056**	**$ 105,000**	**$ 37,415**	**$ 11,818**	**$ 247,698**
Total insurance and investment contract liabilities	**$ 61,409**	**$ 32,056**	**$ 105,000**	**$ 37,415**	**$ 11,818**	**$ 247,698**
As at December 31, 2021						
Bonds	$ 26,978	$ 23,620	$ 32,302	$ 33,208	$ 6,394	$ 122,502
Mortgage loans	11,781	4,661	4,641	5,891	80	27,054
Stocks	8,665	3,116	211	391	—	12,383
Investment properties	4,021	579	—	2,743	—	7,343
Other assets[1]	10,325	2,804	26,784	4,982	6,656	51,551
Total	$ 61,770	$ 34,780	$ 63,938	$ 47,215	$ 13,130	$ 220,833
Total insurance and investment contract liabilities	$ 61,770	$ 34,780	$ 63,938	$ 47,215	$ 13,130	$ 220,833

[1] Other assets include reinsurance assets, premiums in the course of collection, interest due and accrued, other investment receivables, deferred acquisition costs, accounts receivable, current income taxes and prepaid expenses.

Asset and liability cash flows are matched within established limits to minimize the financial effects of a shift in interest rates and mitigate the changes in the Company's financial position due to interest rate volatility.

Other general fund liabilities

Other general fund liabilities

	As at December 31	
	2022	2021
Debentures and other debt instruments	**$ 10,509**	$ 8,804
Other liabilities	**8,794**	6,063
Funds held under reinsurance contracts	**8,247**	1,542
Accounts payable	**3,194**	3,032
Deferred tax liabilities	**1,009**	1,089
Derivative financial instruments	**1,639**	1,030
Current income taxes	**150**	193
Total	**$ 33,542**	$ 21,753

Total other general fund liabilities at December 31, 2022 were $33.5 billion, an increase of $11.8 billion from December 31, 2021. The increase was primarily due to an increase of $6.7 billion in funds held under reinsurance contracts driven by two separate agreements completed by Empower to cede, via indemnity reinsurance, insurance contract liabilities to a non-related party. In addition, other liabilities increased by $2.7 billion and debentures and other debt instruments increased by $1.7 billion. The increase was partially offset by a decrease of $0.1 billion in deferred tax liabilities.

Other liabilities of $8.8 billion include pension and other post-employment benefits, lease liabilities, deferred income reserve, bank overdraft and other liability balances. Refer to note 17 in the Company's December 31, 2022 annual consolidated financial statements for a breakdown of the other liabilities balance and note 15 in the Company's December 31, 2022 annual consolidated financial statements for details of the debentures and other debt instruments.

Segregated Fund and Variable Annuity Guarantees

The Company offers retail segregated fund products, unitized with profits (UWP) products and variable annuity products that provide for certain guarantees that are tied to the market values of the investment funds.

In Canada, the Company offers individual segregated fund products through Canada Life. These products provide guaranteed minimum death benefits (GMDB) and guaranteed minimum accumulation on maturity benefits (GMAB).

In the U.S., the Company has a mix of open and closed blocks of group variable annuities with guaranteed minimum withdrawal benefits (GMWB) and a closed block of group standalone GMDB products which mainly provide return of premium on death. A block of GMWB policies was acquired from Prudential on April 1, 2022.

In Europe, the Company offers UWP products, which are similar to segregated fund products but include minimum credited interest rates and pooling of policyholders' funds, as well as a GMWB product in Germany.

The GMWB products offered by the Company in the U.S. and Germany, and previously offered in Canada and Ireland, provide the policyholder with a guaranteed minimum level of annual income for life. The minimum level of income may increase depending upon the level of growth in the market value of the policyholder's funds. Where the market value of the policyholder's funds is ultimately insufficient to meet the level of guarantee purchased by the policyholder, the Company is obligated to make up the shortfall.

Capital and Risk Solutions has a closed portfolio of GMAB and guaranteed minimum income benefits (GMIB) that it has reinsured from other U.S. and Canadian life insurance and reinsurance companies.

These products involve cash flows of which the magnitude and timing are uncertain and are dependent on the level of equity and fixed-income market returns, interest rates, currency markets, market volatility, policyholder behaviour and policyholder longevity.

The Company has a hedging program in place to manage a portion of the market and interest rate risk associated with options embedded in its GMWB products. The program methodology quantifies both the embedded option value and its sensitivity to movements in equity markets, currency markets and interest rates. Equity derivative instruments, currency derivative instruments and interest rate derivative instruments are used to mitigate changes in the embedded option value attributable to movements in equity markets, currency markets and interest rates respectively. The hedging program, by its nature, requires continuous monitoring and rebalancing to avoid over or under hedged positions. Periods of heightened market volatility will increase the frequency of hedge rebalancing.

By their nature, certain risks associated with the GMWB product either cannot be hedged or cannot be hedged on a cost-effective basis. These risks include policyholder behaviour, policyholder longevity, basis risk and market volatility. Consequently, the hedging program will not mitigate all risks to the Company associated with the GMWB products and may expose the Company to additional risks including the operational risk associated with the reliance upon sophisticated models, and counterparty credit risk associated with the use of derivative instruments.

Other risk management processes are in place aimed at appropriately limiting the Company’s exposure to the risks it is not hedging or are otherwise inherent in its GMWB hedging program. In particular, the GMWB product has been designed with specific regard to limiting policyholder anti-selection, and the array of investment funds available to policyholders has been determined with a view to minimizing underlying basis risk.

Certain GMWB products offered by the Company offer levels of death and maturity guarantees. At December 31, 2022, the amount of GMWB product in-force in Canada, the U.S., Ireland and Germany was $7,033 million ($3,316 million at December 31, 2021). The increase in in-force amount was primarily a result of the Prudential acquisition in the U.S. segment.

Segregated fund and variable annuity guarantee exposure

		December 31, 2022			
		Investment deficiency by benefit type			
	Market Value	Income	Maturity	Death	Total[1]
Canada	$ 32,799	$ —	$ 27	$ 402	$ 402
United States	23,465	758	—	12	770
Europe	10,609	32	—	1,352	1,352
Capital and Risk Solutions[2]	656	169	—	—	169
Total	**$ 67,529**	**$ 959**	**$ 27**	**$ 1,766**	**$ 2,693**

[1] A policy can only receive a payout from one of the three trigger events (income election, maturity or death). Total deficiency measures the point-in-time exposure assuming the most costly trigger event for each policy occurred on December 31, 2022.
[2] Capital and Risk Solutions exposure is to markets in Canada and the U.S.

Investment deficiency at December 31, 2022 increased by $1,731 million to $2,693 million compared to December 31, 2021, primarily due to a decrease in market values and the Prudential acquisition in the U.S. segment. The investment deficiency measures the point-in-time exposure to a trigger event (i.e., income election, maturity or death) assuming it occurred on December 31, 2022 and does not include the impact of the Company's hedging program for GMWB products. The actual cost to the Company will depend on the trigger event having occurred and the market values at that time. The actual claims before tax associated with these guarantees were $4 million in-quarter ($3 million for the fourth quarter of 2021) and $13 million year-to-date ($10 million year-to-date for 2021), with the majority arising in the Capital and Risk Solutions segment related to a legacy block of business. The market value decreased by $3,353 million to $67,529 million compared to December 31, 2021, primarily due to the year-to-date decrease in equity markets.

LIFECO CAPITAL STRUCTURE

In establishing the appropriate mix of capital required to support the operations of the Company and its subsidiaries, management utilizes a variety of debt, equity and other hybrid instruments considering both the short and long-term capital needs of the Company.

Debentures and Other Debt Instruments

At December 31, 2022, debentures and other debt instruments increased by $1,705 million to $10,509 million compared to December 31, 2021.

On March 30, 2022, Great-West Lifeco U.S. LLC, a subsidiary of the Company, established a 2-year US$500 million non-revolving credit facility with interest on the drawn balance equal to a float rate based on the Adjusted Term Secured Overnight Financing Rate (SOFR). The facility is fully and unconditionally guaranteed by the Company. The $645 million (US$500 million) facility was fully drawn, along with $416 million (US$323 million) from an existing revolving credit facility to finance a portion of the Prudential retirement service business acquisition on the acquisition date.

On July 1, 2022, Great-West Lifeco U.S. LLC made an initial payment of US$150 million on its existing revolving credit facility, followed by a final payment of US$173 million on December 30, 2022. As at December 31, 2022, the $675 million (US$500 million) facility remained fully drawn and the existing revolving credit facility balance was nil.

On November 16, 2022, the Company issued €500 million aggregate principal amount 4.70% senior bonds at par, maturing on November 16, 2029. The bonds are admitted to the Official List of Euronext Dublin and are listed for trading on the Global Exchange Market of Euronext Dublin.

Refer to note 15 in the Company's December 31, 2022 annual consolidated financial statements for further details of the Company's debentures and other debt instruments.

Capital Trust Securities

At December 31, 2022, the Company had $150 million principal outstanding of Canada Life Capital Trust Securities – Series B (CLiCS – Series B). Included in the Company's invested assets at December 31, 2022 were CLiCS – Series B with a fair value of $44 million and principal value of $37 million (fair value of $53 million at December 31, 2021).

Each holder of the CLiCS – Series B is entitled to receive a semi-annual non-cumulative fixed cash distribution of $37.645 per CLiCS – Series B, representing an annual yield of 7.529% payable out of Canada Life Capital Trust's (CLCT) distributable funds. Subject to regulatory approval, CLCT may redeem the CLiCS – Series B, in whole or in part, at any time and the CLiCS – Series B are callable at par on June 30, 2032.

Equity

Share capital outstanding at December 31, 2022 was $10,011 million, which comprises $5,791 million of common shares and $2,720 million of preferred shares and $1,500 million LRCN Series 1 discussed below. Preferred shares included $2,470 million of non-cumulative First Preferred Shares and $250 million of 5-year rate reset First Preferred Shares.

Common shares

At December 31, 2022, the Company had 931,853,110 common shares outstanding with a stated value of $5,791 million compared to 930,620,338 common shares with a stated value of $5,748 million at December 31, 2021.

The Company renewed its normal course issuer bid (NCIB) effective January 27, 2022 for one year to purchase and cancel up to 20,000,000 of its common shares at market prices in order to mitigate the dilutive effect of stock options granted under the Company's Stock Option Plan and for other capital management purposes. During the twelve months ended December 31, 2022, the Company did not purchase any common shares under the current NCIB (nil for the twelve months ended December 31, 2021, under the previous NCIB).

Subsequent to December 31, 2022, in order to mitigate the dilutive effect of stock options granted under the Company's Stock Option Plan and for other capital management purposes, the Company announced a new NCIB commencing January 27, 2023 and terminating January 26, 2024 to purchase for cancellation up to but not more than 20,000,000 of its common shares at market prices.

Preferred shares

At December 31, 2022, the Company had 11 series of fixed rate First Preferred Shares and one series of 5-year rate reset First Preferred Shares outstanding with aggregate stated values of $2,470 million and $250 million, respectively.

The terms and conditions of the outstanding First Preferred Shares are set out in the table below:

Great-West Lifeco Inc.	Series G	Series H	Series I	Series L	Series M	Series N
General Type	Fixed Rate	Fixed Rate	Fixed Rate	Fixed Rate	Fixed Rate	5-Year Rate Reset
Cumulative/Non-Cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative
Date Issued	Sep 14, 2004	Aug 12, 2005	Apr 12, 2006	Oct 2, 2009	Mar 4, 2010	Nov 23, 2010
Shares Outstanding	12,000,000	12,000,000	12,000,000	6,800,000	6,000,000	10,000,000
Amount Outstanding (Par)	$300,000,000	$300,000,000	$300,000,000	$170,000,000	$150,000,000	$250,000,000
Yield	5.20%	4.85%	4.50%	5.65%	5.80%	1.749%
Earliest Issuer Redemption Date	Dec 31, 2009	Sep 30, 2010	Jun 30, 2011	Dec 31, 2014	Mar 31, 2015	Dec 31, 2020
	Series P	**Series Q**	**Series R**	**Series S**	**Series T**	**Series Y**
General Type	Fixed Rate	Fixed Rate	Fixed Rate	Fixed Rate	Fixed Rate	Fixed Rate
Cumulative/Non-Cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative
Date Issued	Feb 22, 2012	Jul 6, 2012	Oct 11, 2012	May 22, 2014	May 18, 2017	Oct 8, 2021
Shares Outstanding	10,000,000	8,000,000	8,000,000	8,000,000	8,000,000	8,000,000
Amount Outstanding (Par)	$250,000,000	$200,000,000	$200,000,000	$200,000,000	$200,000,000	$200,000,000
Yield	5.40%	5.15%	4.80%	5.25%	5.15%	4.50%
Earliest Issuer Redemption Date	March 31, 2017	Sep 30, 2017	Dec 31, 2017	Jun 30, 2019	Jun 30, 2022	Dec 31, 2026

The terms and conditions of the First Preferred Shares do not allow the holder to convert to common shares of the Company or to otherwise cause the Company to redeem the shares. Preferred shares issued by the Company are commonly referred to as perpetual and represent a form of financing that does not have a fixed term.

Non-controlling Interests

The Company's non-controlling interests include participating account surplus in subsidiaries and non-controlling interests in subsidiaries. Refer to note 18 in the Company's December 31, 2022 annual consolidated financial statements for further details of the Company's non-controlling interests.

Non-controlling interests	As at December 31	
	2022	2021
Participating account surplus in subsidiaries:		
Canada Life	**$ 3,147**	$ 3,126
Empower	**9**	12
	$ 3,156	$ 3,138
Non-controlling interests in subsidiaries	**$ 152**	$ 129

At December 31, 2022, the carrying value of non-controlling interests increased by $41 million to $3,308 million compared to December 31, 2021. For the twelve months ended December 31, 2022, net earnings attributable to the participating account before policyholder dividends were $1,809 million and policyholder dividends were $1,627 million.

LIQUIDITY AND CAPITAL MANAGEMENT AND ADEQUACY

LIQUIDITY

Total Liquid Assets

	As at December 31, 2022		
	On-balance sheet assets	**Non-liquid/ Pledged**	**Net liquid assets**
Cash, cash equivalents and short-term bonds			
Cash and cash equivalents[1]	**$ 7,290**	**$ 83**	**$ 7,207**
Short-term bonds[2]	**4,241**	**30**	**4,211**
Sub-total	**$ 11,531**	**$ 113**	**$ 11,418**
Other assets and marketable securities			
Government bonds[2]	**$ 40,784**	**$ 11,239**	**$ 29,545**
Corporate bonds[2]	**114,562**	**55,833**	**58,729**
Stocks[1]	**14,268**	**2,888**	**11,380**
Mortgage loans[1]	**39,529**	**36,393**	**3,136**
Sub-total	**$ 209,143**	**$ 106,353**	**$ 102,790**
Total	**$ 220,674**	**$ 106,466**	**$ 114,208**

	As at December 31, 2021		
	On-balance sheet assets	Non-liquid/ Pledged	Net liquid assets
Cash, cash equivalents and short-term bonds			
Cash and cash equivalents[1]	$ 6,075	$ 32	$ 6,043
Short-term bonds[2]	5,671	1,923	3,748
Sub-total	$ 11,746	$ 1,955	$ 9,791
Other assets and marketable securities			
Government bonds[2]	$ 47,126	$ 11,795	$ 35,331
Corporate bonds[2]	87,815	37,324	50,491
Stocks[1]	14,183	1,759	12,424
Mortgage loans[1]	28,852	25,446	3,406
Sub-total	$ 177,976	$ 76,324	$ 101,652
Total	$ 189,722	$ 78,279	$ 111,443

1 Refer to the consolidated balance sheet in the Company's December 31, 2022 annual consolidated financial statements for on-balance sheet amounts.
2 Refer to note 8(ii) in the Company's December 31, 2022 annual consolidated financial statements for on-balance sheet amounts.

The Company's liquidity requirements are largely self-funded, with short-term obligations being met by internal funds and maintaining levels of liquid investments adequate to meet anticipated liquidity needs. The Company holds cash, cash equivalents and short-term bonds at the Lifeco holding company level and with the Lifeco consolidated subsidiary companies. At December 31, 2022, the Company and its operating subsidiaries held liquid cash, cash equivalents and short-term bonds of $11.4 billion ($9.8 billion at December 31, 2021) and other liquid assets and marketable securities of $102.8 billion ($101.7 billion at December 31, 2021). Included in the cash, cash equivalents and short-term bonds at December 31, 2022 was $1.0 billion ($0.6 billion at December 31, 2021) held at the Lifeco holding company level which includes cash at Great-West Lifeco U.S. LLC, the Company's U.S. holding company. In addition, the Company maintains committed lines of credit with Canadian chartered banks for potential unanticipated liquidity needs, if required.

The Company does not have a formal common shareholder dividend policy. The Company maintains a target dividend payout ratio range of 45% to 55% of base earnings that is considered in dividend decisions. Dividends on outstanding common shares of the Company are declared and paid at the sole discretion of the Board of Directors of the Company. The decision to declare a dividend on the common shares of the Company takes into account a variety of factors including the level of earnings, adequacy of capital and availability of cash resources.

As a holding company, the Company's ability to pay dividends and, in part, its ability to deploy capital is dependent upon the Company receiving dividends from its operating subsidiaries. The Company's operating subsidiaries are subject to regulation in a number of jurisdictions, each of which maintains its own regime for determining the amount of capital that must be held in connection with the different businesses carried on by the operating subsidiaries. The requirements imposed by the regulators in any jurisdiction may change from time to time, and thereby impact the ability of the operating subsidiaries to pay dividends to the Company.

CASH FLOWS

Cash flows

	For the three months ended December 31		For the twelve months ended December 31	
	2022	2021	**2022**	2021
Cash flows relating to the following activities:				
Operations	**$ 1,495**	$ 1,829	**$ 7,047**	$ 10,373
Financing	**35**	(425)	**(620)**	(992)
Investment	**(2,889)**	(2,201)	**(5,493)**	(11,212)
	(1,359)	(797)	**934**	(1,831)
Effects of changes in exchange rates on cash and cash equivalents	**13**	(18)	**281**	(40)
Increase (decrease) in cash and cash equivalents in the period	**(1,346)**	(815)	**1,215**	(1,871)
Cash and cash equivalents, beginning of period	**8,636**	6,890	**6,075**	7,946
Cash and cash equivalents, end of period	**$ 7,290**	$ 6,075	**$ 7,290**	$ 6,075

The principal source of funds for the Company on a consolidated basis is cash provided by operating activities, including premium income, net investment income and fee income. These funds are used primarily to pay policy benefits, policyholder dividends and claims, as well as operating expenses and commissions. Cash flows generated by operations are mainly invested to support future liability cash requirements. Cash flows related to financing activities include the issuance and repayment of capital instruments and associated dividends and interest payments.

In the fourth quarter of 2022, cash and cash equivalents decreased by $1.3 billion from September 30, 2022. Cash flows provided by operations during the fourth quarter of 2022 were $1.5 billion, a decrease of $0.3 billion compared to the fourth quarter of 2021. Cash flows provided by financing were nil as the issuance of the euro-denominated debt of $0.7 billion was offset by the payment of dividends to common and preferred shareholders of $0.5 billion as well as a net decrease in the line of credit of a subsidiary of $0.2 billion. For the three months ended December 31, 2022, cash flows were used by the Company to acquire an additional $2.9 billion of investment assets.

For the twelve months ended December 31, 2022, cash and cash equivalents increased by $1.2 billion from December 31, 2021. Cash flows provided by operations were $7.0 billion, a decrease of $3.3 billion compared to the same period in 2021. Cash flows used in financing of $0.6 billion were primarily used for the payment of dividends to common and preferred shareholders of $2.0 billion, partially offset by the issue of euro-denominated debt discussed for the in-quarter period and a net increase in the line of credit of a subsidiary of $0.6 billion. For the twelve months ended December 31, 2022, cash flows were used by the Company to acquire an additional $5.5 billion of investment assets.

COMMITMENTS/CONTRACTUAL OBLIGATIONS

Commitments/contractual obligations
At December 31, 2022

	Payments due by period						
	Total	1 year	2 years	3 years	4 years	5 years	Over 5 years
1) Debentures and other debt instruments	$ 9,544	$ 725	$ —	$ 675	$ 725	$ 540	$ 6,879
2) Lease obligations	634	79	72	62	56	55	310
3) Purchase obligations	537	184	108	79	55	47	64
4) Credit-related arrangements							
(a) Contractual commitments	5,336	5,245	84	—	—	—	7
(b) Letters of credit	see note 4(b) below						
5) Pension contributions	315	315	—	—	—	—	—
Total contractual obligations	**$ 16,366**	**$ 6,548**	**$ 264**	**$ 816**	**$ 836**	**$ 642**	**$ 7,260**

1) Refer to note 15 in the Company's December 31, 2022 annual consolidated financial statements. Excluded from debentures and other debt instruments are unamortized transaction costs.

2) For a further description of the Company's lease obligations, refer to note 17 in the Company's December 31, 2022 annual consolidated financial statements.

3) Purchase obligations are commitments to acquire goods and services, essentially related to information services.

4) (a) Contractual commitments are essentially commitments of investment transactions made in the normal course of operations in accordance with policies and guidelines that are to be disbursed upon fulfillment of certain contract conditions.

(b) Letters of credit (LC) are written commitments provided by a bank. The total amount of LC facilities is US$1,913 million of which US$1,497 million were issued as of December 31, 2022.

The Reinsurance business unit periodically uses LC as collateral under certain reinsurance contracts for on-balance sheet policy liabilities. The Company may be required to seek collateral alternatives if it is unable to renew existing LCs on maturity.

A total of US$1,116 million has been issued to subsidiaries or branches of Canada Life and the additional US$70 million has been issued to Great-West Life & Annuity Insurance Company of South Carolina.

The remaining US$311 million has been issued to external parties. Clients residing in the United States are required pursuant to their insurance laws to obtain LCs issued on the Company’s behalf from approved banks in order to further secure the Company’s obligations under certain reinsurance contracts.

5) Pension contributions include funding estimates for defined benefit pension plans, defined contribution pension plans and other post-employment plans. These contributions are subject to change, as contribution decisions are affected by many factors including market performance, regulatory requirements and management’s ability to change funding policy. Funding estimates beyond 2023 are excluded due to the significant variability in the assumptions required to project the timing of future contributions.

CAPITAL MANAGEMENT AND ADEQUACY

The Board of Directors reviews and approves an annual capital plan as well as capital transactions undertaken by management pursuant to the plan. The capital plan is designed to ensure that the Company maintains adequate capital, taking into account the Company's strategy, risk profile and business plans. The Company has established policies and procedures designed to identify, measure and report all material risks. Management is responsible for establishing capital management procedures for implementing and monitoring the capital plan. In addition to undertaking capital transactions, the Company uses and provides traditional and structured reinsurance to support capital and risk management.

At the holding company level, the Company monitors the amount of consolidated capital available and the amounts deployed in its various operating subsidiaries. The amount of capital deployed in any particular company or country is dependent upon local regulatory requirements as well as the Company’s internal assessment of capital requirements in the context of its operational risks and requirements and strategic plans. The Company’s practice is to maintain the capitalization of its regulated operating subsidiaries at a level that will exceed the relevant minimum regulatory capital requirements in the jurisdictions in which they operate. The capitalization decisions of the Company and its operating subsidiaries also give consideration to the impact such actions may have on the opinions expressed by various credit rating agencies that provide financial strength and other ratings to the Company.

In Canada, OSFI has established a regulatory capital adequacy measurement for life insurance companies incorporated under the Insurance Companies Act (Canada) and their subsidiaries, known as the Life Insurance Capital Adequacy Test (LICAT). The LICAT Ratio is calculated in accordance with the OSFI Guideline - Life Insurance Capital Adequacy Test.

The LICAT Ratio compares the regulatory capital resources of a company to its required capital. The required capital is calibrated so that a life insurer can both withstand severe stress events and support the continuity of existing business. 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 capital requirements.

OSFI has established a Supervisory Target Total Ratio of 100% and a Supervisory Minimum Total Ratio of 90%. The Internal Target LICAT Ratio for Canada Life is now being expressed as a specific percentage rather than a range. The updated Internal Target is 115% which is the midpoint of the prior target range (110-120%).

Canada Life's consolidated LICAT Ratio at December 31, 2022 was 120% (124% at December 31, 2021). The LICAT Ratio does not take into account any impact from $1.0 billion of liquidity at the Lifeco holding company level at December 31, 2022 ($0.6 billion at December 31, 2021).

The following provides a summary of the LICAT information and ratios for Canada Life:

LICAT Ratio	**Dec. 31 2022**	Dec. 31 2021
Tier 1 Capital	**$ 13,201**	$ 12,584
Tier 2 Capital	**4,644**	4,417
Total Available Capital	**17,845**	17,001
Surplus Allowance & Eligible Deposits	**10,531**	13,225
Total Capital Resources	**$ 28,376**	$ 30,226
Required Capital	**$ 23,582**	$ 24,323
Total Ratio (OSFI Supervisory Target = 100%)[1]	**120 %**	124 %

[1] Total Ratio (%) = (Total Capital Resources / Required Capital)

The LICAT Ratio decreased four points in the year. This was caused by materially increased interest rates during the year which caused the Surplus Allowance element of LICAT Total Capital Resources to decrease. The contribution of earnings less dividends and decreased capital requirements from the ongoing phasing in of the LICAT interest rate scenario shift in North America offset part of the ratio decrease.

The LICAT Ratio increased by two points in the quarter from 118% at September 30, 2022 to 120% at December 31, 2022. The main drivers of the increase were the impact of earnings less dividends and decreased capital requirements from the ongoing phasing in of the LICAT interest rate scenario shift in North America. Currency movements in quarter also had a positive impact on the ratio. The increase was partially offset by both capital requirement increases from business activity and the impact of interest rate movements on capital requirements and capital resources.

Empower, Lifeco's regulated U.S. operating company, has established an internal target Risk-Based Capital (RBC) ratio of 400-425% of the Company Action Level set by the National Association of Insurance Commissioners, based upon an assessment of the risks within its businesses as well as business needs to support future growth. Accordingly, Empower's target RBC ratio may change as future risks and business needs change. Empower reports its RBC ratio annually to U.S. Insurance Regulators. The RBC ratio is included for information only and is not intended as a means to rank insurers generally or for any other purposes. At December 31, 2022, Empower's RBC ratio is estimated to be in excess of 400%.

LICAT Interest Rate Scenario Shift
The LICAT interest rate risk capital requirements are based on the results of the most adverse of four scenarios. The determination of the most adverse scenario is dependent on government treasury rates and credit spreads, as well as the position of the Company's assets and liabilities. A shift in the interest rate scenario applied in the LICAT calculation can result in a discontinuity where capital requirements can change materially. OSFI prescribes a calculation to smooth potential volatility in the interest rate risk capital requirement for participating insurance products. The smoothing calculation averages the participating interest rate risk capital requirements over the trailing six quarters, thereby reducing unwarranted volatility.

The Company last experienced a shift in the interest rate scenario in North America during the fourth quarter of 2021. As a result of the scenario change, a smoothing of the impact of reduced requirements for participating interest rate risk will conclude next quarter. Assuming the Company remains on the current scenario, the smoothing calculation is expected to increase the Canada Life LICAT Ratio by approximately one point next quarter, when the scenario shift is fully incorporated into results.

LICAT Sensitivities

Caution Related to Sensitivities
This section includes estimates of Canada Life consolidated LICAT Ratio sensitivities for certain risks. Actual results can differ significantly from these estimates for a variety of reasons including:

- Assessment of the circumstances that led to the scenario may lead to changes in (re)investment approaches and interest rate scenarios considered;
- Changes in actuarial, investment return and future investment activity assumptions;
- Actual experience differing from the assumptions;
- Changes in business mix, effective income tax rates and other market factors;
- Interactions among these factors and assumptions when more than one changes; and
- The general limitations of the Company's internal models.

For these reasons, the sensitivities should only be viewed as directional estimates of the underlying sensitivities for the respective factors. Given the nature of these calculations, the Company cannot provide assurance that the actual impact on the Canada Life consolidated LICAT Ratio will be as indicated.

LICAT sensitivities are rounded to the nearest full point, are prepared on an IFRS 4 basis and may change under IFRS 17 and the LICAT 2023 OSFI Guideline which comes into effect during the first quarter of 2023.

Publicly Traded Common Stocks
The following table sets out the estimated immediate impact to Canada Life's consolidated LICAT Ratio of certain instantaneous changes in publicly traded common stock values as at December 31, 2022. These sensitivity estimates assume instantaneous shocks, followed by a return to historical average growth levels for broader equity markets. The sensitivity estimates relate to publicly traded common stocks and do not cover other non-fixed income assets. These estimates are illustrative as actual equity exposures may vary due to active management of the public stock portfolios.

Immediate change in publicly traded common stock values	**December 31, 2022**			
	20% increase	**10% increase**	**10% decrease**	**20% decrease**
Potential increase (decrease) on LICAT Ratio	0 point	0 point	(1 point)	(3 points)

Interest Rates

Canada Life's consolidated LICAT Ratio will generally reduce in an environment of rising interest rates and benefit from declining rates. Higher interest rates will decrease the fair value of the Company's surplus assets and other regulatory capital resources including actuarial margins within the Surplus Allowance. However, LICAT uses static interest rates for the calculation of insurance risk capital requirements, and hence these capital requirements do not change with interest rate movements. This means that while rising interest rates are generally favourable for the Company, they will lead to a decrease in the calculated LICAT ratio.

The sensitivity estimates shown here are illustrative. The impacts shown are based on a parallel shift in the interest rate yield curve. Actual movement in credit spreads or government treasury rates may produce different movements in Canada Life's consolidated LICAT Ratio. Sensitivity to interest rates is dependent on many factors and may result in non-linear impacts to the LICAT Ratio. These sensitivities do not include a change in the ultimate interest rates outlined in Actuarial Standards or the impact of a LICAT interest rate risk scenario shift.

Immediate parallel shift in yield curve	**December 31, 2022**	
	50 bps increase	**50 bps decrease**
Potential increase (decrease) on LICAT Ratio	(2 points)	2 points

OSFI Regulatory Capital Initiatives

The International Accounting Standards Board (IASB) has issued IFRS 17, which replaced IFRS 4 effective January 1, 2023. Refer to the "Developments - Update on Transition to IFRS 17 and IFRS 9" and "Accounting Policies - International Financial Reporting Standards" sections of this document for further details.

OSFI has released the 2023 LICAT Guideline, as amended for reporting under IFRS 17. The Company will first report under this guideline for the March 31, 2023 reporting period. Under current market and economic conditions, the Company expects a positive impact of approximately 10 points to the ratio.

OSFI is developing a new approach, to be implemented in 2025, to determine capital requirements for Segregated Fund Guarantee Risk. The Company will continue to participate in future public consultations relating to these developments.

RETURN ON EQUITY (ROE)[1]

Base Return on Equity[2]	**Dec. 31 2022**	Sept. 30 2022	Dec. 31 2021
Canada	**15.0 %**	15.4 %	17.2 %
U.S. Financial Services	**10.9 %**	10.3 %	12.2 %
U.S. Asset Management (Putnam)	**(2.9)%**	0.8 %	5.3 %
Europe	**16.7 %**	16.0 %	14.6 %
Capital and Risk Solutions	**25.0 %**	25.3 %	33.7 %
Total Lifeco Base Earnings Basis[2]	**13.6 %**	13.5 %	14.6 %
Return on Equity[1]			
Canada	**14.6 %**	13.7 %	16.7 %
U.S. Financial Services	**7.9 %**	6.4 %	8.7 %
U.S. Asset Management (Putnam)	**(2.9)%**	0.8 %	5.0 %
Europe	**18.5 %**	17.3 %	17.2 %
Capital and Risk Solutions	**31.2 %**	30.1 %	32.8 %
Total Lifeco Net Earnings Basis[1]	**13.6 %**	12.7 %	14.0 %

1 Refer to the "Glossary" section of this document for additional details on the composition of this measure.
2 This metric is a non-GAAP ratio. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.

The Company reported base return on equity of 13.6% at December 31, 2022, compared to 13.5% at September 30, 2022 and 14.6% at December 31, 2021. The Company reported return on equity of 13.6% at December 31, 2022, compared to 12.7% at September 30, 2022 and 14.0% at December 31, 2021.

The Company has a capital allocation methodology, which allocates financing costs in proportion to allocated capital. For the Canada, Europe and Capital and Risk Solutions segments (essentially Canada Life), this allocation method generally tracks the regulatory capital requirements, while for U.S. Financial Services and U.S. Asset Management (Putnam), it tracks the financial statement carrying value of the business units. Total leverage capital is consistently allocated across all business units in proportion to total capital resulting in a debt-to-equity ratio in each business unit consistent with the consolidated Company.

RATINGS

Lifeco maintains ratings from five independent ratings companies. Credit ratings[1] are intended to provide investors with an independent measure of the credit quality of a corporation and securities of a corporation and are indicators of the likelihood of payment and the capacity of a corporation to meet its obligations in accordance with the terms of each obligation.

In 2022, the existing credit ratings for Lifeco and its major operating subsidiaries were unchanged[1]. The Company continued to receive strong ratings relative to its North American peer group resulting from its conservative risk profile, stable net earnings and strong capitalization.

Lifeco's operating companies are assigned a group rating from each rating agency. This group rating is predominantly supported by the Company’s leading position in the Canadian insurance market and competitive positions in the U.S. and European markets. Each of Lifeco's operating companies benefit from the strong implicit financial support and collective ownership by Lifeco. There were no changes to the Company's group credit ratings in 2022.

Rating agency	Measurement	Lifeco	Canada Life	Irish Life	Empower
A.M. Best Company	Financial Strength		A+		A+
DBRS Morningstar	Issuer Rating	A (high)	AA		
	Financial Strength		AA		NR
	Senior Debt	A (high)			
	Subordinated Debt	A (low)	AA (low)		
Fitch Ratings	Insurer Financial Strength		AA	AA	AA
	Senior Debt	A			
	Subordinated Debt	BBB+	A+		
Moody's Investors Service	Insurance Financial Strength		Aa3		Aa3
S&P Global Ratings	Insurer Financial Strength		AA		AA
	Senior Debt	A+			
	Subordinated Debt	A-	AA-		

[1] These ratings are not a recommendation to buy, sell or hold the securities of the Company or its subsidiaries and do not address market price or other factors that might determine suitability of a specific security for a particular investor. The ratings also may not reflect the potential impact of all risks on the value of securities and are subject to revision or withdrawal at any time by the rating agency.

SEGMENTED OPERATING RESULTS

The consolidated operating results of Lifeco, including the comparative figures, are presented on an IFRS basis after capital allocation. Consolidated operating results for Lifeco comprise the net earnings of Canada Life (and its operating subsidiaries), Empower (Financial Services) and Putnam (Asset Management), together with Lifeco's corporate results. The following sections analyze the performance of Lifeco's four major reportable segments: Canada, United States (U.S.), Europe and Capital and Risk Solutions.

TRANSLATION OF FOREIGN CURRENCY

For the United States, Europe and Capital and Risk Solutions segments, foreign currency assets and liabilities are translated into Canadian dollars at the market rate at the end of the financial period. All income and expense items are translated at an average rate for the period.

CANADA

The Canada segment of Lifeco includes the operating results of the Canadian businesses operated by Canada Life, together with an allocation of a portion of Lifeco's corporate results. There are two primary business units included in this segment. Through the Individual Customer business unit, the Company provides life, disability and critical illness insurance products as well as wealth savings and income products to individual clients. Through the Group Customer business unit, the Company provides life, accidental death and dismemberment, disability, critical illness, health and dental protection, creditor insurance as well as retirement savings and income and annuity products and other specialty products to group clients in Canada.

BUSINESS PROFILE

INDIVIDUAL CUSTOMER

Individual Customer comprises both insurance and wealth management product lines sold to individual customers.

Individual insurance includes individual life, disability and critical illness insurance products and services. Individual wealth management includes individual wealth savings and income products and services. The Company is a leader in Canada for all insurance and wealth management products and services and utilizes diverse, complementary distribution channels: Advisor Solutions, managing general agencies (MGAs) and national accounts, including IG Wealth Management, a member of the Power Corporation of Canada group of companies. Through Financial Horizons Group, the Company participates in the MGA channel, distributing products from across the insurance industry.

By offering this broad suite of products and services through multiple distribution channels, the Company is able to provide advice and product solutions to meet the needs of Canadians at all phases of their lives.

GROUP CUSTOMER

Group Customer includes group life and health benefits, group creditor, and group retirement and investment product lines.

Through its group life and health benefits product lines, the Company offers effective benefit solutions for small, medium and large plan sponsors. The Company offers a wide range of traditional group products and services including life, accidental death and dismemberment, critical illness, disability, health and dental as well as specialty products. In addition, specialty product development, in particular growing the Freedom Experience has been a focus recently as the Company seeks to provide customized solutions to increasingly unique customer needs. The Freedom Experience suite of products allows members to apply for life, health, and critical illness products and maintain this coverage even when leaving their employers. These products also serve to close any group health and wealth gaps that members might experience with their current coverage. Products and programs have also been developed to address the needs of mental health in the workplace, high-cost medications and employee wellness. Traditional group products are generally offered on an insured or an ASO basis, where clients self-insure the products and Group Customer administers on their behalf. With the acquisition of ClaimSecure, Group Customer's ASO capabilities have been significantly enhanced.

The Company's creditor business offers creditor insurance products through large financial institutions and credit card companies. Canada Life is a leader in the creditor insurance business in Canada.

Group retirement and investment product lines include group Registered Retirement Savings Plans (RRSP), Tax-Free Savings Accounts (TFSA), Registered Education Savings Plans (RESP), group retirement income products and institutional investment services. The Company is focused on innovation within its savings and investment product lines.

Through the Company's extensive network of group sales offices located across the country, it distributes its products through brokers, consultants and financial security advisors.

MARKET OVERVIEW

PRODUCTS AND SERVICES

INDIVIDUAL CUSTOMER

The Company provides an array of individual insurance and individual wealth management products that are distributed through multiple sales channels.

MARKET POSITION	PRODUCTS AND SERVICES	DISTRIBUTION[3,4]

• A leader in individual life insurance sales measured by new annualized premium with 15.8% market share[1]
• A significant provider of individual disability and critical illness insurance with 12.7% market share of new sales[1]
• An industry leader with 26.1% market share of individual segregated fund assets[2]
	Individual Life Insurance
	• Term life
	• Universal life
	• Participating life
	
	Living Benefits
	• Disability
	• Critical illness
	
	Individual Wealth Management
	• Savings plans
	  • RRSPs
	  • Non-registered savings programs
	  • TFSAs
	  • RESPs
	Invested in:
	  • Segregated funds
	  • Mutual funds
	  • Guaranteed investment options
	
	• Retirement income plans
	  • Retirement income funds
	  • Life income funds
	  • Payout annuities
	  • Deferred annuities
	
	• Residential mortgages[6]
	• Banking products
		Advisor Solutions
		• 4,329 financial security advisors
		
		Affiliated Partnerships
		• 7,102 independent brokers associated with 31 MGAs[5]
		• 1,240 advisors associated with 12 national accounts
		• 1,530 IG Wealth Management consultants who actively sell Canada Life products
		• 84 direct brokers and producer groups
		
		Financial Horizons Group[5]
		• 5,330 independent brokers selling products from across the insurance industry, including Canada Life
		
		Quadrus Investment Services Ltd. (also included in Advisor Solutions advisor counts):
		• 2,860 investment representatives

1 For the nine months ended September 30, 2022.
2 As at October 31, 2022.
3 As at November 30, 2022.
4 Advisor Solutions includes all contracted advisors. Affiliated Partnerships and Financial Horizons Group include advisors who placed new business in 2022.
5 Financial Horizons Group advisors that placed Canada Life business in 2022 are also included in the MGA independent broker count.
6 The Canada segment ceased residential mortgage origination in November 2022.

GROUP CUSTOMER

The Company provides an array of life, health and creditor insurance as well as retirement and investment products that are distributed primarily through Group sales offices across the country.

MARKET POSITION	PRODUCTS AND SERVICES	DISTRIBUTION

• Employee benefits to over 28,100 plan sponsors[1]
• 20% market share for employee benefit plans[2]
• Leading market share for creditor products with coverage provided to 6.8 million plan members[1]
• 19% market share of group capital accumulation plans[2]
	Group Life and Health Benefits
	• Life
	• Disability
	• Critical illness
	• Accidental death & dismemberment
	• Dental
	• Expatriate coverage
	• Extended health care
	
	Group Creditor
	• Life
	• Disability
	• Job loss
	• Critical illness
	
	Group Retirement and Investment Services
	• Group capital accumulation plans including:
	  • Defined contribution pension plans
	  • Group RRSPs, RESPs & TFSAs
	  • Deferred profit sharing plans
	  • Non-registered savings programs
	Invested in:
	  • Segregated funds
	  • Guaranteed investment options
	  • Single company stock
	
	• Retirement income plans
	  • Payout annuities
	  • Deferred annuities
	  • Retirement income funds
	  • Life income funds
	
	• Investment management services only plans; invested in:
	  • Segregated funds
	  • Guaranteed investment options
	  • Securities
	
	Specialty Products and Services
	• Individual health, life and critical illness offered through the Freedom Experience
	• Consult+™
	• Teledoc Medical Experts™
	• Contact™
		• Group Life and Health Benefits and Group Retirement and Investment Services are distributed through brokers, consultants, third party administrators/ payers and financial security advisors. Sales and service support are provided by an integrated team of over 610 employees, located in 22 offices across the country, including 116 account executives.[1]
		• Group Creditor products and services are distributed primarily though large financial institutions and serviced through a dedicated sales and service organization.

1 As at December 31, 2022.
2 As at December 31, 2021.

COMPETITIVE CONDITIONS

INDIVIDUAL CUSTOMER

Competition in the Canadian individual insurance market focuses on service, technology, product features, price and financial strength, as indicated by ratings issued by nationally recognized agencies. The Company's broad spectrum of distribution associates, including affiliated and independent channels, provide important strategic advantages within the Canadian market.

The individual wealth management marketplace is also very competitive. The Company's main competitors include mutual fund companies, insurance companies, banks and investment advisors as well as other service and professional organizations. New financial technology (Fintech) competitors have entered the marketplace leading to increased competition. Competition focuses on ease of doing business through technology, service, variety of investment options, investment performance, product features, price (fees) and financial strength. Individual wealth management's broad spectrum of distribution associates, including affiliated and independent channels, provide important strategic advantages within the Canadian market.

GROUP CUSTOMER

The group life and health benefits market in Canada mainly comprises three large group insurance carriers with significant market positions, a number of smaller companies operating nationally and several regional and niche competitors. The Company has a significant market share of 20%, which is supported by an extensive distribution network that has access to a wide range of products and services. This strong market share position is a distinct advantage for competing successfully in the Canadian group insurance market.

The group capital accumulation plan market is also very competitive. Three major insurance companies hold a significant market share while several smaller insurance companies have an important market presence.

The pension risk transfer business continues to grow in the Canadian marketplace as more companies with defined benefit pension plans (open or closed) look to transfer the investment and longevity risk to insurance companies. Providing the market with the capacity to meet this demand, existing companies have increased their presence in the marketplace, including major independent and bank-owned insurance companies with strong balance sheets and new entrants.

2022 DEVELOPMENTS

- The Company's commitment to improved product offering and service experience for clients:
    - On April 4, 2022, Canada Life and ClaimSecure Inc. (ClaimSecure) launched SecurePak, a bundled offering of Canada Life's insurance benefits and ClaimSecure's health and dental claims adjudication services. SecurePak offers plan sponsors the advantage of modernized claims processing through ClaimSecure and the security of Canada Life's pooled products for plans in the small-case market with 25 to 200 plan members.
    - In September 2022, Canada Life launched the option to make Consult+ a “one-stop-shop” virtual care solution with Employee Assistance Program (EAP) and Mental Health Services (MHS) bundled into the base Consult+ offering. Adding EAP and MHS enables a robust combination of physical and mental health services available through one application at a competitive rate.
    - During the fourth quarter of 2022, Canada Life accessed capabilities in Bangalore, India, for the processing of client claims. The expansion leverages existing Empower operations to drive efficiency and adds to our existing Canadian benefits payment back office and resource complement, allowing the Company to process claims for Canadians nearly 24 hours a day, five days a week, to keep pace with customer expectations and deliver an improved experience.
- The Company continued to advance its digital capabilities to serve advisors and clients:
    - Canada Life continues to modernize legacy technology platforms and expand its SimpleProtect digital app features and coverage to improve the advisor and customer experience.
    - The Company has enriched its member sites to allow even earlier access to Canadians. Now, members can register for the MyCanadaLife at Work website, and get access to their plan and see information about coverages, even before they are fully eligible for their employment benefits.

- On October 1, 2022, Plan Member as Customers was rebranded as Freedom Experience. The Company is leveraging this brand by renaming several direct-to-consumer products distributed by Group Customer with the Freedom Experience brand. A dedicated team will be focused on distributing these products and bringing the Freedom Experience to Canadians.

SELECTED FINANCIAL INFORMATION - CANADA

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Base earnings (loss)[1]					
Individual Customer	**$ 126**	$ 91	$ 140	**$ 437**	$ 580
Group Customer	**213**	178	194	**736**	705
Canada Corporate	**(44)**	14	(17)	**(27)**	(65)
Base earnings (loss)[1]	**$ 295**	$ 283	$ 317	**$ 1,146**	$ 1,220
Items excluded from base earnings					
Actuarial assumption changes and other management actions[2]	**$ 2**	$ (120)	$ (13)	**$ (117)**	$ (43)
Market-related impacts on liabilities[2]	**(1)**	(3)	3	**3**	10
Tax legislative changes impact	**84**	—	—	**84**	—
Net earnings	**$ 380**	$ 160	$ 307	**$ 1,116**	$ 1,187
Sales[2]					
Individual Insurance	**$ 130**	$ 93	$ 120	**$ 413**	$ 421
Individual Wealth	**2,630**	1,988	3,274	**9,929**	11,468
Group Insurance	**138**	116	189	**610**	667
Group Wealth	**1,131**	890	1,298	**3,687**	3,869
Sales[2]	**$ 4,029**	$ 3,087	$ 4,881	**$ 14,639**	$ 16,425
Wealth Management net cash flows[2]					
Individual Customer	**$ (329)**	$ (756)	$ 332	**$ (1,324)**	$ 1,324
Group Customer	**186**	203	(509)	**1,016**	(1,252)
Wealth Management net cash flows[2]	**$ (143)**	$ (553)	$ (177)	**$ (308)**	$ 72
Fee and other income					
Individual Customer	**$ 278**	$ 281	$ 292	**$ 1,135**	$ 1,138
Group Customer	**207**	201	217	**822**	794
Canada Corporate	**7**	8	12	**31**	59
Fee and other income	**$ 492**	$ 490	$ 521	**$ 1,988**	$ 1,991
Total assets	**$ 195,082**	$ 189,196	$ 203,982		
Other assets under management[2,3]	**4,057**	3,964	5,742		
Total assets under management[1]	**199,139**	193,160	209,724		
Other assets under administration[2,4]	**26,344**	25,505	29,615		
Total assets under administration[1,4]	**$ 225,483**	$ 218,665	$ 239,339		

1 This metric is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.
2 Refer to the "Glossary" section of this document for additional details on the composition of this measure.
3 At December 31, 2022, proprietary mutual funds excluded $2.9 billion in funds accounted for as investments on account of segregated fund policyholders ($2.4 billion at December 31, 2021).
4 2021 comparative figures have been restated to include Financial Horizons Group and Excel Private Wealth Inc. assets under administration in the Canada segment.

Base and net earnings

In the fourth quarter of 2022, the Canada segment's net earnings of $380 million increased by $73 million compared to the same quarter last year. Base earnings of $295 million decreased by $22 million compared to the same quarter last year, primarily due to lower fee income driven by lower assets, less favourable mortality experience as well as lower policyholder behaviour experience in Individual Customer and less favourable investment experience on equity release mortgages. These items were partially offset by changes in certain tax estimates and strong Group long-term disability results driven by effective claims management and disciplined pricing actions.

Items excluded from base earnings were positive $85 million compared to negative $10 million for the same quarter last year. The fourth quarter of 2022 included the favourable impact of the revaluation of net deferred tax assets and actuarial liabilities of $84 million resulting from an increase to the Canadian statutory income tax rate. Actuarial assumption changes and management actions were positive $2 million compared to negative $13 million for the same quarter last year. Market-related impacts were negative $1 million in the fourth quarter of 2022 compared to positive $3 million in the same quarter last year.

For the twelve months ended December 31, 2022, net earnings decreased by $71 million to $1,116 million compared to the same period last year. Base earnings of $1,146 million decreased by $74 million compared to the same period last year, primarily due to the same reasons discussed for the in-quarter results.

For the twelve months ended December 31, 2022, items excluded from base earnings were negative $30 million compared to negative $33 million for the same period last year. Actuarial assumption changes and management actions were negative $117 million compared to negative $43 million for the same period last year, primarily due to updated policyholder behaviour assumptions, partially offset by mortality updates and model refinements in the third quarter of 2022. The twelve months ended December 31, 2022 also included the favourable impact of the revaluation of net deferred tax assets and actuarial liabilities as discussed for the in-quarter results. Market-related impacts were positive $3 million compared to positive $10 million for the same period last year.

For the fourth quarter of 2022, net earnings attributable to the participating account were $9 million compared to a net loss of $25 million for the same quarter last year, primarily due to more favourable impacts of actuarial assumption changes, partially offset by lower earnings on surplus.

For the twelve months ended December 31, 2022, net earnings attributable to the participating account were $188 million compared to $304 million for the same period last year, primarily due to lower earnings on surplus and lower impacts of new business.

Sales

Sales for the fourth quarter of 2022 of $4.0 billion decreased by $0.9 billion compared to the same quarter last year, primarily due to lower individual mutual fund and segregated fund sales. The Company saw fewer opportunities in the group insurance medium and large case markets.

For the twelve months ended December 31, 2022, sales decreased by $1.8 billion to $14.6 billion compared to the same period last year, primarily due to the same reasons discussed for the in-quarter results.

In the fourth quarter of 2022, wealth management net cash outflows were $143 million compared to net cash outflows of $177 million for the same quarter last year. The improvement in net cash outflows was primarily due to strong Group retirement wealth product sales and lower terminations and withdrawals in Group Customer, partially offset by lower segregated fund deposits in Individual Customer.

Net cash outflows for the twelve months ended December 31, 2022 were $308 million compared to net cash inflows of $72 million for the same period last year, primarily due to the same reasons discussed for the in-quarter results as well as higher mutual fund withdrawals in Individual Customer, partially offset by the non-recurrence of a large group termination in the third quarter last year.

Fee and other income

Fee and other income for the fourth quarter of 2022 of $492 million decreased by $29 million compared to the same quarter last year. The decrease was primarily due to lower fee income from wealth management businesses as a result of lower asset levels.

For the twelve months ended December 31, 2022, fee and other income decreased by $3 million to $1,988 million compared to the same period last year, primarily due to the same reasons discussed for the in-quarter results as well as lower fee income in Canada Corporate as a result of the sale of EverWest Real Estate Investors, LLC and EverWest Advisors, LLC (EverWest) in the fourth quarter of 2021.

OUTLOOK

Refer to Cautionary Note regarding Forward-looking Information and Cautionary Note regarding Non-GAAP Financial Measures and Ratios at the beginning of this document.

INDIVIDUAL CUSTOMER

The strong Canada Life brand, prudent business practices, the depth and breadth of its distribution channels and the Company's reputation for strength and stability, positions the Company well for 2023 and beyond.

In 2023, Individual Customer will continue to advance on strategies to position for growth. The Company will further establish the value propositions for advisors in all channels, providing them with strategies and tools for helping customers focus on achieving long-term financial security regardless of life stage and market fluctuations. This commitment to advice is beneficial to strong customer retention as well as helping advisors attract new customers to the Company. In 2022, the Company acquired a majority interest in two distribution firms to continue strengthening its distribution network. Distribution channels will maximize the use of common tools, processes and support, while tailoring support to specific segments of advisors, where appropriate.

The Company will continue to competitively develop, price and market a comprehensive range of individual insurance and individual wealth management products while maintaining its focus on sales and service support to customers and advisors in all channels. The Company will also continue to monitor and respond to the impacts of long-term interest rates and fee income compression.

Operational expense management continues to be critically important to delivering strong financial results. The Company will seek to achieve this through disciplined expense controls and effective development and implementation of strategic initiatives. Management has identified key areas of focus for these initiatives to facilitate the objective of organic growth, including continuing to invest in digital solutions to support advisors and customers and addressing its legacy of administration systems and processes to unlock the potential for future growth.

GROUP CUSTOMER

During 2022, Group Customer delivered strong business results and enhanced its competitive position in the Canadian group market with its acquisition of ClaimSecure and being awarded the Public Service Health Care Plan. Group Customer has leading or strong market share in all case size, regional and benefit market segments. The Company believes that this market share position, together with its distribution capacity, will facilitate continued growth in net premium income.

In 2023, Group Customer will continue to advance its core strategies to drive growth in the business. Group Customer plans to enhance its competitive position in the marketplace by focusing on improving its operational resilience. Group Customer will enhance its productivity as well as customer and employee experience by making further investments in workflow, automation, digital innovation and artificial intelligence. Group Customer also plans to take advantage of being awarded the Public Service Health Care Plan by building additional digital capabilities that will be leveraged by the rest of the business improving efficiency and customer service.

The focus on operational resilience, combined with a strong expense management culture, will be key to delivering strong financial results in 2023 and beyond. While maintaining focus on all areas of the business, Group Customer plans to put increased focus and investment in its disability offering, improving the efficiency and effectiveness of disability operations to support growth and profitability in this business.

Group Customer will also focus on expanding its distribution footprint and offering its member base enhanced products that will be more readily available through the Freedom Experience suite of products. Group Customer plans to capitalize on its recent acquisition of ClaimSecure and leverage newly acquired capabilities to offer an enhanced product shelf as well as to grow in the third party administrator business segment.

UNITED STATES

The United States segment operating results for Lifeco include the results of Empower Annuity Insurance Company of America (Empower), Putnam Investments (Putnam) and the results of the insurance businesses in the U.S. branch of Canada Life, together with an allocation of a portion of Lifeco's corporate results.

Through its Financial Services business unit, and specifically Empower, the Company helps people with saving, investing and advice through employer sponsored plans and individual product solutions. The Financial Services business unit also includes a retained block of life insurance, predominantly participating policies, which are now administered by Protective Life, as well as a closed retrocession block of life insurance.

Through its Asset Management business unit, and specifically the Putnam brand, the Company provides investment management services and related administrative functions and distribution services, through a broad range of investment products.

BUSINESS PROFILE

FINANCIAL SERVICES

Empower offers employer-sponsored defined contribution, defined benefit and non-qualified plans including enrollment services, communication materials, investment options and education services. In addition to employer sponsored products, it offers individual retirement accounts and taxable brokerage accounts to individuals. The Empower Investments brand offers fund management, investment and advisory services. The Empower Institutional brand offers private label recordkeeping and administrative services for other providers of employer-sponsored defined contribution plans. Personal Capital is a hybrid wealth manager that combines a leading-edge digital experience with personalized advice delivered by dedicated advisors.

ASSET MANAGEMENT

Putnam provides investment management services and related administrative functions and distribution services. Putnam offers a broad range of investment products, including equity, fixed-income, absolute return and alternative strategies, through Putnam Funds, Putnam Exchange Traded Funds (ETF), Putnam World Trust Funds, institutional portfolios (including hedge fund and other alternative strategies), model-based separately managed accounts (SMAs) and model portfolios. Revenue is derived from the value and composition of assets under management and performance fees as well as service and distribution fees. Accordingly, fluctuations in the financial markets and changes in the composition of assets or accounts affect revenues and results of operations.

MARKET OVERVIEW

PRODUCTS AND SERVICES

The Company provides a focused product offering that is distributed through a variety of channels.

FINANCIAL SERVICES

MARKET POSITION	PRODUCTS AND SERVICES	DISTRIBUTION
• Second largest defined contribution service provider in the country[1] by participants providing services for 17.8 million participant accounts and approximately 81,000 plans,[2] with clients in all 50 states, Puerto Rico and Guam • 25.8% market share in state and local government deferred compensation plans, based on number of participant accounts[3] • Empower Lifetime Funds are the 16th largest target date fund offering in the U.S.[2]	• Employer-sponsored defined contribution, defined benefit and non-qualified plans including enrollment services, communication materials, investment options and education services • Administrative and recordkeeping services for financial institutions and employer-sponsored defined contribution, defined benefit and non-qualified plans • Fund management, investment and advisory services • Individual retirement accounts (IRAs) and taxable brokerage accounts	• Retirement services products distributed to plan sponsors through brokers, consultants, advisors, third-party administrators and banks • Empower Institutional recordkeeping and administrative services distributed through institutional clients • IRAs and taxable brokerage accounts available to individuals through the Retirement Solutions Group as well as distributed directly to consumers through Personal Capital

1 As of July 21, 2022.
2 As at December 31, 2022.
3 As of September 30, 2021.

ASSET MANAGEMENT

MARKET POSITION	PRODUCTS AND SERVICES	DISTRIBUTION
• A global investment manager with assets under management of US$164.7 billion[1] • Global distribution includes sales teams that are focused on major institutional markets in the U.S., Europe, the Middle East, Asia and Australia and through a long-standing strategic distribution relationship in Japan	***Investment Management Products & Services*** • Individual retail investors - a family of open-end mutual funds and closed-end funds, a line of actively-managed ETFs, college savings plans, mutual funds underlying variable annuity products, and model-only separately managed accounts and model portfolios for clients of third party financial firms • Institutional investors - defined benefit plans sponsored by corporations, state, municipal and other governmental authorities, university endowment funds, charitable foundations, sovereign wealth funds and collective investment vehicles (both U.S. and non-U.S.) • Investment offerings for defined contribution plans • Alternative investment products across the fixed-income and equity groups as well as PanAgora Asset Management Inc., a Putnam subsidiary offering quantitative strategies • Seven equity model-based separately managed accounts (SMAs) and six multi-asset model portfolios ***Administrative Services*** • Transfer agency, underwriting, distribution, shareholder services, and trustee and other fiduciary services	***Individual Retail Investors*** • A broad network of distribution relationships with unaffiliated broker dealers, financial planners, registered investment advisors and other financial institutions that distribute the Putnam Funds and defined contribution investment only offerings to their customers, which, in total, includes approximately 130,000 advisors[1] • Sub-advisory relationships and Putnam-labeled funds as investment options for insurance companies and non-U.S. residents • Retail distribution channels are supported by Putnam's sales and relationship management team • Retirement plan sponsors and participants are supported by Putnam’s dedicated defined contribution investment only professionals and through a relationship with Empower and other recordkeeping firms ***Institutional Investors*** • Supported by Putnam's dedicated account management, product management and client service professionals

1 As at December 31, 2022.

COMPETITIVE CONDITIONS

FINANCIAL SERVICES

The retirement and investment marketplaces are competitive. The Company's competitors include mutual fund companies, insurance companies, banks, investment advisors and certain service and professional organizations. No one competitor or small number of competitors is dominant. Competition focuses on name recognition, service, technology, cost, variety of investment options, investment performance, product features, price and financial strength as indicated by ratings issued by nationally recognized agencies.

ASSET MANAGEMENT

The investment management business is competitive. Putnam competes with other providers of investment products and services, primarily based on the range of investment products offered, investment performance, distribution, scope and quality of shareholder and other services, as well as general reputation in the marketplace. Putnam's investment management business is also influenced by general securities market conditions, government regulations, global economic conditions, as well as advertising and sales promotional efforts. Putnam competes with other mutual fund firms and institutional asset managers that offer investment products similar to Putnam, as well as products that Putnam does not offer. Putnam also competes with a number of mutual fund sponsors that offer their funds directly to the public. Conversely, Putnam generally offers its funds only through intermediaries.

2022 DEVELOPMENTS

Financial Services Developments

- Strategic Transaction Updates
    - In July 2022, Empower initiated a new brand identity, with the name "Empower" replacing "Empower Retirement." The Company believes the new public-facing brand name will help to continue to drive business growth as it more accurately reflects its broadening stature and rapid growth.
    - On April 1, 2022, Empower completed the acquisition of the full-service retirement services business of Prudential Financial, Inc. (Prudential). With the completion of the acquisition, Empower's reach in the U.S. has expanded to approximately 81,000 workplace savings plans as of December 31, 2022.

      The Company funded the total transaction value of US$3,480 million with US$1,193 million of limited recourse capital notes and US$823 million of short-term debt, in addition to existing resources.

      Empower anticipates realizing cost synergies through the migration of Prudential's retirement services business onto Empower's recordkeeping platform. Estimated run-rate cost synergies of US$180 million are expected to be phased in over 24 months primarily when systems migrations are completed. As of December 31, 2022, US$43 million of pre-tax run rate cost synergies have been achieved. Revenue synergies of US$20 million are expected on a run-rate basis by the end of 2024 and are expected to grow to US$50 million by 2026.

      Empower expects to incur one-time integration and restructuring expenses of US$170 million pre-tax related to the Prudential acquisition, US$18 million pre-tax of which were incurred in the fourth quarter of 2022. The integration is expected to be completed in the first half of 2024.

(in US$ millions)	**For the three months ended**		**For the twelve months ended**	**Total expensed to date**
	Dec. 31 2022	Sept. 30 2022	**Dec. 31 2022**	**Dec. 31 2022**
Restructuring and integration (pre-tax)	**$ 18**	$ 15	**$ 68**	**$ 68**
Restructuring and integration (post-tax)	**14**	11	**51**	**51**
Transaction costs (pre-tax)	**—**	25	**79**	**86**
Transaction costs (post-tax)	**—**	20	**63**	**69**

- The Company completed the integration of MassMutual as of December 31, 2022, and has achieved US$160 million of final pre-tax run rate cost synergies in line with original expectations. In the fourth quarter of 2022 pre-tax run rate cost synergies increased US$59 million pre-tax compared to US$101 million pre-tax as of September 30, 2022. Empower is on track to achieve run rate revenue synergies of US$30 million pre-tax in 2024 and revenue synergies are expected to continue to grow beyond 2024. To date, the Company has incurred US$125 million pre-tax of restructuring and integration costs, US$116 million of which has been expensed, in line with original expectations.

(in US$ millions)	**For the three months ended**		**For the twelve months ended**	**Total expensed to date**
	Dec. 31 2022	Sept. 30 2022	**Dec. 31 2022**	**Dec. 31 2022**
Restructuring and integration (pre-tax)	**$ —**	$ 25	**$ 42**	**$ 116**
Restructuring and integration (post-tax)	**—**	18	**31**	**87**

- The integration of Personal Capital was completed as of December 31, 2022. To date, the Company has incurred US$57 million pre-tax of restructuring and integration costs, US$43 million of which has been expensed, in line with original expectations. During the third quarter of 2022, a contingent consideration provision of US$41 million pre-tax was released, as the growth in assets under management is below the level where further contingent consideration is payable.

(in US$ millions)	**For the three months ended**		**For the twelve months ended**	**Total expensed to date**
	Dec. 31 2022	Sept. 30 2022	**Dec. 31 2022**	**Dec. 31 2022**
Restructuring and integration (pre-tax)	**$ 4**	$ 4	**$ 17**	**$ 43**
Restructuring and integration (post-tax)	**3**	3	**12**	**31**
Transaction costs (pre-tax)	**—**	(41)	**(41)**	**61**
Transaction costs (post-tax)	**—**	(39)	**(39)**	**57**

- Empower assets under administration (AUA) were US$1.3 trillion at December 31, 2022, an increase of US$0.1 trillion compared to December 31, 2021 and an increase of US$0.1 trillion compared to September 30, 2022. Empower participant accounts have grown to 17.8 million at December 31, 2022, up from 13.0 million at December 31, 2021 and 17.5 million at September 30, 2022. The increases in AUA and participants compared to December 31, 2021 were primarily the result of the Prudential acquisition. The increase in AUA compared to September 30, 2022 was primarily due to an increase in equity markets.
- During 2022, the Company received the following awards and rankings:
  - In January 2022, Empower earned 28 “Best in Class” ratings from its customers in an annual survey from PLANSPONSOR Magazine that gauges employers’ satisfaction with their retirement plan providers.
  - Empower was named by the Human Rights Campaign Foundation as “Best Place to Work for LGBTQ+ Equality” for its policies, practices and benefits pertinent to lesbian, gay, bisexual, transgender and queer employees.
  - In October 2022, Empower received the 2022 Service Awards Gold Medal for best participant tools and best reporting from Financial Advisor IQ.

Asset Management Developments

- Putnam’s ending assets under management (AUM) at December 31, 2022 of US$164.7 billion decreased by US$37.8 billion compared to the same period last year, while average AUM for the twelve months ended December 31, 2022 of US$176.6 billion decreased by US$21.6 billion compared to the same period last year.

- Putnam continues to sustain strong investment performance relative to its peers.
  - Putnam ranked 13th (out of 49) and sixth (out of 45) for the five-year and ten-year performance, respectively, in the 2021 Barron's Annual Best Fund Families rankings, which were released in the first quarter of 2022.
  - As of December 31, 2022, approximately 73% and 78% of Putnam's fund assets performed at levels above the Lipper median on a three-year and five-year basis, respectively. In addition, 43% and 66% of Putnam's fund assets were in the Lipper top quartile on a three-year and five-year basis, respectively. Putnam has 40 funds currently rated 4 or 5 stars by Morningstar Ratings.
  - In March 2022, Putnam Convertible Securities Fund received a 2022 Refinitiv Lipper Fund Award for its top performance over a five-year period, recognizing the fund's consistently strong risk-adjusted performance relative to its peers in the convertible securities category.
- Putnam expanded its offering of innovative products:
  - During 2022, Putnam made a series of product-related announcements to meet evolving market demand for sustainable investment options including three actively managed, transparent exchange traded funds (ETFs) which were launched in January 2023, the repositioning of Putnam's RetirementReady Funds target-date series as the Putnam Sustainable Retirement Funds, the launching of three active fixed income and two active quantitative equity ETFs with an ESG focus.
  - During the third quarter of 2022, Putnam launched two new transparent and actively managed equity ETFs. The Putnam BDC Income ETF is concentrated on business development companies (BDCs) and Putnam BioRevolution ETF is centered on companies operating at the intersection of technology and biology. Putnam BDC Income ETF is the first actively managed BDC ETF in the marketplace.

SELECTED FINANCIAL INFORMATION - UNITED STATES

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Base earnings[1]	**$ 185**	$ 204	$ 156	**$ 652**	$ 671
Items excluded from base earnings					
Actuarial assumption changes and other management actions[2]	**$ —**	$ —	$ 2	**$ —**	$ 6
Market-related impacts on liabilities[2]	**9**	(22)	(1)	**(32)**	(5)
Restructuring and integration costs	**(32)**	(43)	(15)	**(131)**	(66)
Transaction costs related to acquisitions	**—**	25	(50)	**(29)**	(107)
Net earnings - common shareholders	**$ 162**	$ 164	$ 92	**$ 460**	$ 499
Sales[2]	**$ 40,278**	$ 35,854	$ 40,104	**$ 165,268**	$ 204,584
Fee and other income	**1,156**	1,095	998	**4,271**	3,880
Base earnings (US$)[1]	**$ 135**	$ 156	$ 125	**$ 499**	$ 535
Items excluded from base earnings (US$)					
Actuarial assumption changes and other management actions[2]	**$ —**	$ —	$ 1	**$ —**	$ 5
Market-related impacts on liabilities[2]	**7**	(18)	(1)	**(26)**	(3)
Restructuring and integration costs	**(23)**	(32)	(12)	**(100)**	(54)
Transaction costs related to acquisitions	**—**	19	(40)	**(24)**	(86)
Net earnings - common shareholders (US$)	**$ 119**	$ 125	$ 73	**$ 349**	$ 397
Sales (US$)[2]	**$ 29,616**	$ 27,370	$ 31,829	**$ 127,010**	$ 162,455
Fee and other income (US$)	**850**	836	792	**3,270**	3,092
Total assets (US$)[3]	**$ 230,187**	$ 219,580	$ 163,946		
Other assets under management[2,3]	**205,287**	194,513	244,829		
Total assets under management[1,3]	**435,474**	414,093	408,775		
Other assets under administration[2,3]	**1,056,914**	982,770	977,932		
Total assets under administration (US$)[1,3]	**$ 1,492,388**	$ 1,396,863	$ 1,386,707		
Total assets under administration (C$)[1,3]	**$ 2,014,725**	$ 1,927,671	$ 1,761,118		

1 This metric is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.
2 Refer to the "Glossary" section of this document for additional details on the composition of this measure.
3 The Prudential acquisition during the second quarter of 2022 added US$88 billion (C$119 billion) in total assets, US$1 billion (C$1 billion) in other assets under management and US$197 billion (C$267 billion) in other assets under administration as at December 31, 2022.

Financial Services Operating Results

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Base earnings[1]	**$ 206**	$ 214	$ 137	**$ 710**	$ 604
Items excluded from base earnings					
Actuarial assumption changes and other management actions[2]	**$ —**	$ —	$ 2	**$ —**	$ 6
Market-related impact on liabilities[2]	**9**	(22)	(1)	**(32)**	(5)
Restructuring and integration costs	**(28)**	(22)	(15)	**(94)**	(55)
Net earnings - common shareholders	**$ 187**	$ 170	$ 123	**$ 584**	$ 550
Sales[2]	**$ 25,923**	$ 24,720	$ 22,672	**$ 115,112**	$ 147,534
Fee and other income	**862**	824	673	**3,136**	2,640
Base earnings (US$)[1]	**$ 151**	$ 164	$ 110	**$ 544**	$ 482
Items excluded from base earnings (US$)					
Actuarial assumption changes and other management actions[2]	**$ —**	$ —	$ 1	**$ —**	$ 5
Market-related impact on liabilities[2]	**7**	(18)	(1)	**(26)**	(3)
Restructuring and integration costs	**(20)**	(16)	(12)	**(72)**	(44)
Net earnings - common shareholders (US$)	**$ 138**	$ 130	$ 98	**$ 446**	$ 440
Sales (US$)[2]	**$ 19,061**	$ 18,870	$ 17,994	**$ 88,603**	$ 117,036
Fee and other income (US$)	**634**	629	534	**2,400**	2,103

[1] This metric is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.
[2] Refer to the "Glossary" section of this document for additional details on the composition of this measure.

Base and net earnings

In the fourth quarter of 2022, net earnings of US$138 million increased by US$40 million compared to the same quarter last year. Base earnings of US$151 million increased by US$41 million compared to the same quarter last year, primarily due to base earnings of US$47 million related to the Prudential acquisition as well as higher contributions from investment experience. These items were partially offset by lower fee income driven by lower average equity markets and transaction volumes as well as higher expenses driven by business growth.

Items excluded from base earnings of negative US$13 million were comparable to the same quarter last year as higher restructuring and integration costs related to the Prudential acquisition were offset by positive contributions from hedge ineffectiveness related to Prudential guaranteed lifetime withdrawal benefit products resulting from higher in-quarter equity market levels.

For the twelve months ended December 31, 2022, net earnings increased by US$6 million to US$446 million compared to the same period last year. Base earnings of US$544 million increased by US$62 million compared to the same period last year, primarily due to base earnings of US$129 million related to the Prudential acquisition as well as the same reason discussed for the in-quarter results.

Items excluded from base earnings were negative US$98 million compared to negative US$42 million in the same period last year. The increase was primarily due to higher restructuring and integration costs related to the Prudential acquisition as well as market volatility resulting in hedge ineffectiveness related to Prudential guaranteed lifetime withdrawal benefit products.

Sales
Sales in the fourth quarter of 2022 of US$19.1 billion increased by US$1.1 billion compared to the same quarter last year. The increase was primarily due to an increase in large plan sales. Large plan sales can be highly variable from period to period and tend to be lower margin; however, contribute to covering fixed overhead costs.

For the twelve months ended December 31, 2022, sales decreased by US$28.4 billion to US$88.6 billion compared to the same period last year, primarily due to lower large plan sales. Included in sales for the first quarter of 2021 was one Empower large plan sale relating to a new client with approximately 316,000 participants.

Fee and other income
Fee income is derived primarily from assets under management, assets under administration, shareholder servicing fees, administration and recordkeeping services, investment advisory services, investment management fees, performance fees, transfer agency and other service fees, as well as underwriting and distribution fees.

Fee and other income for the fourth quarter of 2022 of US$634 million increased by US$100 million compared to the same quarter last year. The increase was primarily due to Prudential related fee income of US$157 million, partially offset by lower Empower fee income driven by lower average equity markets and lower transaction volumes.

For the twelve months ended December 31, 2022, fee and other income increased by US$297 million to US$2,400 million compared to the same period last year, primarily due to Prudential related fee income of US$463 million, partially offset by the same reasons discussed for the in-quarter results.

Empower - assets under administration (US$)

	December 31	
	2022	2021
General account	**$ 73,955**	$ 37,329
Segregated funds	**118,445**	86,181
Other assets under management[1,2]	**62,706**	65,075
Other assets under administration[3]	**1,056,914**	977,932
	$ 1,312,020	$ 1,166,517

1 At December 31, 2022, other assets under management included US$19.6 billion in Putnam managed funds (US$19.6 billion at December 31, 2021) and US$89 billion in Prudential managed funds (nil at December 31, 2021).
2 2021 comparative figure has been restated to include Personal Capital assets under management.
3 At December 31, 2022 other assets under administration included US$197 billion in Prudential managed funds (nil at December 31, 2021).

Empower customer account values at December 31, 2022 of US$1.3 trillion increased by US$145.5 billion compared with December 31, 2021, primarily due to the Prudential acquisition.

Asset Management Operating Results

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Core net earnings (loss)[1]	**$ 2**	$ (17)	$ 25	**$ (23)**	$ 92
Non-core net earnings (loss)[1]	**(29)**	(5)	18	**(43)**	3
Net earnings (loss)[2]	**$ (27)**	$ (22)	$ 43	**$ (66)**	$ 95
Sales[3]	**$ 14,355**	$ 11,134	$ 17,432	**$ 50,156**	$ 57,050
Fee income					
Investment management fees	**$ 196**	$ 193	$ 220	**$ 792**	$ 855
Performance fees	**17**	(3)	12	**11**	15
Service fees	**36**	35	37	**142**	146
Underwriting & distribution fees	**45**	46	56	**190**	224
Fee income	**$ 294**	$ 271	$ 325	**$ 1,135**	$ 1,240
Core net earnings (loss) (US$)[1]	**$ 1**	$ (13)	$ 20	**$ (18)**	$ 74
Non-core net earnings (loss) (US$)[1]	**(21)**	(4)	15	**(32)**	2
Net earnings (loss) (US$)[2]	**$ (20)**	$ (17)	$ 35	**$ (50)**	$ 76
Sales (US$)[3]	**$ 10,555**	$ 8,500	$ 13,835	**$ 38,407**	$ 45,419
Fee income (US$)					
Investment management fees	**$ 144**	$ 147	$ 175	**$ 607**	$ 682
Performance fees	**13**	(2)	9	**9**	12
Service fees	**26**	27	29	**108**	116
Underwriting & distribution fees	**33**	35	45	**146**	179
Fee income (US$)	**$ 216**	$ 207	$ 258	**$ 870**	$ 989
Core margin (pre-tax)[4]	**1.2 %**	(7.2)%	11.4 %	**(2.4)%**	10.1 %

1 This metric is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.
2 For the Asset Management business unit, there were no differences between net earnings (loss) and base earnings (loss) in the periods presented.
3 Refer to the "Glossary" section of this document for additional details on the composition of this measure.
4 This metric is a non-GAAP ratio. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.

Net earnings
For the Asset Management business unit, there were no differences between net earnings (loss) and base earnings (loss) in the periods presented.

The net loss for the fourth quarter of 2022 was US$20 million compared to net earnings of US$35 million for the same period last year, primarily due to lower other AUM-based fee income and the unfavourable impact of certain tax items.

The net loss for the twelve months ended December 31, 2022 was US$50 million compared to net earnings of US$76 million for the same period last year, primarily due to the same reasons discussed for the in-quarter results.

Sales
Sales in the fourth quarter of 2022 decreased by US$3.3 billion to US$10.6 billion compared to the same quarter last year, primarily due to a decrease in institutional sales of US$3.7 billion.

For the twelve months ended December 31, 2022, sales decreased by US$7.0 billion to US$38.4 billion compared to the same period last year, primarily due to the same reason discussed for the in-quarter results.

Fee income
Fee income is derived primarily from investment management fees, performance fees, transfer agency and other service fees, as well as underwriting and distribution fees. Generally, fees are earned based on AUM and may depend on financial markets, the relative performance of Putnam's investment products to benchmarks, the number of retail accounts and sales. Performance fees are generated on certain mutual funds and institutional portfolios and are generally based on a rolling 36-month performance period for mutual funds and a 12-month performance period for institutional portfolios. Performance fees on mutual funds are symmetric, and as a result, can be positive or negative.

Fee income for the fourth quarter of 2022 decreased by US$42 million to US$216 million compared to the same quarter last year. The decrease was primarily due to lower investment management fees and underwriting and distribution fees driven by lower other AUM as a result of lower equity and fixed income markets. The decrease in underwriting and distribution fees was mostly offset by lower distribution expenses.

For the twelve months ended December 31, 2022, fee income decreased by US$119 million to US$870 million compared to the same period last year, primarily for the same reasons as the in-quarter results.

Other Assets Under Management (AUM) - Putnam (US$)[1,2]

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Beginning other AUM	**$ 157,738**	$ 166,965	$ 196,887	**$ 202,532**	$ 191,554
Sales - Mutual funds and ETFs[1]	**5,577**	4,697	5,206	**21,254**	22,343
Redemptions - Mutual funds and ETFs	**(7,203)**	(5,845)	(6,812)	**(27,545)**	(26,605)
Net asset flows - Mutual funds and ETFs[1]	**(1,626)**	(1,148)	(1,606)	**(6,291)**	(4,262)
Sales - Institutional[1]	**4,978**	3,803	8,629	**17,153**	23,076
Redemptions - Institutional	**(4,836)**	(4,695)	(7,063)	**(21,195)**	(26,109)
Net asset flows - Institutional[1]	**142**	(892)	1,566	**(4,042)**	(3,033)
Net asset flows - Total[1]	**(1,484)**	(2,040)	(40)	**(10,333)**	(7,295)
Impact of market/performance	**8,458**	(7,187)	5,685	**(27,487)**	18,273
Ending other AUM[3]	**$ 164,712**	$ 157,738	$ 202,532	**$ 164,712**	$ 202,532
Average AUM[1]					
Mutual funds and ETFs	**79,219**	82,029	98,425	**84,741**	97,155
Institutional assets	**85,771**	87,854	102,090	**91,813**	100,968
Total average other AUM[1]	**$ 164,990**	$ 169,883	$ 200,515	**$ 176,554**	$ 198,123

1 Refer to the "Glossary" section of this document for additional details on the composition of this measure.
2 Other assets under management excluded US$1,061 million at December 31, 2022 in assets for which Putnam provides investment recommendations, but has no control over implementation of investment decisions and no trading authority, including model portfolios and model-only separately managed accounts, and Putnam-designed custom indices that serve as the reference benchmark for third-party insurance investment products (US$836 million at September 30, 2022 and US$412 million at December 31, 2021).
3 At December 31, 2022, ending other AUM included US$22.1 billion of assets managed for other business units within the Lifeco group of companies (US$20.4 billion at September 30, 2022 and US$22.8 billion at December 31, 2021).

Putnam's average other AUM for the three months ended December 31, 2022 were US$165.0 billion, a decrease of US$35.5 billion or 18% compared to the same quarter last year, primarily due to the cumulative impact of lower equity and fixed income markets as well as net outflows. In-quarter mutual fund net asset outflows of US$1.6 billion were comparable with the same quarter last year while institutional net asset inflows were US$1.4 billion lower.

Average other AUM for the twelve months ended December 31, 2022 decreased by US$21.6 billion to US$176.6 billion compared to the same period last year, for the same reason as the in-quarter results. Net asset outflows for the twelve months ended December 31, 2022 were US$10.3 billion compared to US$7.3 billion for the same period last year.

United States Corporate Operating Results

U.S. Corporate consists of items not associated directly with or allocated to the United States business units, including the impact of certain non-continuing items related to the U.S. segment.

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Base earnings (loss)[1]	**$ 6**	$ 12	$ (24)	**$ 8**	$ (28)
Items excluded from base earnings (loss)					
Transaction costs related to acquisitions	**$ —**	$ 25	$ (50)	**$ (29)**	$ (107)
Restructuring and integration costs	**(4)**	(21)	—	**(37)**	(11)
Net earnings (loss) - common shareholders	**$ 2**	$ 16	$ (74)	**$ (58)**	$ (146)
Base earnings (loss) (US$)[1]	**$ 4**	$ 9	$ (20)	**$ 5**	$ (23)
Items excluded from base earnings (loss) (US$)					
Transaction costs related to acquisitions	**$ —**	$ 19	$ (40)	**$ (24)**	$ (86)
Restructuring and integration costs	**(3)**	(16)	—	**(28)**	(10)
Net earnings (loss) - common shareholders (US$)	**$ 1**	$ 12	$ (60)	**$ (47)**	$ (119)

1 This metric is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.

Net earnings

In the fourth quarter of 2022, net earnings were US$1 million compared to a net loss of US$60 million for the same period in the same quarter last year, primarily due to lower transaction costs and the impact of changes in certain tax estimates. The fourth quarter of 2021 included US$39 million of additional contingent consideration expense related to the acquisition of Personal Capital.

For the twelve months ended December 31, 2022, the net loss decreased by US$72 million to US$47 million compared to the same period last year. The decrease was primarily due to the impact of certain tax items as well as lower transaction costs, which were driven by a contingent consideration provision release of US$39 million related to Personal Capital in the third quarter of 2022. The twelve months ended December 31, 2021 included US$76 million of additional contingent consideration expense related to the acquisition of Personal Capital. These items were partially offset by higher restructuring and integration costs related to the Prudential and MassMutual acquisitions.

OUTLOOK

Refer to Cautionary Note regarding Forward-looking Information and Cautionary Note regarding Non-GAAP Financial Measures and Ratios at the beginning of this document.

FINANCIAL SERVICES

Empower is positioned for significant growth opportunities with expertise and diversification across all plan types, company sizes and market segments. The acquisition of the full-service retirement business of Prudential in the first half of 2022 added significant expertise, a broader set of capabilities and an expanded product portfolio to Empower. Additionally, the acquisition further solidifies Empower's position as the second largest player in the U.S. retirement market. The Financial Services business unit continues to examine opportunities to structure products and develop strategies to stimulate growth in AUM.

In 2023, Empower's strategies to drive sales growth will continue to include active marketing of the brand, investing in product differentiation and offering a best-in-class service model. In 2022, the integrations of Personal Capital and MassMutual were completed in the second half of the year. The Company realized further cost synergies related to the migration of MassMutual's retirement services business onto Empower's recordkeeping platform throughout 2022, while also beginning to realize cost synergies related to the migration of Prudential's retirement services business in the second half of 2022. Additional cost synergies related to Prudential are anticipated to be realized throughout 2023 and the first half of 2024.

In addition to those business integrations, it is expected that continued investments in improving customer web experience, including adding innovative capabilities and ease of service products, will be made in 2023. These efforts are expected to increase customer retention and ultimately increase participant retirement savings. Leveraging new capabilities from the acquisition of Personal Capital will allow Empower to continue to better integrate Prudential's existing business of helping customers better understand their current financial needs through financial advice and goal setting.

ASSET MANAGEMENT

Putnam remains committed to providing strong, long-term risk-adjusted investment performance across asset classes for its clients and investors in the mutual fund, institutional and retirement marketplaces.

Putnam continues to focus efforts on driving growth and market share through new sales and asset retention in all of its businesses, including Global Institutional, PanAgora (Putnam's quantitative institutional manager), U.S. Retail and Defined Contribution Investment Only, while maintaining its industry recognized reputation for service excellence.

Innovation will remain a key differentiator in 2023 as Putnam further develops and refines its product offerings, service features and operational functions, while seeking to bolster its corporate and brand image in the marketplace. As a cloud-first company, Putnam continues to increasingly utilize digital technology across its business to drive greater efficiencies and create opportunities.

Putnam is also focused on managing firm-wide expenses as it seeks to further build a scalable and profitable asset management franchise.

EUROPE

The Europe segment is comprised of three distinct business units serving customers in the U.K., Ireland and Germany and offers protection and wealth management products, including payout annuity products. The U.K. and Germany business units operate under the Canada Life brand and the Ireland business unit operates under the Irish Life brand.

BUSINESS PROFILE

UNITED KINGDOM

The core products offered by the U.K. business unit are bulk and individual payout annuities, equity release mortgages, investments (including life bonds, retirement drawdown and pension), and group insurance. These products are distributed through independent financial advisors and employee benefit consultants in the U.K. and by companies in the Isle of Man selling into the U.K. Canada Life Management (CLAM) is the U.K.'s fund management company managing a broad range of assets on behalf of the U.K. businesses and companies in the Lifeco group.

IRELAND

The core products offered by Irish Life in Ireland are savings and investments, individual and group life insurance, health insurance and pension products. These products are distributed through independent brokers, a direct sales force and tied agent bank branches. Irish Life Health offers individual and corporate health plans, distributed through independent brokers and direct channels. Irish Life Investment Managers (ILIM) is one of the Company's fund management operations in Ireland. In addition to managing assets on behalf of companies in the Lifeco group, ILIM also manages assets for a wide range of institutional clients including pension schemes, insurance companies, wealth managers, fiduciary managers and sovereign wealth funds across Europe and North America. Setanta Asset Management, a subsidiary of the Company, manages assets for third-party institutional clients and a number of companies in the Lifeco group. The Company also owns a number of leading employee benefits and wealth consultancy businesses in Ireland, serving over 300,000 customers.

GERMANY

The core products offered by the Germany business unit are individual and group pensions and life insurance products. These products are distributed through independent brokers and multi-tied agents.

MARKET OVERVIEW

PRODUCTS AND SERVICES

EUROPE

MARKET POSITION	PRODUCTS AND SERVICES	DISTRIBUTION
U.K. • Group life market share 23%[1] • Group income protection market share 14%[1] • Payout annuities market share 20% (Advisor only)[2] • A market leading international life company selling into the U.K. market with over 23% market share[3] • Among the top three in the onshore unit-linked single premium bond market, with 9% market share (Advisor only)[3] • A leading company in the equity release market with 18% market share[4] **Ireland** • Life assurance market share 38%[5] • ILIM is one of the largest institutional fund managers in Ireland with €93 billion assets under management[6] • Third largest health insurance business through Irish Life Health with a market share of 21%[5] **Germany** • 4% share of the broker market[6]	**U.K.** • Individual and bulk payout annuities • Fixed term annuities • Individual savings and investments (retirement drawdown & pension, onshore & international bonds and collective investment funds) • Group and individual life insurance • Group income protection (disability) • Group and individual critical illness • Equity release mortgages **Ireland** • Individual and group risk & pensions • Individual and bulk payout annuities • Health insurance • Wealth management services • Individual savings and investment • Institutional investment management **Germany** • Pensions • Income protection (disability) • Critical illness • Variable annuities (GMWB) • Individual life insurance	**U.K.** • Financial advisors • Private banks • Employee benefit consultants **Ireland** • Independent brokers • Pensions and investment consultants • Direct sales force made up of primarily self employed tied agents and a smaller employed sales team • Tied bank branch distribution • Direct digital and contact centre **Germany** • Independent brokers • Multi-tied agents

1 As at December 31, 2021.
2 Market share based on third quarter 2022 data through financial advisors, restricted whole market advisors and non-advised distributor.
3 Market share position is based on sales for the twelve month period ended September 30, 2022.
4 Equity Release Council market statistics for the fourth quarter of 2021 to the third quarter of 2022.
5 As at September 30, 2022.
6 As at December 31, 2022.

COMPETITIVE CONDITIONS

United Kingdom
In the U.K., the Company has strong market positions for payout annuities, wealth management and group risk, where it is a market leader. Combined sales from the onshore and international wealth management businesses puts Canada Life as one of the top investment bond providers in the U.K.

For individual annuities, the Company has benefited in recent years from an increase in the proportion of customers seeking the best price in the open market, increasing the proportion of customers buying annuities through financial advisors, which are the Company's primary distribution channel. The Company continues to offer both standard and enhanced annuities as well as investment based pension and drawdown products for customers wanting to take advantage of pension flexibility. The Company is well positioned for further growth in the retirement retail market, supported by its equity release mortgage expertise, which is an important part of the retirement market. Adverse financial market conditions in the U.K. led to a temporary suspension of equity release mortgage applications in late September of 2022. These applications recommenced in November of 2022. The Company also offers bulk annuities aimed at trustees of defined benefits plans who want to insure pension annuities in payment. This is a large and growing market and demand from trustees remains strong as they consider ways to reduce risk. With considerable expertise and experience in longevity and investment products, the Company is well placed in the bulk annuity market.

In November of 2022, the Company announced its exit from the U.K.'s individual protection market to refocus on the group protection and international protection markets. Future estate planning continues to be an area of focus for U.K. advisors and Canada Life International remains one of the leading companies in this sector of the market.

Canada Life Asset Management (CLAM) is based in the U.K. with approximately £37 billion of assets under management, as at December 31, 2022. CLAM's core fund management solutions include a broad asset sourcing capability that supports its institutional client mandates, bulk annuity and reinsurance customers and retail collective funds. CLAM distributes its products through a network of platforms, discretionary fund managers and financial advisors.

Ireland
The Company is the largest life assurance company in Ireland with a market share of 38% as at September 30, 2022. Irish Life follows a multi-channel distribution strategy with a large broker distribution network, the largest direct sales force and the largest Bancassurance distribution network where it has tied relationships with five banks. Two of the smaller banks are currently in the process of winding down their Irish operations and will formally exit from the Irish market in 2023.

ILIM is one of Ireland's largest institutional fund managers with approximately €93 billion of assets under management, as at December 31, 2022. ILIM continues to expand its real estate offerings, broaden its ESG capabilities, evolve its asset and liability management and focus on bulk annuity services to large defined benefit pension schemes.

Setanta Asset Management had approximately €13 billion of assets under management as at December 31, 2022.

Irish Life Health has a top three position in the Irish market and provides access to healthcare through its health insurance plans, offering preventative health benefits through a combination of innovative digital and in-person services.

The intermediary division of Irish Life provides employee benefits and wealth consultancy to individuals and companies in Ireland through a number of specialist intermediary firms.

Germany
The Company has a leading position among providers of low guarantee unitized products to the German independent intermediary market. The move of insurance companies from traditional German insurance products with guarantees to the unitized lighter guarantee product categories that Canada Life offers continues, increasing the level of competition. The Company has enhanced its ongoing product, technology and service improvements to help strengthen its position in the competitive German market.

2022 DEVELOPMENTS

- The Company continued to advance its digital capabilities to serve advisors and clients:
  - During the first quarter of 2022, Canada Life U.K. announced the launch of its redesigned Home Finance Adviser Portal which allows advisers streamlined access to obtain quotes, submit applications and track case progress conveniently using the custom-built portal. Additionally, the Simplified Platform Programme launched Customer Online Access which marks the successful completion of a major commitment the wealth business had made toward key adviser relationships.
  - In the second quarter of 2022, Irish Life invested in a minority shareholding in U.K. based financial technology company Multiply.AI (Multiply), enabling Irish Life to design and build compliant digital customer journeys specific to the Irish market.
- The Company's commitment to sustainability were further evidenced:
  - From April 2022, Canada Life U.K.'s Potters Bar and London offices have been supplied with 100% renewable REGO-certified electricity (Renewable Energy Guarantees of Origin), making the carbon emissions from electricity in these offices effectively zero.
  - Canada Life Asset Management supported a regeneration plan in the North of England and agreed to fund the development of two Grade-A office buildings for £75 million.
- The Company expanded its product and service capabilities:
  - In the third quarter of 2022, Irish Life entered into a new partnership with Centric Health Primary Care Limited, a leading Irish primary care provider. The partnership agreement received regulatory approval during the fourth quarter of 2022 with the newly established joint venture named Care Connect.
  - In the third quarter of 2022, Canada Life Asset Management launched the LF Canlife Sterling Short Term Bond Fund which broadens options for investors with short and medium-term cash requirements. The fund aims to provide a stable income by investing in sterling-denominated short-term fixed income and variable rate bonds, including money market instruments.
- Adverse financial market conditions in the U.K. led to a temporary suspension of equity release mortgage applications in late September. Applications recommenced in November with interest rate increases reducing both the total market size and the average case size.
- During the year, the Company received the following rankings:
  - The recent group protection industry survey 'Group Watch 2022' from Swiss Re confirmed Canada Life U.K. as the leading provider by in-force premium, policies and lives insured.
  - Assekurata Assekuranz Rating-Agentur GmbH, a German financial strength rating agency, raised the credit rating of Canada Life Assurance Europe plc, a subsidiary of Canada Life, from AA- to AA, making Canada Life one of the highest rated life insurance companies in Germany.
- Strategic Transactions Update:
  - In the second quarter of 2021, a 50:50 joint venture agreement was reached by Allied Irish Banks plc (AIB) and Canada Life Irish Holding Company Limited to form a new life assurance company. In the fourth quarter of 2022, the Company incurred transaction costs of $3 million ($18 million incurred to date) related to this agreement. In December 2022, the joint venture agreement received authorization in principle from the Central Bank of Ireland.
  - In Q4 2022, Irish Life completed the portfolio transfer of Ark Life, which was integrated into ILA's Retail division effective October 1, 2022. This follows the purchase of Ark Life on November 1, 2021 by Irish Life Group Limited. During the fourth quarter of 2022, Ark Life Assurance Company dac changed its legal name to Irish Life Ark Dublin dac.

SELECTED FINANCIAL INFORMATION - EUROPE

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Base earnings (loss)[1]					
United Kingdom	**$ 153**	$ 105	$ 110	**$ 497**	$ 366
Ireland	**59**	65	67	**267**	288
Germany	**37**	37	41	**156**	196
Europe Corporate	**(10)**	(7)	(5)	**(28)**	(20)
Base earnings (loss)[1]	**$ 239**	$ 200	$ 213	**$ 892**	$ 830
Items excluded from base earnings					
Actuarial assumption changes and other management actions[2]	**$ 37**	$ 69	$ 46	**$ 117**	$ 186
Market-related impacts on liabilities[2]	**16**	(15)	18	**(5)**	19
Transaction costs related to acquisitions	**(5)**	(5)	(24)	**(20)**	(24)
Tax legislative changes impact	**—**	—	—	**—**	(21)
Net gain/charge on business dispositions	**—**	—	(14)	**—**	(14)
Net earnings - common shareholders	**$ 287**	$ 249	$ 239	**$ 984**	$ 976
Sales[2]					
Insurance	**$ 887**	$ 966	$ 909	**$ 3,975**	$ 4,202
Wealth Management	**5,551**	5,616	5,584	**23,305**	22,411
Sales[2]	**$ 6,438**	$ 6,582	$ 6,493	**$ 27,280**	$ 26,613
Wealth and investment only net cash flows[2]					
United Kingdom	**$ 190**	$ 198	$ 42	**$ 827**	$ 348
Ireland	**856**	309	1,354	**3,207**	3,085
Germany	**174**	170	266	**820**	925
Wealth and investment only net cash flows[2]	**$ 1,220**	$ 677	$ 1,662	**$ 4,854**	$ 4,358
Fee and other income					
United Kingdom	**$ 40**	$ 37	$ 42	**$ 166**	$ 175
Ireland	**180**	174	200	**733**	772
Germany	**108**	101	122	**435**	468
Fee and other income	**$ 328**	$ 312	$ 364	**$ 1,334**	$ 1,415
Total assets	**$ 179,274**	$ 165,283	$ 200,899		
Other assets under management[2]	**50,539**	46,749	60,480		
Total assets under management[1]	**229,813**	212,032	261,379		
Other assets under administration[2,3]	**11,345**	10,640	12,360		
Total assets under administration[2]	**$ 241,158**	$ 222,672	$ 273,739		

1 This metric is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.
2 Refer to the "Glossary" section of this document for additional details on the composition of this measure.
3 At December 31, 2022, other assets under administration excludes $10.8 billion of assets managed for other business units within the Lifeco group of companies ($10.0 billion at September 30, 2022 and $10.8 billion at December 31, 2021).

Base and net earnings
In the fourth quarter of 2022, the Europe segment's net earnings of $287 million increased by $48 million compared to the same quarter last year. Base earnings of $239 million increased by $26 million compared to the same quarter last year, primarily due to favourable investment experience in the U.K. and Ireland as well as favourable longevity experience in the U.K. These items were partially offset by less favourable morbidity experience in Ireland, the unfavourable impact of currency movement, and the non-recurrence of changes to certain tax estimates in the U.K. in the prior year.

Items excluded from base earnings for the fourth quarter of 2022 were positive $48 million compared to positive $26 million for the same quarter last year. The increase was primarily due to lower transaction costs, including contingent consideration provisions, related to acquisitions in Ireland and a net charge on business disposition in the prior year. These items were partially offset by lower contributions from actuarial assumption changes and other management actions. Market-related impacts on liabilities were comparable to the same quarter last year as reductions in property market values in the U.K. were mostly offset by favourable impacts on investment guarantee business and positive interest rate impacts in Ireland.

For the twelve months ended December 31, 2022, net earnings increased by $8 million to $984 million compared to the same period last year. Base earnings of $892 million increased by $62 million compared to the same period last year. The increase was primarily due to favourable investment experience in the U.K. and Ireland, higher fee income and favourable mortality experience in Ireland. The increase was partially offset by unfavourable longevity experience in the U.K., the unfavourable impact of currency movement, and the non-recurrence of a 2021 pension settlement gain in Ireland.

For the twelve months ended December 31, 2022, items excluded from base earnings decreased by $54 million to $92 million, primarily due to lower contributions from actuarial assumption changes and other management actions as well as unfavourable market-related impacts driven by the same reasons discussed for the in-quarter results. The twelve months ended December 31, 2021 included unfavourable impacts of tax legislative changes on deferred tax liabilities as well as lower transaction costs, including contingent consideration provisions, related to acquisitions in Ireland, and a net charge on business disposition in Corporate.

Sales
Sales for the fourth quarter of 2022 decreased by $0.1 billion to $6.4 billion compared to the same quarter last year. Higher fund management and bulk annuity sales in Ireland were more than offset by lower bulk annuity sales in the U.K., lower wealth management sales in Ireland and Germany as well as the impact of currency movement.

For the twelve months ended December 31, 2022, sales increased by $0.7 billion to $27.3 billion compared to last year, primarily due to higher fund management sales in Ireland, higher wealth management sales in Ireland and the U.K., growth in equity release mortgage sales in the U.K. as well as bulk annuity sales in Ireland. These items were partially offset by lower bulk annuity sales in the U.K. and lower wealth management sales in Germany and the impact of currency movement.

In the fourth quarter of 2022, wealth and investment only net cash inflows were $1,220 million compared to net inflows of $1,662 million for the same quarter last year. The decrease was primarily due to higher fund management outflows in Ireland. For the twelve months ended December 31, 2022, net cash inflows were $4,854 million compared to $4,358 million for the same period last year, primarily due to higher wealth management sales in Ireland and the U.K.

Fee and other income
Fee and other income for the fourth quarter of 2022 decreased by $36 million to $328 million compared to the same quarter last year. The decrease was primarily due to lower management fees on segregated fund assets and other management fees in Ireland and Germany as well as the impact of currency movement.

For the twelve months ended December 31, 2022, fee and other income decreased by $81 million to $1,334 million compared to the same period last year. Higher management fees on segregated fund assets and other management fees across all business units were more than offset by the impact of currency movement.

OUTLOOK

Refer to Cautionary Note regarding Forward-looking Information and Cautionary Note regarding Non-GAAP Financial Measures and Ratios at the beginning of this document.

UNITED KINGDOM

The retail payout annuities market is expected to show modest growth in the medium to long-term. Some individuals have chosen to remain invested in the market while drawing pension income rather than buying a payout annuity; however, the Company expects that the attractiveness of guaranteed income from annuities will remain a key part of customers' retirement planning in the future. The Company expects the opportunity to grow its payout annuity business in line with the expected growth in the overall retirement market given the higher interest rate environment.

The overall size of the retirement market continues to grow as more employers transition from defined benefit to defined contribution pension plans, with significant growth expected in equity release mortgages, pension consolidation and income drawdown. The Company plans to continue to develop products for individuals who require additional pension flexibility and to further develop its presence in the bulk annuity market where trustees of defined benefit schemes want to remove risk by insuring pension liabilities near to or already in payment.

Canada Life continues to be a key player in the single premium investment bond marketplace. Canada Life plans to continue to develop its presence in both the international and onshore market segments. The Company's distribution strategy for onshore will remain focused on financial advisors. In the international wealth management segment, the outlook is cautiously optimistic, with the majority of the Company's business growth expected to be through discretionary fund management wealth advisors, the retail market and through tax and estate planning products.

The Group protection business remains the market leader and the Company believes that this market share position will facilitate continued growth in premium income. The Company anticipates employment contraction arising from the U.K. economy entering recession, although it does not expect material impacts on earnings due to the offsetting impact of wage inflation.

IRELAND

Irish Life's vision to be "Ireland's home of Health and Wealth" continues to progress strongly driven by a number of innovation and transformation initiatives across the Irish business unit. The Company also continues to expand its Wealth & Intermediary Division.

The Irish business is accruing benefits from being a collaborative, centrally connected, inquisitive and digitally enabled organization that embraces technology for the benefit of all its stakeholders. In 2022 it has again actively reviewed and amended its strategy to accelerate developments that help its customers and advisers face the challenges presented by the current economic climate. The launch of the MyIrishLife digital portal presents existing and new Irish Life customers a best-in-market view of our services and products.

Irish Life continues to expand its well-being offering in line with the Company's commitment to support its customers, employees and wider community in managing their mental, physical and financial well-being. In 2022, Irish Life Health exceeded 500,000 customers and as a group, its insurance companies now serve more than 1.5 million adult customers.

The Company's broadly diversified product portfolio, distribution channels and target market segments have helped it adapt successfully to the economic challenges presented in the post-pandemic world, and position it well in relation to opportunities expected to be present in the Irish economy in 2023. Further evidence of Irish Life's strong positioning can be seen from its high customer satisfaction scores and the current market-leading position it holds with ILA now having a 38% market share.

GERMANY

The outlook for the German business continues to be positive and the Company expects growth in its share of the market and assets under management as the German economy improves during 2023. The Company has positioned itself to further strengthen its presence in the unit-linked market through increased investments in product development, distribution technology and service improvements.

The Company will focus on the independent intermediary distribution channel and has a strong distribution technology platform in Germany, which offers considerable service flexibility.

CAPITAL AND RISK SOLUTIONS

The Capital and Risk Solutions segment of Lifeco includes the operating results of the Reinsurance business unit which operates primarily in the U.S., Barbados, Bermuda and Ireland, together with an allocation of a portion of Lifeco's corporate results. Capital and Risk Solutions Corporate includes the results for the segment's legacy international businesses.

BUSINESS PROFILE

REINSURANCE

Reinsurance provides capital and risk solutions and operates primarily in the U.S., Barbados, Bermuda and Ireland. In the U.S., the reinsurance business operates through a branch of Canada Life, subsidiaries of Canada Life and a subsidiary of Empower. In Barbados, the reinsurance business operates primarily through a branch of Canada Life and subsidiaries of Canada Life. In Bermuda and Ireland, the reinsurance business operates through a subsidiary of Canada Life.

The Company's business includes both reinsurance and retrocession business transacted directly with clients or through reinsurance brokers. As a retrocessionaire, the Company provides reinsurance to other reinsurers to enable those companies to manage their insurance risk.

The product portfolio offered by the Company includes life, health, annuity/longevity, mortgage surety and property catastrophe reinsurance, provided on both a proportional and non-proportional basis.

In addition to providing reinsurance products to third parties, the Company also utilizes internal reinsurance transactions between companies in the Lifeco group. These transactions are undertaken to better manage insurance risks relating to retention, volatility and concentration; and to facilitate capital management for the Company, its subsidiaries and branch operations. These internal reinsurance transactions produce benefits that are reflected in one or more of the Company's other business units.

MARKET OVERVIEW

PRODUCTS AND SERVICES

REINSURANCE

MARKET POSITION	PRODUCTS AND SERVICES	DISTRIBUTION
• 4th largest reinsurer worldwide by premium volume[1] • Largest life reinsurer worldwide by premium volume[1] • Leading provider of structured reinsurance solutions in the U.S. and Europe markets • Leading provider of U.K. and European longevity reinsurance • Ranked 8th for traditional mortality reinsurance in the U.S in terms of market share[1] • Long-standing provider of a range of property and casualty catastrophe retrocession coverages	**Life, Health and Annuity** • Yearly renewable term • Co-insurance • Modified co-insurance • Risk & capital management solutions **Longevity** • Longevity swaps • Capital management solutions **Mortgage and Surety Reinsurance** • Stop loss and quota share **Property and Casualty** • Catastrophe retrocession • Capital management solutions **Funded reinsurance** • Coinsurance of life and annuity blocks with assets	• Independent reinsurance brokers • Direct placements

[1] As at December 31, 2021.

COMPETITIVE CONDITIONS

In the U.S. life reinsurance market, insurers continue to view reinsurance as an important tool for risk and capital management. Several competitors are now focusing on growing their market share, which resulted in increased competition. Nevertheless, a biennial independent industry survey released in October 2021 confirmed that the Company remains one of the top two providers of risk and capital management solutions in the U.S. market. The Company's financial strength and ability to offer risk and capital solutions and traditional mortality reinsurance continues to be a competitive advantage.

In Europe, Solvency II dominates the regulatory landscape and interest in reinsurance solutions that produce capital benefits continues to grow. Demand for longevity reinsurance remains strong in the U.K., the Netherlands and other continental European countries. As a result, there are now more reinsurers participating in the European market.

2022 DEVELOPMENTS

- The Capital and Risk Solutions segment continued to grow by providing tailored solutions to customers while increasing diversification within the portfolio. During 2022, the Capital and Risk Solutions segment expanded its international presence in targeted new markets, including Asia, while continuing to focus on core markets and product expansion in Europe and the U.S.
- The Company offers property catastrophe coverage to reinsurance companies and as a result, the Company is exposed to potential claims arising from major weather events and other catastrophic events. The Company has been closely following the impacts of Hurricane Ian, which caused a high level of insured losses. The Company’s net earnings for the third quarter of 2022 included a $128 million after-tax provision primarily relating to estimated claims net of reinstatement premiums on these coverages. The Company’s loss estimate is based on currently available information and the exercise of judgment and may change as additional information becomes available.

SELECTED FINANCIAL INFORMATION - CAPITAL AND RISK SOLUTIONS

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Base earnings (loss)[1]					
Reinsurance	**$ 190**	$ 3	$ 147	**$ 540**	$ 552
Capital and Risk Solutions Corporate	**(3)**	(2)	(2)	**(8)**	(5)
Base earnings (loss)[1]	**$ 187**	$ 1	$ 145	**$ 532**	$ 547
Items excluded from base earnings					
Actuarial assumption changes and other management actions[2]	**10**	119	(12)	**129**	(15)
Market-related impact on liabilities[2]	**14**	(5)	—	**1**	—
Net earnings - common shareholders	**$ 211**	$ 115	$ 133	**$ 662**	$ 532
Total net premiums					
Reinsurance	**$ 8,446**	$ 7,205	$ 7,216	**$ 31,711**	$ 29,514
Capital and Risk Solutions Corporate	**6**	6	6	**20**	19
Total net premiums	**$ 8,452**	$ 7,211	$ 7,222	**$ 31,731**	$ 29,533
Total assets[3]	**$ 16,346**	$ 15,265	$ 17,396		

1 This metric is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.
2 Refer to the "Glossary" section of this document for additional details on the composition of this measure.
3 The Capital and Risk Solutions segment does not have assets under management or other assets under administration.

Base and net earnings

In the fourth quarter of 2022, the Capital and Risk Solutions segment's net earnings of $211 million increased by $78 million compared to the same quarter last year. Base earnings of $187 million increased by $42 million compared to the same quarter last year, primarily due to strong new business growth, favourable longevity experience and improved claims experience on the U.S. life business. The increase was partially offset by the impact of currency movement.

Items excluded from base earnings were positive $24 million compared to negative $12 million for the same quarter last year. The fourth quarter of 2022 included positive contributions from insurance contract liability basis changes and a decrease in actuarial liabilities on a legacy block of business with investment performance guarantees.

For the twelve months ended December 31, 2022, net earnings increased by $130 million to $662 million compared to the same period last year. Base earnings of $532 million decreased by $15 million compared to the same period last year, primarily due to the net provision for estimated claims resulting from the impact of Hurricane Ian of $128 million after-tax recorded in the third quarter of 2022, mostly offset by business growth, favourable longevity experience and improved claims experience on the U.S. life business. The third quarter of 2021 also included a provision for major weather events for $61 million.

For the twelve months ended December 31, 2022, items excluded from base earnings increased by $145 million to positive $130 million compared to the same period last year, primarily due to the same reasons discussed for the in-quarter results.

Total net premiums

Reinsurance premiums can vary significantly from period to period depending on the terms of underlying treaties. For certain life reinsurance transactions, premiums will vary based on the form of the transaction. Treaties where insurance contract liabilities are assumed on a proportionate basis will typically have significantly higher premiums than treaties where claims are not incurred by the reinsurer until a threshold is exceeded. Earnings are not directly correlated to premiums received.

Total net premiums for the fourth quarter of 2022 of $8.5 billion increased by $1.2 billion compared to the same quarter last year, primarily due to new business in the current period.

For the twelve months ended December 31, 2022, total net premiums increased by $2.2 billion to $31.7 billion compared to the same period last year, primarily due to the same reason discussed for the in-quarter results.

OUTLOOK

Refer to Cautionary Note regarding Forward-looking Information and Cautionary Note regarding Non-GAAP Financial Measures and Ratios at the beginning of this document.

The U.S. health individual market continues to create expanded opportunities for reinsurance.

The Company's Reinsurance business unit continues to help European clients and other affiliated companies meet these capital challenges through innovative reinsurance solutions. Demand for longevity reinsurance remains strong and will remain a focus for 2023.

Internationally, Canada Life continued to explore opportunities where the Company's reinsurance solutions can support clients in new geographies and executed a number of value generating transactions. Measured international expansion will remain a focus in 2023.

2022 was the sixth consecutive year of significant hurricane and flood events. The Company expects 2023 retrocessional pricing to continue to increase. Insurance linked securities capacity has decreased due to trapped collateral from 2017 to 2022 events, together with a lower appetite for these risks. The Company’s primary focus in the property catastrophe market for 2023 will be to continue to support the core client base with prudent attachment levels and risk adjusted premiums.

LIFECO CORPORATE OPERATING RESULTS

The Lifeco Corporate segment includes operating results for activities of Lifeco that are not associated with the major business units of the Company.

In the fourth quarter of 2022, the Lifeco Corporate segment's net loss was $14 million compared to a net loss of $6 million for the same period last year, primarily due to higher operating expenses driven by variable compensation expenses, partially offset by higher net investment income. There were no differences between net loss and base loss for the fourth quarter of 2022.

For the twelve months ended December 31, 2022, the Lifeco Corporate segment's net loss was $3 million compared to a net loss of $66 million for the same period last year. Base loss of $3 million decreased by $5 million compared to the same period last year, primarily due to higher net investment income and lower operating expenses. Items excluded from base earnings were nil compared to negative $58 million for the same period last year, primarily due to a provision in the prior year for payments relating to the Company's 2003 acquisition of Canada Life.

RISK MANAGEMENT

OVERVIEW

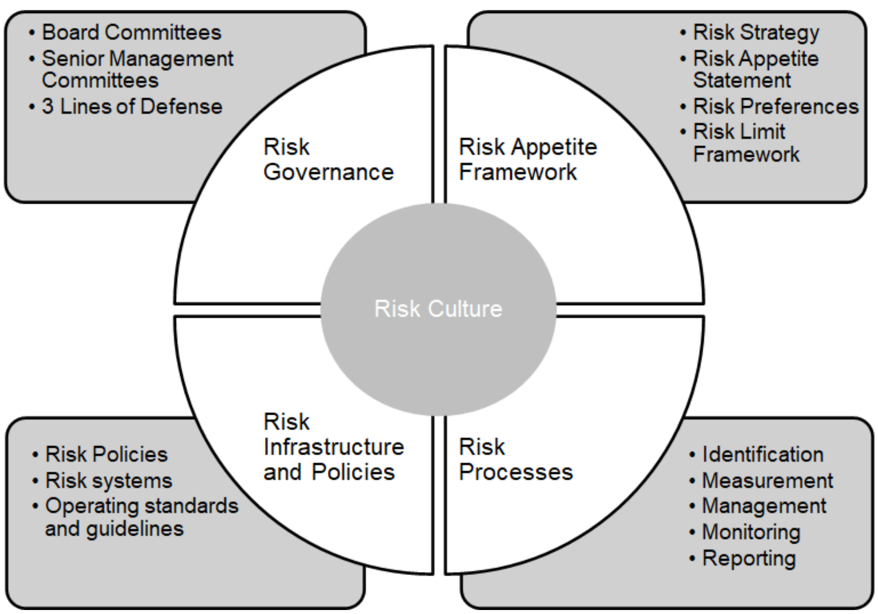
As a diverse financial services company, the effective management of risk is integral to the success of the Company’s business. The Company is committed to a comprehensive system of risk management, which is embedded across all business activities, operated through a three lines of defense organization and overseen by the Board of Directors. The Company's three lines of defense include business unit and support functions, oversight functions including actuarial, finance, risk and compliance, and the Company's internal audit function. The Company has a prudent and measured approach to risk management. This approach is built on a strong risk culture and is guided by an integrated Enterprise Risk Management (ERM) Framework.

The Company’s ERM Framework facilitates the alignment of business strategy with risk appetite, informs and improves the deployment of capital; and supports the identification, mitigation and management of exposure to possible losses and risks. The Company’s Risk Function is responsible for developing and maintaining the Risk Appetite Framework (RAF), the supporting risk policies and risk limit structure, and provides independent risk oversight across the Company’s operations.

There are three main sections to this Risk Management disclosure: ERM Framework, Risk Management and Control Practices and Exposures and Sensitivities.

ENTERPRISE RISK MANAGEMENT FRAMEWORK

The Company’s Board and Management Committees provide oversight of the ERM Framework which is comprised of five components: Risk Culture, Risk Governance, RAF, Risk Processes and Risk Infrastructure & Policies.



RISK CULTURE

Risk culture is defined as the system of norms, values, attitudes and behaviours that influences and informs risk decision-making. Our risk culture reflects the Company's collective sense of responsibility to fulfill our commitments and promises to our stakeholders. Our risk culture is guided by our corporate purpose and core values with a customer first approach. We safeguard our financial strength and strong reputation while growing shareholder value in a manner that balances the interests of all stakeholders.

This culture is instilled through a mindset of risk awareness as demonstrated by:

- Consistent tone from the Board, senior management and throughout the organization in respect of behavioural and ethical expectations, and alignment of business decisions with business strategies, corporate purpose, core values and risk appetite
- Recognition that risk is inherent in our business success and reflects opportunity when appropriately managed
- Individual and shared commitment to the importance of continuous management of risk, including clear accountability for and ownership of specific risks and risk areas
- Rewarding of positive risk taking and management behaviours while challenging and remediating those that are inconsistent with corporate purpose, core values or risk appetite
- Encouragement of risk event reporting and the presence of robust whistleblowing processes, actively seeking to learn from mistakes and near misses
- Accountability to all stakeholders
- Recognition that risk management is a responsibility of all employees, officers and directors, both individually and collectively; risk management skills and knowledge are developed and core to our ongoing success; effective challenge is expected and respected across all business operations and all three lines of defense. Oversight and assurance functions are valued and appropriately resourced throughout the organization

RISK GOVERNANCE

Risk governance sets out the roles and responsibilities for the Board of Directors (Board) and Board Committees.

Board of Directors

The mandate of the Board, which it discharges directly or through one of its Committees, is to supervise the management of the business and affairs of the Company. The Board is ultimately accountable and responsible for the governance and oversight of risk throughout the Company. The Board annually approves the strategic goals, objectives, plans and initiatives for Lifeco, and in so doing reviews the risks associated with Lifeco's diverse business, strategic goals and high priority initiatives. Key risk responsibilities include:

- Approving the ERM Policy and RAF;
- Monitoring the implementation and maintenance by management of appropriate systems, policies, procedures and controls to manage the risks associated with the Company's businesses and operations;
- Annually approving Lifeco's business, financial and capital plans and monitoring the implementation by management thereof;
- Upon the recommendation of the Risk Committee, adopting a Code of Conduct applicable to Directors, officers and employees of the Company;
- Periodically approving policies designed to support independence of the Risk, Finance, Actuarial and Compliance oversight functions as well as the Internal Audit assurance function; and

- Overseeing the Company’s environmental, social and governance (ESG) strategy, monitoring management’s execution against this strategy and reviewing the related impacts, risks, initiatives and reporting.

Risk Committee
The Risk Committee of the Board of Directors is responsible for assisting the Board with risk management oversight and governance throughout the Company. The Risk Committee's responsibilities include:

- Review and oversight of the ERM Policy and RAF;
- Review, approval and oversight of the credit, market and liquidity, insurance, operational, conduct, strategic and other risk policies;
- Approval of the risk limit framework, associated risk limits and monitoring adherence to those limits;
- Approval of the organizational and reporting structures, budget and resources of the Risk and Compliance functions;
- Discussion of the risks in aggregate and by type of risk, including actions taken or planned to mitigate those risks where appropriate;
- Review relevant reports including stress testing and Financial Condition Testing;
- Review and approval of the Own Risk and Solvency Assessment (ORSA) Report;
- Periodic approval of the Recovery Plan Playbook;
- Advise the Board of any developments that would materially alter the risk profile;
- Review of the risk impact of business strategies, capital plans, financial plans and new business initiatives;
- Review and approval of the mandate for and assessment of the performance of the Company's CRO, CCO and the effectiveness of the Risk and Compliance functions;
- Review and monitoring of compliance with the Company's Code of Conduct;
- Periodic consideration and input regarding the relationships between risk and compensation; and
- Review and assessment of the effectiveness of risk management across the Company including processes to ensure effective identification, measurement, management, monitoring and reporting on significant current and emerging risks.

The Risk Committee is required to meet, at least annually, with the Audit Committee and with the Company's Chief Internal Auditor. The Risk Committee meets with the Investment Committee as appropriate. Members of the Risk Committee are independent of management.

Audit Committee - The primary mandate of the Audit Committee is to review the financial statements of the Company and public disclosure containing financial information and to report on such reviews to the Board, to be satisfied that adequate procedures are in place for the review of the Company’s public disclosures containing financial information and to oversee the work and review the independence of the external auditor. The Audit Committee is also responsible for reviewing, evaluating and approving the internal control procedures that are implemented and maintained by management. The Audit Committee meets as often as necessary to discharge its duties and responsibilities and meets at least annually with the Risk Committee. Members of the Audit Committee are independent of management.

Conduct Review Committee - The primary mandate of the Conduct Review Committee is to require management to establish satisfactory procedures for the consideration and approval of transactions with related parties and to review and, if deemed appropriate, to approve related party transactions in accordance with such procedures. Members of the Conduct Review Committee are independent of management.

Governance and Nominating Committee - The primary mandate of the Governance and Nominating Committee is to oversee the Company's approach to governance matters, to recommend to the Board effective corporate governance policies and processes, to assess the effectiveness of the Board, Board Committees and the Directors and to recommend to the Board candidates for election as Directors and candidates for appointment to Board Committees.

Human Resources Committee - The primary mandate of the Human Resources Committee is to support the Board in its oversight of compensation, talent management and succession planning. This includes the responsibility to approve compensation policies, to review the designs of major compensation programs, to approve compensation arrangements and any benefit or perquisite plan for senior executives of the Company and to recommend to the Board compensation arrangements for the Directors and for the President and Chief Executive Officer. The mandate also includes the responsibility to review succession plans for the President and Chief Executive Officer and other senior executives, to review talent management programs and initiatives and to review the leadership capabilities required to support the advancement of the Company's strategic objectives. The Human Resources Committee is also responsible for considering the implications of the risks associated with the Company's compensation policies, plans and practices and in doing so meets annually with the Chief Risk Officer. The Human Resources Committee also meets with the Risk Committee on an as needed basis.

Investment Committee - The primary mandate of the Investment Committee is to oversee the Company's global investment strategy and activities, including approving the Company's Investment Policy and monitoring the Company's compliance with the Investment Policy. The global investment strategy includes climate-related transition risks and opportunities such as cleaner energy sectors that could impact our investment growth strategies. The mandate also includes reviewing the Company's annual investment plan and monitoring emerging risks, market trends and performance, investment regulatory issues and any other matters relevant to the oversight of the Company's global investment function. The Investment Committee meets as often as necessary to discharge its duties and responsibilities and meets with the Risk Committee as appropriate.

Reinsurance Committee - The primary mandate of the Reinsurance Committee is to advise on the Company's reinsurance transactions. The mandate also includes reviewing and approving management's recommendations with respect to policies applicable to reinsurance.

Senior Management Risk Committees

The Executive Risk Management Committee (ERMC) is the primary senior management committee that oversees all forms of risk and the implementation of the ERM Framework. The members are the CEO, the heads of each major business segment, the heads of key oversight functions and heads of support functions as appropriate. The Company's CRO leads the Risk Function and chairs the ERMC. Its responsibilities include reviewing compliance with the RAF, risk policies and risk standards. It also assesses the risk impact of business strategies, capital and financial plans and material initiatives. The Board Risk Committee delegates authority for the approval and management of lower level risk limits to the ERMC. The following three enterprise-wide sub-committees, chaired by the Risk Function, report to the ERMC to provide advice and recommendations on each of the key risk categories:

- Market and Credit Risk Committee
- Insurance Risk Committee
- Operational Risk Committee

The oversight responsibilities of the above Committees include identification, measurement, management, monitoring and reporting of their respective risks. In addition, each business segment has established its own executive risk management committee providing oversight for all forms of risk and the implementation of the ERM Framework.

Accountabilities
The Company has adopted a Three Lines of Defense model to clearly segregate risk management and risk oversight responsibilities and applies the ERM Framework rigorously across the enterprise.

- **First Line:** Business units and business support functions, including Investment Management, Human Resources, Information Services and Legal, are the ultimate owners of risk and have primary risk management as well as risk-taking responsibility and accountability through day-to-day operations within ongoing business processes.
- **Second Line:** The Risk Function has the primary and overall responsibility and accountability for independent oversight and effective challenge of risk-taking and risk management of the first line of defense. In this role, the Risk Function receives support from other oversight functions including Actuarial, Compliance and Finance; and
- **Third Line:** Internal Audit is responsible for independent assurance of the adequacy of the design and operational effectiveness of the Company's ERM Framework.

The Company's CRO reports directly, both to the President and Chief Executive Officer and to the Board Risk Committee. The CRO is responsible for ensuring that the Risk Function is appropriately resourced and effective in executing its responsibilities. The accountabilities of the CRO include reporting on compliance with the ERM Policy and RAF as well as for escalating matters that require attention.

Business segment ERMCs monitor all risk categories for businesses and operations within their respective business segments. Risk resources and capabilities are aligned with the Company's business segments and operating units and further support is provided by centrally based risk areas of expertise.

Although the Company takes steps to anticipate and minimize risks in general, no risk management framework can guarantee that all risks will be identified, appreciated or mitigated effectively. Unforeseen future events may have a negative impact on the Company's business, financial condition and results of operations.

RISK APPETITE FRAMEWORK
The Company has an articulated Risk Appetite Framework (RAF) that includes the following elements along with the associated governance structure:

- **Risk Strategy:** Risk philosophy of the Company that links to the business strategy
- **Risk Appetite Statement:** Reflects the aggregate level of risk and types of risk that the Company is willing to accept to achieve its business objectives.
- **Risk Preference:** Qualitative description of risk tolerances
- **Risk Limit Framework:** Quantitative components of the RAF including excess and escalation process.

Risk Strategy
Our main purpose is to help our customers achieve financial security and well-being while keeping our commitments and growing shareholder value. Effective and efficient risk management is key to achieving these aims. This is achieved by:

- Establishing a risk awareness culture that is ingrained in all business activities with a risk governance model based on three lines of defense. Business units have full accountability for all risk-taking decisions. The Risk Function has primary responsibility for independent risk oversight and effective challenge within the second line of defense. As the third line of defense, Internal Audit provides independent assurance over the Company's ERM Framework.
- Employing a prudent and measured approach to risk-taking:
- Conducting business to safeguard the Company's reputation and deliver fair customer outcomes through maintaining high standards of integrity based on the employee Code of Conduct and sound sales and marketing practices, and

- Generating returns to grow shareholder value through profitable and growing operations while maintaining a strong balance sheet.

Risk Appetite Statement
The Company's Risk Appetite Statement has four key components:

- **Strong Capital Position:** The Company intends to maintain a strong balance sheet and not take risks that would jeopardize its financial strength.
- **Mitigated Earnings Volatility:** The Company seeks to avoid substantial earnings volatility through appropriate diversification and limiting exposure to more volatile lines of business.
- **Strong Liquidity:** The Company intends to maintain a high quality, diversified investment portfolio with sufficient liquidity to meet the demands of policyholder and financing obligations under normal and stressed conditions, and
- **Treating Customers Fairly and Maintaining the Company's Reputation:** The Company seeks to maintain a high standing and positive reputation with all stakeholders including its customers, counterparties, creditors and other stakeholders. This includes building and maintaining trust, fair treatment of customers, consideration of corporate social responsibility, and effective management of sustainability and reputational risks.

Risk Preference
The Company has established qualitative risk preferences for each risk type. Each risk is assigned a risk preference level, in the context of understanding and managing these risks. The current level of exposure is regularly measured and risk tolerances are expressed quantitatively through actual constraints to the Company's risk profile within pre-agreed limits. Maximum guidelines are established to monitor risk concentration and inform the risk limit setting process.

Risk Limit Framework
A comprehensive structure of risk limits and controls is in place across the Company. Enterprise risk limits are further broken down by business unit and risk type. The limit structure is accompanied by comprehensive limit approval and excess management processes to ensure effective governance and oversight of the RAF.

The Company and its subsidiaries are subject to various regulatory regimes. The capital requirements under these regulatory capital regimes are reflected in the development of risk limits. Business units are responsible for operating within the risk appetite and the risk limit framework and satisfying local needs as required.

RISK PROCESSES
Risk processes follow a cycle of identification, measurement, management, monitoring and reporting and are designed to ensure both current and emerging risks are assessed against the RAF.

Risk Identification, Measurement and Management
Risk identification requires the structured analysis of the current and emerging risks facing the Company, so that they are understood and appropriately managed. Processes are designed to ensure risks are considered, assessed, prioritized and addressed in all business initiatives, operations and changes, including investment strategies, product design, significant transactions, annual planning and budgeting as well as potential business acquisitions and disposals.

Risk measurement provides the means to quantify and assess the Company's risk profile and monitor the profile against the risk limits. Any material new business development or change in strategy warrants an independent assessment of risk and potential impact on reputation, in addition to measurement of the impact on capital, earnings and liquidity. Stress and scenario testing is used to evaluate risk exposures against the risk appetite. Sensitivity testing of key risks is used to evaluate the impact of risk exposures independent of other risks. Scenario testing is used to evaluate the combined impact of multiple risk exposures.

The Company has processes in place to identify risk exposures on an ongoing basis and, where appropriate, develops mitigation strategies to proactively manage these risks. Effective risk management requires the selection and implementation of approaches to accept, reject, transfer, avoid or control risk, including mitigation plans. It is based on a control framework for financial and non-financial risks that includes risk limits, Risk Function Indicators (RFIs) and stress and scenario testing to ensure appropriate escalation and resolution of potential issues in a timely manner.

A key responsibility of the Risk Function is to ensure that the risk appetite is applied consistently across the Company and that limits are established to ensure that risk exposures comply with the risk appetite and Company-wide risk policies. The Risk Function provides ongoing and independent challenge to the first line of defense. In addition, in the event of a significant internal or external change that could introduce new risks or heighten existing risks that could materially impact the business, the Risk Function provides a formal Risk Opinion or thematic review.

Risk Monitoring, Reporting and Escalation

Risk monitoring relates to ongoing oversight and tracking of the Company's risk exposures, ensuring that the risk management approaches in place remain effective. Monitoring may also identify risk-taking opportunities.

Risk reporting presents an accurate and timely picture of existing and emerging risk issues and exposures as well as their potential impact on business activities. Reporting highlights the risk profile relative to the risk appetite and associated risk limits.

A clearly defined escalation protocol is in place to address any excesses against thresholds or limits established by the RAF, risk policies, operating standards and guidelines. Remediation plans are reviewed and monitored by the Risk Function and escalated to designated management and Board committees.

RISK INFRASTRUCTURE AND POLICIES

The Company's organization and infrastructure is established to provide resources and risk systems to support adequate and appropriate risk policies, operating standards and guidelines and processes. The Company endeavours to take a consistent approach to risk management across key risk types.

The Company has codified its procedures and operations related to risk management and oversight requirements in a set of guiding documents composed of risk policies, operating standards and associated guidelines. This comprehensive documentation framework provides detailed and effective guidance across all risk management processes. These documents enable a consistent approach to risk management and oversight across the Company's businesses and are reviewed and approved regularly, in accordance with an established authority hierarchy, by the Board of Directors, the Board Risk Committee or a senior management committee. Similar policy structures have been developed and are maintained by each business segment.

RISK MANAGEMENT AND CONTROL PRACTICES

The Company's risk profile is impacted by a variety of risks and its risk management and independent oversight processes are tailored to the type, volatility and magnitude of each risk. The Company has defined specific risk management and oversight processes for risks, broadly grouped in the following categories:

1. Market and Liquidity Risk
2. Credit Risk
3. Insurance Risk
4. Operational Risk
5. Conduct Risk
6. Strategic Risk

MARKET AND LIQUIDITY RISK

Risk Description

Market risk is the risk of loss resulting from potential changes in market rates and prices in various markets such as for interest rates, real estate, currency, common shares and commodities. Exposure to this risk results from business activities including investment transactions which create on-balance sheet and off-balance sheet positions.

Liquidity risk is the risk of the Company's inability to generate the necessary funds to meet its obligations as they come due, including off-balance sheet commitments and obligations.

Market and Liquidity Risk Management

The Company's Market & Liquidity Risk Policy sets out the market and liquidity risk management framework and principles. This policy is supported by other policies and guidelines that provide detailed guidance.

A governance structure has been implemented for the management of market and liquidity risk. The business units, including Investment Management, are the ultimate owners of market and liquidity risk and as such have primary responsibility for the identification, measurement, management, monitoring and reporting. The Company has established a senior management committee to provide oversight of market and liquidity risk, which includes completing reviews and making recommendations regarding risk limits, the risk policy and associated compliance, excess management and mitigation pertaining to market and liquidity risk. Each business segment has established oversight committees and operating committees to help manage market and liquidity risk within the segment. The Company has developed risk limits, RFIs and other measures to support the management of market and liquidity risk in compliance with the Company's RAF. The Risk Function works with the business units and other oversight functions to identify current and emerging market and liquidity risks and take appropriate action, if required.

The Company is willing to accept market and liquidity risk in certain circumstances as a consequence of its business model and seeks to mitigate the risks wherever practical. To reduce market risk, the Company has established a framework using dynamic hedging programs associated with segregated fund and variable annuity guarantees. Hedging programs are grouped by product-level hedging, tactical portfolio hedging and macro-hedging. This is supplemented by a general macro equity hedging program that has been established to execute hedge transactions in circumstances and at levels that have been determined by the Company. To reduce liquidity risk, the Company seeks to maintain a high quality, diversified investment portfolio with sufficient liquidity to meet demands of policyholders and financing obligations under normal and stress conditions.

Risks and risk management activities associated with the broad market and liquidity risk categories are detailed below.

Interest Rate Risk

Interest rate risk is the risk of loss resulting from the effect of the volatility and uncertainty of future interest rates on asset cash flows relative to liability cash flows and on assets backing surplus. This also includes changes in the amount and timing of cash flows related to asset and liability optionality, including interest rate guarantees and book value surrender benefits in the liabilities.

The Company's principal exposure to interest rate risk arises from certain general fund and segregated fund products. The Company's Asset Liability Management (ALM) strategy has been designed to mitigate interest rate risks associated with general fund products, with close matching of asset cash flows and insurance and investment contract obligations. Products with similar risk characteristics are grouped together to ensure an effective aggregation and management of the Company's ALM positions. Asset portfolios supporting insurance and investment contract liabilities are segmented to align with the duration and other characteristics (e.g. liquidity) of the associated liabilities.

Crediting rates within general fund products are set prudently and a significant proportion of the Company's portfolio of crediting rate products includes pass-through features, which allow for the risk and returns to be shared with policyholders. However, a rapid rise in interest rates may adversely impact certain general fund products with guaranteed benefits as a result of losses associated with early disposal of fixed income securities to meet contractual surrender benefits. Asset management and related products permit redemptions; however, the Company attempts to mitigate this risk by establishing long-term customer relationships, built on a strategic customer focus and an emphasis on delivering strong fund performance.

A prolonged period of low interest rates may adversely impact the Company's earnings and capital and could impact the Company's business strategy. During periods of prolonged low interest rates, investment earnings may be lower because the interest earned on new fixed income investments will likely have declined with the market interest rates, and hedging costs may increase. Also, early repayment on investments held such as mortgage-backed securities, asset-backed securities, and callable bonds, may be experienced and proceeds forced to be reinvested at lower yields, which will reduce investment margins.

The Company has established dynamic hedging programs to hedge interest rate risk sensitivity associated with segregated fund and variable annuity guarantees. These hedging programs are designed to offset changes in the economic value of liabilities using derivative instruments. The Company's approach to dynamic hedging of interest rate risk principally involves transacting in interest rate swaps. The hedge asset portfolios are dynamically rebalanced within approved thresholds and rebalancing criteria.

Where the Company's insurance and investment products have benefit or expense payments that are dependent on inflation (e.g. inflation-indexed annuities, pensions and disability claims), the Company generally invests in real return instruments to mitigate changes in the real dollar liability cash flows. Some protection against changes in the inflation index can be achieved, as any related change in the fair value of the assets will be largely offset by a similar change in the fair value of the liabilities.

Equity Risk

Equity risk is the risk of loss resulting from the sensitivity of the value of assets, liabilities, financial instruments and fee revenue to changes in the level or in the volatility of market prices of common shares and real estate. This includes the equity risk associated with the Company's general fund assets and investments on account of segregated fund policyholders.

The Company's principal exposure to equity risk arises from segregated funds and fee income associated with the Company's assets under management. Approved investment and risk policies also provide for general fund investments in equity markets within defined limits.

The Company has established dynamic hedging programs to hedge equity risk sensitivity associated with segregated fund and variable annuity guarantees. Hedging programs are grouped by product-level hedging, tactical portfolio hedging and macro-hedging. The hedging programs are designed to mitigate exposure to changes in the economic value of these liabilities using derivative instruments. The Company's approach to dynamic hedging of equity risk principally involves the short selling of equity index futures. The hedge asset portfolios are dynamically rebalanced within approved thresholds and rebalancing criteria. The Company's product-level hedging programs are supplemented by a general macro hedging strategy that has been established to execute hedge transactions in circumstances and at levels that have been determined by the Company.

For certain very long-dated liabilities it is not practical or efficient to closely match liability cash flows with fixed-income investments. Therefore, certain long-dated asset portfolios target an investment return sufficient to meet liability cash flows over the longer term. These liabilities are partially backed by a diversified portfolio of non-fixed income investments, including equity and real estate investments, in addition to long dated fixed-income instruments. Real estate losses can arise from fluctuations in the value of or future cash flows from the Company's investments in real estate.

The Company has established a macro equity hedging program to execute hedge transactions in circumstances and at levels that have been determined by the Company. The objective of the program is to reduce the Company's exposure to equity tail-risk and to maintain overall capital sensitivity to equity market movements within Board approved risk appetite limits. The program is designed to hedge a portion of the Company's capital sensitivity due to movements in equity markets arising from sources outside of dynamically hedged segregated fund and variable annuity exposures.

Foreign Exchange Risk

Foreign exchange risk is the risk of loss resulting from changes in currency exchange rates against the reporting currency. The Company's foreign exchange investment and risk management policies and practices are to match the currency of the Company's general fund investments with the currency of the underlying insurance and investment contract liabilities. To enhance portfolio diversification and improve asset liability matching, the Company may use foreign exchange derivatives to mitigate currency exchange risk to the extent this is practical using forward contracts and swaps.

The Company has net investments in foreign operations. As a result, the Company's revenue, expenses and income denominated in currencies other than the Canadian dollar are subject to fluctuations due to the movement of the Canadian dollar against these currencies. Such fluctuations affect the Company's financial results. The Company has exposures to the U.S. dollar resulting from the operations of Empower and Putnam in the United States segment and the Reinsurance business unit within the Capital and Risk Solutions segment; and to the British pound and the euro resulting from operations of business units within the Europe and Capital and Risk Solutions segments operating in the U.K., the Isle of Man, Ireland and Germany.

In accordance with IFRS, foreign currency translation gains and losses from net investments in foreign operations, net of related hedging activities and tax effects, are recorded in accumulated other comprehensive income (loss). Strengthening or weakening of the Canadian dollar end-of-period market rate compared to the U.S. dollar, British pound and euro end-of-period market rates impacts the Company's total share capital and surplus. Correspondingly, the Company's book value per share and capital ratios monitored by rating agencies are also impacted.

Management may use forward foreign currency contracts and foreign currency denominated debt to mitigate the volatility arising from the movement of currency rates as they impact the translation of net investments in foreign operations. The Company uses non-GAAP financial measures such as constant currency calculations to assist in communicating the effect of currency translation fluctuation on financial results.

- A 5% appreciation (depreciation) of the average exchange rate of the Canadian dollar to each of the British pound, euro and U.S. dollar would decrease (increase) net earnings in 2022 by $46 million, $30 million and $34 million, respectively.
- A 5% appreciation (depreciation) of the Canadian dollar end-of-period market rate compared to each of the U.S. dollar, British pound and euro end-of-period market rates would decrease (increase) the unrealized foreign currency translation gains[1] in accumulated other comprehensive income (loss) of shareholders' equity by approximately $499 million, $218 million and $93 million, respectively, as at December 31, 2022.

Liquidity Risk

The Company's liquidity risk management framework and associated limits are designed to ensure that the Company can meet cash and collateral commitments as they fall due, both on an expected basis and under a severe liquidity stress.

In the normal course of certain reinsurance business, the Company provides letters of credit (LCs) to other parties, or beneficiaries. A beneficiary will typically hold a LC as collateral to secure statutory credit for insurance and investment contract liabilities ceded to or amounts due from the Company.

The Company may be required to seek collateral alternatives if it is unable to renew existing LCs at maturity. The Company monitors its use of LCs on a regular basis and assesses the ongoing availability of these and alternative forms of operating credit. The Company has contractual rights to reduce the amount of LCs issued to the LC beneficiaries for certain reinsurance treaties. The Company staggers the maturities of LCs to reduce the renewal risk.

[1] Unrealized foreign currency translation gains (losses) include the impact of instruments designated as hedges of net investments on foreign operations.

Liquidity[1]

	December 31	
	2022	2021
Cash, cash equivalents and short-term bonds	**$ 11,418**	$ 9,791
Other liquid assets and marketable securities		
Government bonds	**29,545**	35,331
Corporate bonds[2]	**58,729**	50,491
Stocks	**11,380**	12,424
Mortgage loans	**3,136**	3,406
	$ 102,790	$ 101,652
Total	**$ 114,208**	$ 111,443

Cashable liability characteristics

	December 31	
	2022	2021
Surrenderable insurance and investment contract liabilities[1,3]		
At market value	**$ 66,329**	$ 48,767
At book value	**79,228**	54,232
Total	**$ 145,557**	$ 102,999

1 Amounts presented exclude non-liquid and pledged assets. Refer to the "Liquidity and Capital Management and Adequacy" section of this document for additional details regarding the composition of these metrics.
2 Includes public short-term bonds and public long-term bonds that are rated BBB or higher.
3 Cashable liabilities include insurance and investment contract liabilities classified as held for sale.

The carrying value of the Company's liquid assets and marketable securities is approximately $114.2 billion or 0.8 times the Company’s surrenderable insurance and investment contract liabilities. The Company believes that it holds adequate and appropriate liquid assets to meet anticipated cash flow requirements as well as to meet cash flow needs under a severe liquidity stress.

Approximately 35% (approximately 48% in 2021) of insurance and investment contract liabilities are non-cashable prior to maturity or claim, with a further 30% approximately (24% in 2021) of insurance and investment contract liabilities subject to fair value adjustments under certain conditions.

The majority of liquid assets and other marketable securities comprise fixed-income securities whose value decrease when interest rates rise. Also, a high interest rate environment may encourage holders of certain types of policies to terminate their policies, thereby placing demands on the Company's liquidity position.

For a further description of the Company's financial instrument risk management policies, refer to note 8 in the Company's December 31, 2022 annual consolidated financial statements.

CREDIT RISK

Risk Description

Credit risk is the risk of loss resulting from an obligor’s potential inability or unwillingness to fully meet its contractual obligations. Exposure to this risk occurs any time funds are extended, committed or invested through actual or implied contractual agreements. Components of credit risk include: loan loss/principal risk, pre-settlement/ replacement risk and settlement risk. Obligors include issuers, debtors, borrowers, brokers, policyholders, reinsurers, derivative counterparties and guarantors.

Credit exposure results from the purchase of fixed-income securities, which are primarily used to support policyholder liabilities. The Company also manages financial contracts with counterparties. Such contracts may be used to mitigate insurance and market risks (reinsurance ceded agreements and derivative contracts) or they may arise from the Company's direct business operations (Reinsurance business unit) and may result in counterparty risk. The risk arising from these types of arrangements is included in the Company's measurement of its risk profile.

Credit Risk Management

The Company's credit risk management framework focuses on minimizing undue concentration of assets, in-house credit analysis to identify and measure risks, continuous monitoring, and proactive management. Diversification is achieved through the establishment of appropriate concentration limits (by asset class, issuers, credit rating, industries, and individual geographies) and transaction approval authority protocols. The Company's approach to credit risk management includes the continuous review of its existing risk profile relative to the RAF as well as to the assessment of potential changes in the risk profile under stress scenarios.

A governance structure has been implemented for the management of credit risk. The business units, including Investment Management, are the ultimate owners of credit risk and as such have primary responsibility for the identification, measurement, management, monitoring and reporting. The Company has established a senior management committee to provide oversight of credit risk, which includes completing reviews and making recommendations regarding risk limits, the risk policy and associated compliance, excess management and mitigation pertaining to credit risk. Each business segment has established oversight committees and operating committees to help manage credit risk within the segment. The Company has developed risk limits, RFIs and measures to support the management of credit risk in compliance with the Company's RAF.

The Company has established business segment-specific Investment and Lending Policies, including investment limits for each asset class. These policies and limits are complemented by the Credit Risk Policy which sets out the credit risk management framework and principles. This policy is supported by other policies and guidelines that provide detailed guidance.

The Company identifies credit risk through an internal credit risk rating system which includes a detailed assessment of an obligor's creditworthiness based on a thorough and objective analysis of business risk, financial profile, structural considerations and security characteristics including seniority and covenants. Credit risk ratings are expressed using a 22-point scale that is consistent with those used by external rating agencies. In accordance with the Company's policies, internal credit risk ratings cannot be higher than the highest rating provided by certain independent ratings companies. The Risk Function reviews and approves the credit risk ratings assigned by Investment Management for all new investments and reviews the appropriateness of ratings assigned to outstanding exposures.

The Risk Function assigns credit risk parameters (probabilities of default, rating transition rates, loss given default, exposures at default) to all credit exposures to measure the Company's aggregate credit risk profile. In addition, the Risk Function establishes limits and processes, performs stress and scenario testing (using stochastically generated and deterministic scenarios) and assesses compliance with the limits established in the RAF. It regularly reports on the Company's credit risk profile to executive management, the Board of Directors and various committees at enterprise, business segment and legal entity levels.

Investment Management and the Risk Function are responsible for the monitoring of exposures relative to limits as well as for the management and escalation of risk limit excesses as they occur. Investment Management is also responsible for the continuous monitoring of its portfolios for changes in credit outlook, and performs regular credit reviews of all relevant obligors and counterparties, based on a combination of bottom-up credit analysis and top-down views on the economy and assessment of industry and sub-sector outlooks. Watch Lists are also used at the business segment levels to plan and execute the relevant risk mitigation strategies for obligors experiencing heightened credit stress.

Counterparty Risk
Counterparties include both reinsurers and derivative counterparties.

The Company uses reinsurance to mitigate insurance risks. This mitigation results in increased credit risk to reinsurance counterparties from the potential failure to collect reinsurance recoveries due to either the inability, or an unwillingness to fulfill their contractual obligation.

Counterparties providing reinsurance to the Company are reviewed for financial soundness as part of an ongoing monitoring process. The minimum financial strength of reinsurers is outlined in the Reinsurance Risk Management Policy. The Company seeks to minimize reinsurance credit risk through diversification as well as seeking protection in the form of collateral or funds withheld arrangements where possible.

The Company enters into derivative contracts primarily to mitigate market risks. Derivative counterparty risk is the risk of loss resulting from the potential failure of the derivative counterparty to meet their financial obligations under the contract. Derivative products are traded through exchanges or with counterparties approved by the Board of Directors or the Investment Committee. The Company seeks to mitigate derivative credit risk through diversification and through collateral arrangements where possible. In addition, the Company includes potential future exposure of derivatives in its measure of total exposure against single name limits.

INSURANCE RISK

Risk Description
Insurance risk is the risk of loss resulting from adverse changes in experience associated with contractual promises and obligations arising from insurance contracts. Insurance risk includes uncertainties around the ultimate amount of net cash flows (premiums, commissions, claims, payouts and related settlement expenses), the timing of the receipt and payment of these cash flows, as well as the impact of policyholder behaviour (e.g. lapses).

The Company identifies six broad categories of insurance risk, which may contribute to financial losses: mortality risk, morbidity risk, longevity risk, policyholder behaviour risk, expense risk and property catastrophe risk. Mortality risk, morbidity risk, longevity risk and expense risk are core business risks and the exchange of these risks into value is a core business activity. Policyholder behaviour risk is associated with offering core products and is accepted as a consequence of the business model and mitigated where appropriate. Property catastrophe risk is a selectively accepted business risk which is constrained, actively managed and controlled within risk limits.

Insurance Risk Management
Insurance products involve commitments by the insurer to provide services and financial obligations with coverage for extended periods of time. To provide insurance protection effectively, the insurer must design and price products so that the premiums received, and the investment income earned on those premiums, will be sufficient to pay future claims and expenses associated with the product. This requires the insurer, in pricing products and establishing insurance contract liabilities, to make assumptions regarding expected levels of income, claims and expenses and how policyholder behaviours and market risks might impact these assumptions. As a result, the Company is exposed to product design and pricing risk which is the risk of financial loss resulting from transacting business where the costs and liabilities arising in respect of a product line exceed the pricing expectations.

Insurance contract liabilities are established to fund future claims and include a provision for adverse deviation, set in accordance with professional actuarial standards. Insurance contract liability valuation requires regular updating of assumptions to reflect emerging experience.

A governance structure has been implemented for the management of insurance risk. Business units are the ultimate owners of insurance risk and as such have primary responsibility for the identification, measurement, management, monitoring and reporting of insurance risk. The Risk Function, supported by Corporate Actuarial, is primarily responsible for oversight of the insurance risk management framework. The Company has established an Insurance Risk Committee to provide oversight of insurance risk, which includes completing reviews and making recommendations regarding risk limits, the risk policy and associated compliance, excess management and mitigation pertaining to insurance risk. Each business segment has established oversight committees and operating committees to help manage insurance risk within the segment.

The Company's Insurance Risk Policy sets out the insurance risk management framework and provides the principles for insurance risk management. This policy is supported by several other policies and guidelines that provide detailed guidance, including:

- Product Design and Pricing Risk Management Policy and Reinsurance Risk Management Policy, which provide guidelines and standards for the product design and pricing risk management processes and reinsurance ceded risk management practices;
- Corporate Actuarial Valuation Policy, which provides documentation and control standards consistent with the valuation standards of the Canadian Institute of Actuaries; and
- Participating Account Management Policies and Participating Policyholder Dividend Policies, which govern the management of participating accounts and provide for the distribution of a portion of the earnings in the participating account as participating policyholder dividends.

The Risk Function, in conjunction with Corporate Actuarial, implements a number of processes to carry out its responsibility for oversight of insurance risk. It reviews the Insurance Risk Policy relative to current risk exposures and updates it as required. It reviews insurance risk management processes carried out by the business units, including product design and pricing, underwriting, claims adjudication, and reinsurance ceding, and provides challenge as required.

The Risk Function works with the business units and other oversight functions to identify current and emerging insurance risks and take appropriate action, if required. Insurance risk limits, risk budgets and RFIs are set to keep the insurance risk profile within the Company's appetite for insurance risk and the Risk Function regularly monitors the insurance risk profile relative to these measures. Any excesses are required to be escalated so that appropriate remediation may be implemented. The Risk Function performs stress testing and does analysis of insurance risks, including review of experience studies. It provides regular reporting on these activities to the business units, senior management, and risk oversight committees. The Risk Function performs thematic reviews and/or enhances the monitoring and reporting of associated exposures to these risks.

Risks and risk management activities associated with the broad insurance risk categories are detailed below.

Mortality and Morbidity Risk

Mortality risk is the risk of loss resulting from adverse changes in the level, trend, or volatility of mortality rates, where an increase in the mortality rate leads to an increase in the value of insurance contract liabilities.

Morbidity risk is the risk of loss resulting from adverse changes in the level, trend, or volatility of disability, health, dental, critical illness and other sickness rates, where an increase in the incidence rate or a decrease in the disability recovery rate leads to an increase in the value of insurance contract liabilities.

There is a risk that the Company will mis-estimate the level of mortality or morbidity, or write business which generates worse mortality and morbidity experience than expected.

The Company employs the following practices to manage its mortality and morbidity risk:

- Research and analysis is done regularly to provide the basis for pricing and valuation assumptions to properly reflect the insurance and reinsurance risks in markets where the Company is active.
- Underwriting limits, practices and policies control the amount of risk exposure, the selection of risks insured for consistency with claims expectations and support the long-term sustainability of the Company.
- The insurance contract liabilities established to fund future claims include a provision for adverse deviation, set in accordance with actuarial standards. This margin is required to provide for the possibilities of mis-estimation of the best estimate and/or future deterioration in the best estimate assumptions.
- The Company sets retention limits for mortality and morbidity risks. Aggregate risk is managed through a combination of reinsurance and capital market solutions to transfer the risk where appropriate.

- For Group life products, exposure to a concentrated mortality event due to concentration of risk in specific locations for example, could have an impact on financial results. To manage the risk, concentrations are monitored for new business and renewals. The Company may impose single-event limits on some group plans and declines to quote in localized areas where the aggregate risk is deemed excessive.
- Effective plan design and claims adjudication practices, for both morbidity and mortality risks are critical to the management of the risk. As an example, for Group healthcare products, inflation and utilization will influence the level of claims costs, which can be difficult to predict. The Company manages the impact of these and similar factors through plan designs that limit new costs and long-term price guarantees and include the ability to regularly re-price for emerging experience.
- The Company manages large blocks of business, which, in aggregate, are expected to result in relatively low statistical fluctuations in any given period. For some policies, these risks are shared with the policyholder through adjustments to future policyholder charges or in the case of participating policies through future changes in policyholder dividends.

Longevity Risk

Longevity risk is the risk of loss resulting from adverse changes in the level, trend, or volatility of mortality rates, where a decrease in the mortality rate leads to an increase in the value of insurance contract liabilities. Annuities, some segregated fund products with Guaranteed Minimum Withdrawal Benefits and longevity reinsurance are priced and valued to reflect the life expectancy of the annuitant. There is a risk that annuitants could live longer than was estimated by the Company, which would increase the value of the associated insurance contract liabilities.

Business is priced using mortality assumptions which consider recent Company and industry experience and the latest research on expected future trends in mortality.

Aggregate risk is managed through reinsurance to transfer the risk as appropriate, as well as consideration of capital market solutions if deemed necessary. The Company has processes in place to verify annuitants' eligibility for continued income benefits. These processes are designed to ensure annuity payments accrue to those contractually entitled to receive them and help ensure mortality data used to develop pricing and valuation assumptions is as complete as possible.

Policyholder Behaviour Risk

Policyholder behaviour risk is the risk of loss resulting from adverse changes in the level or volatility of the rates of policy lapses, terminations, renewals, surrenders, or exercise of embedded policy options.

Many products are priced and valued to reflect the expected duration of contracts and the exercising of options embedded in those contracts. There is a risk that contracts may be terminated earlier or later than assumed in pricing and plan design. To the extent that higher costs are incurred in early contract years, there is a risk that contracts are terminated before higher early expenses can be recovered. Conversely, on certain long-term level premium products where costs increase by age, there is risk that contracts are terminated later than assumed.

Business is priced using policy termination assumptions which consider product designs and policyholder options, recent Company and industry experience and the latest research on expected future trends. Assumptions are reviewed regularly and are updated as necessary for both pricing of new policies and valuation of in-force policies.

The Company also incorporates early surrender charges into certain contracts and incorporates commission chargebacks in its distribution agreements to reduce unrecovered expenses.

Policyholder taxation rules in many jurisdictions help encourage the retention of insurance coverage.

Expense Risk

Expense risk is the risk of loss resulting from adverse variability of expenses incurred with fee-for-service business or in servicing and maintaining insurance, savings or reinsurance contracts, including direct expenses and allocations of overhead costs.

Expense management programs are regularly monitored to control unit costs while maintaining effective service delivery.

Property Catastrophe Risk

Property catastrophe risk is the risk of loss resulting from adverse changes in property damage experience and is mainly related to extreme or catastrophic events.

The reinsurance business in particular has exposure to extreme or catastrophic events that result in property damage. As a retrocessionaire for property catastrophe risk, the Company generally participates at more remote event-loss exposures than primary carriers and reinsurers. Generally, an event of significant size must occur prior to the Company incurring a claim. The Company limits the total maximum claim amount under all property catastrophe contracts. The Company monitors cedant companies' claims experience and research from third party expert risk models on an ongoing basis and incorporates this information in pricing models to ensure that the premium is adequate for the risk undertaken.

OPERATIONAL RISK

Risk Description

Operational risk is the risk of loss resulting from potential problems relating to internal processes, people and systems or from external events. Exposure to operational risk results from either normal day-to-day operations or a specific unanticipated event, and can have material financial and/or reputational consequences.

Operational Risk Management

The Company has established processes to identify, assess, mitigate and mange operational risks. However, the Company's operations require multiple processes, systems and stakeholders to interact across the enterprise on an ongoing basis and operational risk remains an inherent feature of the Company's business model that cannot be fully eliminated.

The Company actively manages operational risks to support operational resilience across key processes and services and to maintain a strong reputation, standing and financial strength.

A governance structure has been implemented for the management of operational risk. Business units are the ultimate owners of operational risk and as such have primary responsibility for the identification, measurement, management, monitoring and reporting of operational risk. The Company has established an Operational Risk Committee to provide oversight of operational risk, which includes completing reviews, reporting, and monitoring risks; and making recommendations regarding risk limits, risk policies and mitigation pertaining to operational risks. Each business segment has established oversight committees and operating committees to help manage operational risk across their business.

The Company's Operational Risk Policy is supported by standards and guidelines that relate to specialized functions including detailed practices related to stress testing, modeling, fraud, regulatory compliance, technology and cybersecurity risk management, risk data aggregation and risk reporting. The Company implements controls to manage operational risk through integrated policies, procedures and processes, with consideration given to the cost/benefit trade-off. Processes and controls are monitored and refined by the business areas and periodically reviewed by the Company's Internal Audit department. Financial reporting processes and controls are further examined by external auditors.

The Company also manages operational risks through the corporate insurance program which mitigates a portion of the operational risk exposure by purchasing insurance coverage that provides protection against unexpected material losses resulting from events such as property loss, cyber-attack or damage and liability exposures. The nature and amount of insurance protection purchased is assessed with regard to the Company's risk profile, risk appetite and tolerance for the associated risks, as well as legal requirements and contractual obligations.

The Company employs a combination of operational risk management methods including risk and control assessments, internal control factors and risk event analyses. For the identification of operational risks, the Company utilizes risk and control assessments which systematically identify and assess potential operational risks and associated controls. Internal and external operational risk events are analyzed to identify root causes and provide insights into potential new operational risks that could impact the Company. In addition, scenario analysis is employed to identify and quantify potential severe operational risk exposures, while RFIs, risk appetite preferences, and other processes are leveraged to measure, manage and monitor operational risks.

The Risk Function monitors the status of actions being undertaken to remediate risks to ensure that risk exposures are mitigated in a timely manner. Processes are in place to escalate significant matters to senior management to inform and enable management to take appropriate action when needed. The Risk Function regularly reports on the Company's operational risk profile to executive management, the Board of Directors and various committees at enterprise, business segment and legal entity levels.

Operational resilience is an outcome from the ability to embed capabilities, processes, and systems to successfully deliver critical operations, through disruption. Operational resilience emphasizes preparation, response, recovery, learning, and adaptation by assuming disruptions, including simultaneous disruptions, will occur.

Key operational risks and the Company's approach to managing them are outlined below.

Legal and Regulatory Compliance Risk

Legal and regulatory risk is the risk of loss resulting from non-compliance with specific local or international rules, laws, regulations, or prescribed practices, as well as civil or criminal litigation engaged in/by the Company. As a multi-national enterprise, the Company and certain of its subsidiaries are subject to extensive legal and regulatory requirements in Canada, the U.S., the U.K., Ireland, Germany and other jurisdictions. These requirements cover most aspects of the Company's operations including capital adequacy, privacy, liquidity and solvency, investments, the sale and marketing of insurance and wealth products, the business conduct of insurers, asset managers and investment advisors as well as reinsurance processes. Material changes in the legal or regulatory framework or the failure to comply with legal and regulatory requirements could have an adverse effect on the Company. An increase in the pace of regulatory change could lead to increased operational costs to implement changes and ensure ongoing compliance.

Legal and regulatory risk is managed through coordination between first and second line of defense functions. The Company records, manages and monitors the regulatory compliance environment closely, using the subject matter expertise of both local and enterprise-wide Compliance and Legal stakeholders and reporting on emerging changes that could have a significant impact on the Company's operations or business.

The Company is subject to the risk of litigation and regulatory action relating to its business, operations, products, securities and contractual relationships and it establishes contingency reserves for litigation that it determines are appropriate.

People Risk

People risk is the risk of loss resulting from the inadequate management of human capital or the misalignment of human resources policies, programs and practices with employment-related legislation, regulatory expectations or the Company's strategic objectives, risk appetite and values. The Company has compensation programs, succession planning, talent management and employee engagement processes that are designed to manage these risks, support a high performance culture and maintain a highly skilled workforce that is reflective of the diverse cultures and practices of the countries in which the Company operates. The Company's ability to recognize and accommodate changing trends with respect to human resources in the industry is important to execute upon business strategies.

Technology Risk

Technology risk is the risk of loss from improper system or control design, improper operation, delivery of or unauthorized access to information and technology resources that can significantly impact the Company's ability to operate efficiently, stay compliant with regulations and maintain its financial integrity and reputation. More specifically, technology risk includes cyber and information security risk, technology operations risk and technology delivery risk.

The nature of advancing technology introduces additional uncertainty as to how the insurance industry will evolve. Cloud services, which are being adopted by the Company to improve systems flexibility and information security, require scrutiny as digital supply chains grow in complexity.

Technology is a critical component of the Company's business operations and is also central to the Company's customer-focused digital strategy. The Company continues to face technology and cyber risks stemming from legacy technology constraints and the advancement of techniques used in cyber-attacks.

The Company continues to implement new risk management processes and practices designed to allow it to better identify, measure, mitigate and report on technology risk, but those processes and practices continue to require further development as well as ongoing updates as technology and business needs evolve. The Company's strategy and approach to managing technology and cyber risks includes policies that govern the technology environment and set standards related to information security and the use of technology, including:

- the use of multiple layers of technologies that are designed to prevent unauthorized access, ransomware attacks, distributed denial of service and other cyber-attacks;
- coordinated global and regional information security offices that gather threat intelligence, detect, monitor and respond to security events and conduct regular threat and vulnerability risk assessments;
- independent oversight and assessment of the approach taken to mitigate technology and cyber risks by the Technology Risk Management team, an independent group that acts as the second line of defense; and
- regular cyber security awareness sessions and mandatory cyber security training for all employees.

Business Continuity Risk

Business continuity risk is the risk of loss as a result of the failure to provide for business processes and operations under adverse conditions that may arise from natural, technological or human caused events involving the loss of workplace, workforce, technology and supply chain outages and disruptions.

A business continuity management framework has been implemented to manage business continuity risks and impacts through the development, testing, training and maintenance in four key areas: emergency response planning, incident management planning, business continuity planning and technology resilience which includes disaster recovery planning.

Process & Infrastructure Risk

Process and infrastructure risk is the risk of loss resulting from inadequate or failed business processes that deliver products and services and grow shareholder value, or the risk of loss resulting from the reduction or non-availability of corporate facilities, physical assets or physical security. These processes include change management, data aggregation and reporting, product development, product introduction, new business (including the distribution and sales process) and renewal (including the underwriting process), investment activities, client administration, claims and benefit payments, financial modelling and financial management. The inadequacy can arise in transaction processing, governance, communication or general process management.

Risk management seeks strategic alignment and congruency across all of the Company's business activities, including change initiatives and business-as-usual activities, with the Company's operational risk appetite and considers the potential impact on the Company's reputation. The Company monitors change initiatives to mitigate risks and realize benefits. Core business operational activities have quality control measures in place.

One of the processes relates to model risk and use of models. The Company uses models in many functions and processes that support business decisions and reporting. Model risk arises from the potential for adverse consequences from decisions based on incorrect models or misused model outputs and reports. Robust processes are in place for the management and oversight of model risk as outlined in the Model Risk Management and Validation Standard.

Further, the Company seeks to control processes across the value chain through automation, standardization and process improvements to prevent or reduce operational losses.

Fraud Risk
Fraud risk is the risk of loss resulting from acts or activities that are intended to defraud, misappropriate assets, or circumvent laws or regulations by customers, contractors or other third parties, directors, officers, employees or advisors. The fraud environment continues to intensify for financial institutions, due to increased financial pressures that may motivate and rationalize fraudulent behavior and progressively sophisticated methods of organized fraud and cyber fraud. Fraud can result in a financial loss or reputational impact to the Company and have other impacts that are detrimental to customers and other stakeholders.

The Company has established a formal program with governance, principles and process requirements outlined in a Fraud Risk Management Policy and the corresponding Fraud Risk Operating Standard to assess, prevent, detect, investigate and respond to fraud in a timely manner. Additionally, the Code of Conduct and Fraud Risk Management Policy highlight management's commitment to acting with integrity and strong fraud risk awareness culture.

Supplier Risk
Supplier risk is the risk of loss resulting from the failure to establish and manage adequate supplier arrangements, transactions or other interactions to meet the expected or contracted service level. Supplier risk is applicable to both external and internal suppliers.

The Company strategically engages suppliers to maintain cost efficiency, to optimize internal resources and capital and to utilize skills, expertise and resources not otherwise available to the Company. Suppliers are engaged based on our prescribed supplier risk management principles in our Supplier Risk Management Policy. The Company applies a supplier risk management framework and risk mitigation activities needed (e.g. risk assessments, due diligence, etc.) to oversee and monitor interactions with suppliers throughout the entire supplier lifecycle, including how they meet standards for quality of service and protect stakeholders and the interests of the Company.

CONDUCT RISK

Risk Description
Conduct risk is the risk of unfair outcomes for customers as a result of inadequate or failed processes and/or inappropriate behaviours, offerings or interactions by the Company or its agents. A failure to identify and mitigate conduct risk impacts not only the Company's customers but can also have adverse reputational and financial consequences for the Company due to the cost of customer remediation, damage to reputation and/or regulatory fines.

Conduct Risk Management
The Company manages conduct risk through various processes which include:

- formalized policies, frameworks, employee training and senior management reporting;
- providing appropriate and clear customer disclosures and communications;
- applying product design, complaint, claims management and sales and advice processes that consider outcomes to customers and customer vulnerability; and
- conducting risk-based advisor assessments and suitability reviews, maintaining controls and adhering to Board-approved policies and processes, including the Conduct Risk Policy and the Code of Conduct.

Conduct risk is incorporated in risk management and compliance activities, including risk and control assessments, internal events reporting, emerging risk assessments, and other measurement, monitoring and reporting activities.

STRATEGIC RISK

Risk Description
Strategic risk is the risk of failing to set or meet appropriate strategic objectives in the context of the internal and external operating environment resulting in a material impact on business performance (e.g. earnings, capital, reputation or standing).

Strategic risk may reflect intentional risk-taking in anticipation or response to industry forces or it may emerge as unintended consequences from changes to strategy, execution of strategy, or from lack of responsiveness to external forces.

Strategic Risk Management

Strategic risk-taking is inherent to achieving strategic objectives and arises from the fundamental decisions made and actions taken concerning an organization's objectives. It may relate to or stem from the design and development of strategy, including the formulation, evaluation and ongoing validation of strategy, or execution of corporate and business strategies, and management of associated risks stemming from the same.

The Company's Strategic Risk Management Framework is designed to identify, measure, manage, monitor and report on strategic risk, and is supported by Policies, Standards and Guidelines for both first and second lines of defense.

Strategic risk management spans the development and refinement of strategy, the translation of strategy into tangible activities, alignment of resources to requirements for executing the strategy, execution of strategy, and ongoing activities to monitor and adjust strategies or related initiatives. Strategic risks are monitored at all stages of the strategy management lifecycle.

The Company aligns business strategies with its risk appetite and mitigates exposure to strategic risk through strategic planning and value-based decision making, establishing appropriate performance indicators, reporting of strategy execution and implementation against strategic goals and ongoing monitoring, together with robust oversight and challenge.

The Company identifies and manages strategic risk in relation to both new and existing strategies, strategic initiatives, and any new business development with the potential to have significant strategic impact on the business or overall portfolio. Major initiatives undergo a comprehensive risk assessment to review alignment with risk appetite, and are subject to regular and robust monitoring and oversight.

OTHER RISKS

Sustainability Risk

Sustainability risk is the risk that the interests of the Company's customers and other stakeholders are not protected or that business operations and business growth are not sustained due to failure to meet societal expectations related to corporate social responsibilities.

Dynamics and attitudes towards societal issues continue to evolve. Factors such as diversity and inclusion and climate change are now a significant focus on the Company's strategic agenda. The Company may experience direct or indirect financial, operational or reputational impact stemming from societal related events, which include climate change, regulatory enforcement or costs associated with changes in environmental laws and regulations as well as diversity and inclusion-related matters.

Sustainability considerations are formally reflected in the Company's risk management principles and associated policies. The Company recognizes that sustainability risk impacts both financial risks (market, credit and insurance) as well as non-financial risks (operational, conduct and strategic). Sustainability risk is not a stand-alone risk type, but underlies all risk types. As a result, the processes for managing sustainability risk are embedded in the processes for managing each risk type.

The Company takes a balanced and sustainable approach to conducting business. The Company has established environmental policies and guidelines pertaining to the acquisition and ongoing management of investment properties, loans secured by real property and investments in equity and fixed-income securities. These policies are approved by the Board of Directors and are reviewed annually.

The Financial Stability Board (FSB) established the Task Force on Climate-related Financial Disclosures (TCFD) to develop recommendations for climate-related disclosure that could encourage more informed investment, credit and insurance underwriting decisions and allow for a better understanding of carbon-related assets in the financial sector and the financial system's exposures to climate risks. The Company is an official supporter of the TCFD recommendations. The Company is also an active participant in the UN-sponsored "Capital as a Force for Good" project and a member of the Canada Sustainable Finance Action Council.

The Company has made available on its website its annual disclosure to CDP (formerly the Carbon Disclosure Project) which is in alignment with the TCFD recommendations. Through its CDP reporting, the Company has demonstrated its commitment to sustainability across its operations, risk management practices and in assessing the exposure of its investment portfolio to a broad range of climate-related risks and opportunities. The Company's annual response to CDP's Climate Change Questionnaire details our commitment to understanding and proactively addressing the potential impacts that climate change may have on our business and that our business may have on the environment.

The Company's objective is to achieve net zero greenhouse gas (GHG) emissions by 2050 for both operations and investments. The Company is continuing to work towards setting interim science-based targets. In addition, the Company is on track to grow women in management roles to 50% across its business segments by 2030 and it is working to increase representation of underrepresented minorities in management to 25% by 2030.

Holding Company Structure Risk

As a holding company, the Company's ability to pay interest, dividends and other operating expenses and to meet its obligations generally depends upon receipt of sufficient funds from its principal subsidiaries and its ability to raise additional capital.

In the event of bankruptcy, liquidation or reorganization of any of these subsidiaries, insurance and investment contract liabilities of these subsidiaries will be completely provided for before any assets of such subsidiaries are made available for distribution to the Company. In addition, the other creditors of these subsidiaries will generally be entitled to the payment of their claims before any assets are made available for distribution to the Company except to the extent that the Company is recognized as a creditor of the relevant subsidiaries.

Any payment (including payment of interest and dividends) by the principal subsidiaries is subject to restrictions set forth in relevant insurance, securities, corporate and other laws and regulations, which require that solvency and capital standards be maintained by Canada Life, Empower and their subsidiaries and certain subsidiaries of Putnam. There are considerable risks and benefits related to this structure.

Management monitors the solvency and capital positions of its principal subsidiaries opposite liquidity requirements at the holding company level. Management also establishes lines of credit for additional liquidity and may also access capital markets for funds. Management monitors compliance with the regulatory laws and regulations at both the holding company and operating company levels.

Mergers and Acquisitions Risk

Periodically, the Company and its subsidiaries evaluate existing companies, businesses, assets, products and services. Such reviews could result in the Company or its subsidiaries acquiring or divesting of businesses or assets. In the ordinary course of business, the Company considers and discusses the purchase or sale of companies, businesses segments or assets.

If effected, such transactions could be material to the Company in size or scope, could result in risks and contingencies relating to companies, businesses or assets that the Company acquires or expose it to the risk of claims relating to those it has divested, could result in changes in the value of the securities of the Company, including the common shares of the Company, and could result in the Company holding additional capital for contingencies that may arise after the transaction is completed. Strategic and integration risks related to mergers and acquisitions can also emerge due to external risks that are difficult to anticipate and may result in reduced synergies and negative impact on value capture.

To mitigate these risks, due diligence reviews of potential transactions are undertaken, and risks are assessed in the context of our Risk Appetite. For acquisitions, an integration strategy is established that considers the values, norms, and culture of the target company, including monitoring of new and emerging risks that may impede efficiency and delay the consolidation process. Before acquiring or divesting companies, businesses, business segments, or assets, Operating Segments assess and provide assurance that systems and processes are appropriate to manage the risks after the transaction is completed, and regular monitoring and oversight of transaction activities is conducted.

Tax Regime Risk

The Company operates in a number of countries each with its own distinct tax regime, encompassing various levels of government and a range of tax mechanisms, such as income taxes, capital taxes, payroll taxes, value add taxes, sales taxes, etc. and further, may provide tax incentives for certain types of products (examples include support for pensions, retirement savings and life & health insurance). These jurisdictions periodically review and amend various aspects of the tax regime that can have an impact on the business of the Company.

There is a risk that changes to tax rates may increase the tax expense to the Company, adversely impacting earnings. There is also a risk that a reduction or elimination in the level of tax incentives on products offered by the Company may adversely impact demand for those products.

Management actively monitors changes in tax regimes in countries where it has operations and proactively responds to tax changes that may have potential impacts on its business. Refer to the "Income Tax" section of this document for additional details.

Product Distribution Risk

Product distribution risk is the risk of loss resulting from the Company's inability to market its products through its network of distribution channels and intermediaries. These intermediaries generally offer their clients products in addition to, and in competition with, the Company's products, and are not obligated to continue working with the Company. In addition, certain investors rely on consultants to advise them on the choice of provider and the consultants may not always consider or recommend the Company. The loss of access to a distribution channel, the failure to maintain effective relationships with intermediaries or the failure to respond to changes in distribution channels could have a significant impact on the Company's ability to generate sales.

Product distribution risk is managed by maintaining a broad network of distribution relationships, with products distributed through numerous broker-dealers, managing general agencies, financial planners, banks and other financial institutions.

EXPOSURES AND SENSITIVITIES

Insurance and Investment Contract Liabilities
In determining the Company's insurance contract liabilities, valuation assumptions are made regarding rates of mortality/morbidity, investment returns, levels of operating expenses, rates of policy termination and rates of utilization of elective policy options or provisions. When the assumptions are revised to reflect emerging experience or change in outlook, the result is a change in the value of liabilities which in turn affects the Company's earnings.

The following table illustrates the approximate impact to the Company's earnings that would arise as a result of changes to management's best estimate of certain assumptions. For changes in asset related assumptions, the sensitivity is shown net of the corresponding impact on earnings of the change in the value of the assets supporting liabilities. These earnings sensitivities represent impacts under the Company's accounting policies as at December 31 2022, including accounting for insurance contracts under IFRS 4 and IAS 39. These sensitivities may change on transition to IFRS 17 and IFRS 9.

	Increase (decrease) in net earnings	
	2022	2021
Mortality - 2% increase	**$ (247)**	$ (276)
Annuitant mortality - 2% decrease	**$ (522)**	$ (722)
Morbidity - 5% adverse change	**$ (253)**	$ (262)
Investment returns		
Parallel shift in yield curve		
1% increase	**$ —**	$ —
1% decrease	**$ —**	$ —
Change in interest rates		
1% increase	**$ 79**	$ 197
1% decrease	**$ (290)**	$ (555)
Change in publicly traded common stock values		
20% increase	**$ 37**	$ 21
10% increase	**$ 27**	$ 13
10% decrease	**$ (28)**	$ (19)
20% decrease	**$ (146)**	$ (66)
Change in other non-fixed income asset values		
10% increase	**$ 52**	$ 79
5% increase	**$ 26**	$ 39
5% decrease	**$ (70)**	(30)
10% decrease	**$ (236)**	(112)
Change in best estimate return assumptions for equities		
1% increase	**$ 525**	$ 567
1% decrease	**$ (620)**	$ (649)
Expenses - 5% increase	**$ (193)**	$ (207)
Policy termination and renewal - 10% adverse change	**$ (945)**	$ (1,002)

Refer to the "Accounting Policies - Summary of Critical Accounting Estimates" section of this document for additional information on earnings sensitivities.

ACCOUNTING POLICIES

SUMMARY OF CRITICAL ACCOUNTING ESTIMATES

The preparation of financial statements in accordance with IFRS requires management to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities, and disclosure of contingent assets and liabilities at the reporting date, and the reported amounts of revenue and expenses during the reporting period. The results of the Company reflect management's judgments regarding the impact of prevailing market conditions related to global credit, equities, investment properties and foreign exchange and prevailing health and mortality experience. The fair value of portfolio investments, the valuation of goodwill and other intangible assets, the valuation of insurance contract liabilities and the recoverability of deferred tax asset carrying values reflect management's judgement based on current expectations but could be impacted in the future depending on current market developments.

The provision for future credit losses within the Company's insurance contract liabilities relies upon investment credit ratings. The Company's practice is to use independent third-party credit ratings where available as an input to its internal credit rating process. Investment properties, which are primarily held in the U.K. and Canada, rely upon independent third-party appraisals for their valuation which impact the estimation of insurance contract liabilities. Independent appraisals for the portfolio occur over the year with management adjustments for material changes in the interim periods. Credit rating changes for fixed income investments and market values for investment properties may lag developments in the current environment. Subsequent credit rating adjustments and market value adjustments on investment properties will impact actuarial liabilities.

The significant accounting estimates include the following:

Fair Value Measurement

Financial and other instruments held by the Company include portfolio investments, various derivative financial instruments, debentures and other debt instruments.

Financial instrument carrying values reflect the liquidity of the markets and the liquidity premiums embedded in the market pricing methods the Company relies upon.

The Company's assets and liabilities recorded at fair value have been categorized based upon the following fair value hierarchy:

Level 1 inputs utilize observable, quoted prices (unadjusted) in active markets for identical assets or liabilities that the Company has the ability to access.

Level 2 inputs utilize other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3 inputs utilize one or more significant inputs that are not based on observable market inputs and include situations where there is little, if any, market activity for the asset or liability.

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, the level in the fair value hierarchy within which the fair value measurement in its entirety has been determined based on the lowest level input that is significant to the fair value measurement in its entirety. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the asset or liability.

Refer to note 9 in the Company's December 31, 2022 annual consolidated financial statements for disclosure of the Company's financial instruments fair value measurement by hierarchy level as at December 31, 2022.

Fair values for bonds classified as fair value through profit or loss or available-for-sale are determined using quoted market prices. Where prices are not quoted in an active market, fair values are determined by valuation models primarily using observable market data inputs. Market values for bonds and mortgages classified as loans and receivables are determined by discounting expected future cash flows using current market rates.

Fair values for equity release mortgages classified as fair value through profit or loss are determined by an internal valuation model that uses discounted future cash flows. Inputs to the model include market observable and non-market observable inputs.

Fair values for public stocks are generally determined by the last bid price for the security from the exchange where it is principally traded. Fair values for stocks for which there is no active market are determined by discounting expected future cash flows based on expected dividends and where market value cannot be measured reliably, fair value is estimated to be equal to cost. Fair values for investment properties are determined using independent appraisal services and include management adjustments for material changes in property cash flows, capital expenditures or general market conditions in the interim period between appraisals.

Investment impairment

Investments are reviewed regularly on an individual basis to determine impairment status. The Company considers various factors in the impairment evaluation process, including, but not limited to, the financial condition of the issuer, specific adverse conditions affecting an industry or region, decline in fair value not related to interest rates, bankruptcy or defaults and delinquency in payments of interest or principal. Investments are deemed to be impaired when there is no longer reasonable assurance of timely collection of the full amount of the principal and interest due. The fair value of an investment is not a definitive indicator of impairment, as it may be significantly influenced by other factors including the remaining term to maturity and liquidity of the asset; however, market price is taken into consideration when evaluating impairment.

For impaired mortgages and bonds classified as loans and receivables, provisions are established or write-offs made to adjust the carrying value to the net realizable amount. Wherever possible the fair value of collateral underlying the loans or observable market price is used to establish the estimated realizable value. For impaired available-for-sale bonds recorded at fair value, the accumulated loss recorded in accumulated other comprehensive income (loss) is reclassified to net investment income. Impairments on available-for-sale debt instruments are reversed if there is objective evidence that a permanent recovery has occurred. All gains and losses on bonds classified or designated as fair value through profit or loss are already recorded in net investment income; therefore, in the event of an impairment, the reduction will be recorded in net investment income. As well, when determined to be impaired, interest is no longer accrued and previous interest accruals are reversed.

Goodwill and intangibles impairment testing

Goodwill and indefinite life intangible assets, including those resulting from an acquisition during the year, are tested for impairment annually or more frequently if events indicate that impairment may have occurred. Intangible assets that were previously impaired are reviewed at each reporting date for evidence of reversal. In the event that certain conditions have been met, the Company would be required to reverse the impairment loss or a portion thereof.

Goodwill has been allocated to (cash generating unit) CGU groupings, representing the lowest level that the assets are monitored for internal reporting purposes. Goodwill is tested for impairment by comparing the carrying value of each CGU grouping to its recoverable amount. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount.

Intangible assets have been allocated to CGUs, representing the lowest level that the assets are monitored for internal reporting purposes.

Intangible assets with an indefinite useful life are reviewed annually to determine if there are indicators of impairment. If indicators of impairment have been identified, a test for impairment is performed and recognized as necessary. Impairment is assessed by comparing the carrying values of the assets to their recoverable amounts. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount.

The recoverable amount is the higher of the asset’s fair value less costs of disposal and value-in-use.

Finite life intangible assets are reviewed annually to determine if there are indicators of impairment and assess whether the amortization periods and methods are appropriate. If indicators of impairment have been identified, a test for impairment is performed and then the amortization of these assets is adjusted or impairment is recognized as necessary.

Insurance and investment contract liabilities

Insurance and investment contract liabilities represent the amounts required, in addition to future premiums and investment income, to provide for future benefit payments, policyholder dividends, commission and policy administrative expenses for all insurance and annuity policies in-force with the Company. The Appointed Actuaries of the Company's subsidiaries are responsible for determining the amount of the liabilities to make appropriate provisions for the Company's obligations to policyholders. The Appointed Actuaries determine the liabilities for insurance contracts using generally accepted actuarial practices, according to the standards established by the Canadian Institute of Actuaries. The valuation uses the Canadian Asset Liability Method (CALM). This method involves the projection of future events in order to determine the amount of assets that must be set aside currently to provide for all future obligations and involves a significant amount of judgment.

In the computation of insurance contract liabilities, valuation assumptions have been made regarding rates of mortality/morbidity, investment returns, levels of operating expenses, rates of policy termination and rates of utilization of elective policy options or provisions. The valuation assumptions use best estimates of future experience together with a margin for adverse deviation. These margins are necessary to provide for possibilities of mis-estimation and/or future deterioration in the best-estimate assumptions and provide reasonable assurance that insurance contract liabilities cover a range of possible outcomes. Margins are reviewed periodically for continued appropriateness.

Investment contract liabilities are measured at fair value determined using discounted cash flows utilizing the yield curves of financial instruments with similar cash flow characteristics.

The earnings sensitivities illustrated in this "Accounting Policies - Summary of Critical Accounting Estimates" section represent impacts under the Company's accounting policies as at December 31 2022, including accounting for insurance contracts under IFRS 4 and IAS 39. These sensitivities may change on transition to IFRS 17 and IFRS 9. The methods for arriving at these valuation assumptions are outlined below.

Mortality – A life insurance mortality study is carried out regularly for each major block of insurance business. The results of each study are used to update the Company's experience valuation mortality tables for that business. Annuitant mortality is also studied regularly, and the results are used to modify established annuitant mortality tables. When there is insufficient data, use is made of the latest industry experience to derive an appropriate valuation mortality assumption. Improvement scales for life insurance and annuitant mortality are updated periodically based on population and industry studies, product specific considerations, as well as professional guidance. In addition, appropriate provisions are made for future mortality deterioration on term insurance.

- A 2% increase in the best estimate life insurance mortality assumption would cause a decrease in net earnings of approximately $247 million.
- A 2% decrease in the best estimate annuitant assumption would cause a decrease in net earnings of approximately $522 million.

Morbidity – The Company uses industry developed experience tables modified to reflect emerging Company experience. Both claim incidence and termination are monitored regularly, and emerging experience is factored into the current valuation. For products for which morbidity is a significant assumption, a 5% decrease in best estimate termination assumptions for claim liabilities and a 5% increase in best-estimate incidence assumptions for active life liabilities would cause a decrease in net earnings of approximately $253 million.

Property and casualty reinsurance – Insurance contract liabilities for property and casualty reinsurance written by the Capital and Risk Solutions segment are determined using accepted actuarial practices for property and casualty insurers in Canada. The insurance contract liabilities are based on cession statements provided by ceding companies. In addition, insurance contract liabilities also include an amount for incurred but not reported losses, which may differ significantly from the ultimate loss development. The estimates and underlying methodology are continually reviewed and updated and adjustments to estimates are reflected in net earnings. The Capital and Risk Solutions segment analyzes the emergence of claims experience against expected assumptions for each reinsurance contract separately and at the portfolio level. If necessary, a more in depth analysis is undertaken of the cedant experience.

Investment returns – The assets which correspond to the different liability categories are segmented. For each segment, projected cash flows from the current assets and liabilities are used in CALM to determine insurance contract liabilities. Cash flows from assets are reduced to provide for asset default losses. Testing under a number of interest rate scenarios (including increasing, decreasing and fluctuating rates) is done to provide for reinvestment risk because the Company's sensitivity to interest rate movements varies at different terms.

The total provision for interest rate is sufficient to cover a broader or more severe set of risks than the minimum arising from the current Canadian Institute of Actuaries prescribed scenarios. The range of interest rates covered by these provision is set in consideration of long-term historical results and is monitored quarterly with a full review annually. The impact to the value of liabilities from an immediate parallel 1% increase or 1% decrease in the interest rates would be largely offset by changes in the value of assets supporting the liabilities. Actual movements in interest rates may produce different impacts on the value of liabilities, net of changes in the value of assets supporting liabilities, depending on the extent of the change in interest rates in different geographies and at different durations. An immediate 1% increase in interest rates in Canada could lead to an increase in the value of liabilities, net of changes in the value of assets supporting liabilities, and a decrease in net earnings, but the impact would not be expected to be material.

The following is the impact to the value of liabilities net of changes in the value of assets supporting liabilities of an immediate parallel 1% increase or 1% decrease in the interest rates as well as a corresponding parallel shift in the ultimate reinvestment rates, as defined in the actuarial standards.

- The effect of an immediate 1% increase in the low and high end of the range of interest rates recognized in the provisions would be to decrease these insurance and investment contract liabilities by approximately $92 million causing an increase in net earnings of approximately $79 million.
- The effect of an immediate 1% decrease in the low and high end of the range of interest rates recognized in the provisions would be to increase these insurance and investment contract liabilities by approximately $386 million causing a decrease in net earnings of approximately $290 million.

In addition to interest rates, the Company is also exposed to movements in equity markets.

Some insurance and investment contract liabilities with long-tail cash-flows are supported by publicly traded common stocks and investments in other non-fixed income assets, primarily comprised of investment properties, real estate funds, private stocks, and equity release mortgages. The value of the liabilities may fluctuate with changes in the value of the supporting assets. The liabilities for other products such as segregated fund products with guarantees also fluctuate with equity values.

There may be additional market and liability impacts as a result of changes in the value of publicly traded common stocks and other non-fixed income assets that will cause the liabilities to fluctuate differently than the equity values. This means that there is a greater impact on net earnings from larger declines in equity values, relative to the change in equity values. Declines in equity values beyond those shown below would have a greater impact on net earnings, relative to the change in equity values.

The following shows the expected impact of an immediate 10% or 20% increase or decrease in the value of publicly traded common stocks on insurance and investment contract liabilities and on the shareholders' net earnings of the Company. The expected impacts take into account the expected changes in the value of assets supporting liabilities and hedge assets:

- A 10% increase in publicly traded common stock values would be expected to additionally decrease non-participating insurance and investment contract liabilities by approximately $31 million, causing an increase in net earnings of approximately $27 million.
- A 10% decrease in publicly traded common stock values would be expected to additionally increase non-participating insurance and investment contract liabilities by approximately $31 million, causing a decrease in net earnings of approximately $28 million.

- A 20% increase in publicly traded common stock values would be expected to additionally decrease non-participating insurance and investment contract liabilities by approximately $43 million, causing an increase in net earnings of approximately $37 million.
- A 20% decrease in publicly traded common stock values would be expected to additionally increase non-participating insurance and investment contract liabilities by approximately $180 million, causing a decrease in net earnings of approximately $146 million.

The following provides information on the expected impacts of an immediate 5% or 10% increase or decrease in the value of other non-fixed income assets on insurance and investment contract liabilities and on the shareholders' net earnings of the Company. The expected impacts take into account the expected changes in the value of assets supporting liabilities:

- A 5% increase in other non-fixed income asset values would be expected to decrease non-participating insurance and investment contract liabilities by approximately $32 million, causing an increase in net earnings of approximately $26 million.
- A 5% decrease in other non-fixed income asset values would be expected to increase non-participating insurance and investment contract liabilities by approximately $90 million, causing a decrease in net earnings of approximately $70 million.
- A 10% increase in other non-fixed income asset values would be expected to decrease non-participating insurance and investment contract liabilities by approximately $63 million, causing an increase in net earnings of approximately $52 million.
- A 10% decrease in other non-fixed income asset values would be expected to increase non-participating insurance and investment contract liabilities by approximately $302 million, causing a decrease in net earnings of approximately $236 million.

The Canadian Institute of Actuaries Standards of Practice for the valuation of insurance contract liabilities establish limits on the investment return assumptions for publicly traded common stocks and other non-fixed income assets which are generally based on historical returns on market indices. The sensitivities shown in the tables above allow for the impact of changes in these limits following market declines.

The best-estimate return assumptions for publicly traded common stocks, and other non-fixed income assets are primarily based on long-term historical averages. Changes in the current market could result in changes to these assumptions and will impact both asset and liability cash flows.

- A 1% increase in the best estimate assumption would be expected to decrease non-participating insurance contract liabilities by approximately $676 million causing an increase in net earnings of approximately $525 million.
- A 1% decrease in the best estimate assumption would be expected to increase non-participating insurance contract liabilities by approximately $806 million causing a decrease in net earnings of approximately $620 million.

For a further description of the Company's sensitivity to equity market and interest rate fluctuations, refer to "Financial Instruments Risk Management", note 8 in the Company's annual consolidated financial statements for the period ended December 31, 2022.

Expenses – Contractual policy expenses (e.g. sales commissions) and tax expenses are reflected on a best estimate basis. Expense studies for indirect operating expenses are updated regularly to determine an appropriate estimate of future operating expenses for the liability type being valued. An inflation assumption is incorporated in the estimate of future operating expenses consistent with the interest rate scenarios projected under CALM as inflation is assumed to be correlated with new money interest rates. A 5% increase in the best estimate maintenance unit expense assumption would cause a decrease in net earnings of approximately $193 million.

Policy termination – Studies to determine rates of policy termination are updated regularly to form the basis of this estimate. Industry data is also available and is useful where the Company has no experience with specific types of policies or its exposure is limited. The Company's most significant exposures are in respect of the T-100 and Level Cost of Insurance Universal Life products in Canada and policy renewal rates at the end of the term for renewable term policies in the Canada and Capital and Risk Solutions segments. Industry experience has guided the Company's assumptions for these products as its own experience is very limited. A 10% adverse change in the best-estimate policy termination and renewal assumptions would cause a decrease in net earnings of approximately $945 million.

Utilization of elective policy options – There are a wide range of elective options embedded in the policies issued by the Company. Examples include term renewals, conversion to whole life insurance (term insurance), settlement annuity purchase at guaranteed rates (deposit annuities) and guarantee re-sets (segregated fund maturity guarantees). The assumed rates of utilization are based on Company or industry experience when it exists and otherwise based on judgement considering incentives to utilize the option. Generally, whenever it is clearly in the best interests of an informed policyholder to utilize an option, then it is assumed to be elected.

Policyholder dividends and adjustable policy features – Future policyholder dividends and other adjustable policy features are included in the determination of insurance contract liabilities with the assumption that policyholder dividends or adjustable benefits will change in the future in response to the relevant experience. The dividend and policy adjustments are determined consistent with policyholders' reasonable expectations, such expectations being influenced by the participating policyholder dividend policies and/or policyholder communications, marketing material and past practice. It is the Company's expectation that changes will occur in policyholder dividend scales or adjustable benefits for participating or adjustable business respectively, corresponding to changes in the best estimate assumptions, resulting in an immaterial net change in insurance contract liabilities. Where underlying guarantees may limit the ability to pass all of this experience back to the policyholder, the impact of this non-adjustability impacting shareholders' net earnings is reflected in the impacts of changes in best estimate assumptions above.

Income taxes

The Company is subject to income tax laws in various jurisdictions. The Company's operations are complex and related income tax interpretations, regulations and legislation that pertain to its activities are subject to continual change. As life insurance companies, the Company's primary Canadian operating subsidiaries are subject to a regime of specialized rules prescribed under the *Income Tax Act (Canada)* for purposes of determining the amount of the companies' income that will be subject to tax in Canada.

Tax planning strategies to obtain tax efficiencies are used. The Company continually assesses the uncertainty associated with these strategies and holds an appropriate level of provisions for uncertain income tax positions. Accordingly, the provision for income taxes represents management's interpretation of the relevant income tax laws and its estimate of current and deferred income tax balances for the period. Deferred income tax assets and liabilities are recorded based on expected future income tax rates and management's assumptions regarding the expected timing of the reversal of temporary differences. The Company has substantial deferred income tax assets. The recognition of deferred income tax assets depends on management's assumption that future earnings will be sufficient to realize the deferred benefit. The amount of the asset recorded is based on management's best estimate of the realization of the asset.

The audit and review activities of tax authorities may affect the ultimate determination of the amounts of income taxes payable or receivable, deferred income tax assets or liabilities and income tax expense. Therefore, there can be no assurance that income taxes will be payable as anticipated and/or the amount and timing of receipt or use of the income tax related assets will be as currently expected. Management's experience indicates the taxation authorities are more aggressively pursuing perceived income tax issues and have increased the resources they put to these efforts.

Employee future benefits

The Company’s subsidiaries maintain contributory and non-contributory defined benefit and defined contribution pension plans for eligible employees and advisors. The defined benefit pension plans provide pensions based on length of service and final average pay; however, these plans are closed to new entrants. Many of the subsidiaries' defined benefit pension plans also no longer provide future defined benefit accruals. The Company's defined benefit plan exposure is expected to reduce in future years. Where defined benefit pension accruals continue, active plan participants share in the cost of benefits through employee contributions in respect of current service. Certain pension payments are indexed on either an ad hoc basis or a guaranteed basis. The determination of the defined benefit obligation reflects pension benefits in accordance with the terms of the plans. Assets supporting the funded pension plans are held in separate trusteed pension funds. Obligations for the wholly unfunded plans are included in other liabilities and are supported by general assets. New hires and active plan participants in defined benefit plans closed to future defined benefit accruals are eligible for defined contribution benefits. The defined contribution pension plans provide pension benefits based on accumulated employee and employer contributions. The Company’s subsidiaries also provide post-employment health, dental and life insurance benefits to eligible employees, advisors and their dependents. These plans are also closed to new entrants. For further information on the pension plans and other post-employment benefits refer to note 23 in the Company's December 31, 2022 annual consolidated financial statements.

For the defined benefit plans, service costs and net interest costs are recognized in the Consolidated Statements of Earnings. Service costs include current service cost, administration expenses, past service costs and the impact of curtailments and settlements. Re-measurements of the defined benefit liability (asset) due to asset returns less (greater) than interest income, actuarial losses (gains) and changes in the asset ceiling are recognized immediately in the Consolidated Statements of Comprehensive Income.

Accounting for defined benefit pension and other post-employment benefits requires estimates of expected increases in compensation levels, indexation of certain pension payments, trends in health-care costs, the period of time over which benefits will be paid, as well as the appropriate discount rates for past and future service liabilities. These assumptions are determined by management using actuarial methods, and are reviewed and approved annually. Emerging experience that differs from the assumptions will be revealed in future valuations and will affect the future financial position of the plans and net periodic benefit costs.

Actuarial assumptions - employee future benefits
At December 31

	Defined benefit pension plans		Other post-employment benefits	
	2022	2021	**2022**	2021
Actuarial assumptions used to determine benefit cost				
Discount rate - past service liabilities	**2.6%**	2.2%	**3.1 %**	2.5%
Discount rate - future service liabilities	**3.3%**	2.8%	**3.0 %**	2.6%
Rate of compensation increase	**3.1%**	3.0%	**—**	—
Future pension increases[1]	**1.7%**	1.2%	**—**	—
Actuarial assumptions used to determine defined benefit obligation				
Discount rate - past service liabilities	**5.0%**	2.6%	**5.3 %**	3.1%
Rate of compensation increase	**3.8%**	3.1%	**—**	—
Future pension increases[1]	**2.3%**	1.7%	**—**	—
Medical cost trend rates				
Initial medical cost trend rate			**4.8 %**	4.7%
Ultimate medical cost trend rate			**4.1 %**	4.1%
Year ultimate trend rate is reached			**2039**	2039

1 Represents the weighted average of plans subject to future pension increases.

Actuarial assumptions – The period of time over which benefits are assumed to be paid is based on best estimates of future mortality, including allowances for mortality improvements. This estimate is subject to considerable uncertainty, and judgment is required in establishing this assumption. As mortality assumptions are significant in measuring the defined benefit obligation, the mortality assumptions applied by the Company take into consideration such factors as age, gender and geographic location, in addition to an estimation of future improvements in longevity.

The mortality tables are reviewed at least annually, and assumptions are in accordance with accepted actuarial practices. Emerging plan experience is reviewed and considered in establishing the best estimate for future mortality.

As these assumptions relate to factors that are long-term in nature, they are subject to a degree of uncertainty. Differences between actual experience and the assumptions, as well as changes in the assumptions resulting from changes in future expectations, result in increases or decreases in the pension and post-employment benefits expense and defined benefit obligation in future years. There is no assurance that the plans will be able to earn assumed rates of return, and market driven changes to assumptions could impact future contributions and expenses.

The following table indicates the impact of changes to certain key assumptions related to pension and post-employment benefits.

Impact of a change of 1.0% in actuarial assumptions on defined benefit obligation[1]	**1% increase**		**1% decrease**	
	2022	2021	**2022**	2021
Defined benefit pension plans:				
Impact of a change to the discount rate	**$ (733)**	$ (1,199)	**$ 926**	$ 1,568
Impact of a change to the rate of compensation increase	**173**	299	**(156)**	(269)
Impact of a change to the rate of inflation	**340**	578	**(299)**	(507)
Other post-employment benefits:				
Impact of a change to assumed medical cost trend rates	**$ 14**	$ 24	**$ (12)**	$ (21)
Impact of a change to the discount rate	**(22)**	(36)	**25**	44

1 To measure the impact of a change in an assumption, all other assumptions were held constant. It is expected that there would be interaction between at least some of the assumptions.

Funding – The Company's subsidiaries have both funded and unfunded pension plans as well as other post-employment benefit plans that are unfunded. The Company's subsidiaries' funded pension plans are funded to or above the amounts required by relevant legislation. During the year, the Company's subsidiaries contributed $293 million ($299 million in 2021) to the pension plans and made benefit payments of $18 million ($19 million in 2021) for post-employment benefits. The Company's subsidiaries expect to contribute $296 million to the pension plans and make benefit payments of $19 million for post-employment benefits in 2022.

INTERNATIONAL FINANCIAL REPORTING STANDARDS

Due to the evolving nature of IFRS, there are a number of IFRS changes impacting the Company in 2022, as well as standards that could impact the Company in future reporting periods. The Company actively monitors future IFRS changes proposed by the International Accounting Standards Board (IASB) to assess if the changes to the standards may have an impact on the Company's results or operations.

The Company adopted the amendments to IFRS for IAS 37, *Provisions, Contingent Liabilities and Contingent Assets* and *Annual Improvements 2018-2020 Cycl*e for the amendment to IFRS 16, *Leases* effective January 1, 2022. The adoption of these amendments did not have a significant impact on the Company's financial statements.

For a further description of the impact of the accounting policy change, refer to note 2 of the Company's December 31, 2022 annual consolidated financial statements.

IFRS that have changed or may change subsequent to 2022 and could impact the Company in future reporting periods, are set out below and in the following table:

IFRS 17 has replaced IFRS 4, effective January 1, 2023.

IFRS 17 sets out the requirements for the recognition, measurement, presentation and disclosures of insurance contracts a company issues, reinsurance contracts it holds, and investment contracts with discretionary participation features issued. Under IFRS 17, the Company will:

- Identify insurance contracts as arrangements where the Company accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder or beneficiary of the contract for specified uncertain future events that adversely affect the policyholder and whose amount and timing is unknown.
- Separately account for specified embedded derivatives, distinct investment components, and distinct non-insurance goods and services from insurance contracts.

- Identify portfolios of insurance contracts, which comprises contracts that are subject to similar risks and managed together. Portfolios are further divided based on expected profitability at inception. At a minimum, each portfolio of insurance contracts issued shall be divided into the following groups:
  - Contracts that are onerous at initial recognition;
  - Contracts that at initial recognition have no significant possibility of becoming onerous subsequently; and
  - Any of the remaining contracts in the portfolio.
- Apply the three measurement models introduced by IFRS 17 as further described below:

  General Measurement Model (GMM)

  The Company applies this model to its medium to long-term insurance products, such as individual protection, payout annuities, and longevity swaps.

  Under this model, the Company will measure insurance contract liabilities on the balance sheet as the total of:
  - The fulfilment cash flows (FCF) – the current estimates of amounts that a company expects to collect (e.g. premiums) and pay out (e.g. claims, benefits, expenses), including adjustments for the timing and the financial and non-financial risks of those amounts; and
  - The contractual service margin (CSM) – unearned profit for providing insurance coverage, which is subsequently recognized into profit or loss over time as the insurance services are provided.

  At the end of each period, the Company will recalculate the FCF and CSM, with the CSM subject to adjustments for interest accretion and certain changes to FCF relating to future service.

  Premium Allocation Approach (PAA)

  The Company applies this model to its short-term insurance products, such as group life and health.

  This simplified model can be used when the contract boundary is less than one year or the approach is expected to produce a similar liability amount as under the GMM. Under the PAA, the Company is exempted from calculating and explicitly accounting for the CSM. Instead the liability is set as the premiums received less acquisition expenses, premium revenue recognized, and amounts transferred to fund incurred claims.

  Variable Fee Approach (VFA)

  The Company applies this model to contracts with direct participating features such as participating insurance and segregated fund business with insurance guarantees, where an investment return is provided to the policyholder based on a defined pool of items (e.g. a portfolio of assets).

  Similar to the GMM, the VFA initially measures the insurance contract liabilities as the FCF plus CSM. Subsequently, the Company will recalculate the FCF and CSM, with the latter reflecting changes in the Company’s share of the pool of items (e.g. future fees and guarantee costs) and certain changes to FCF relating to future service.

A group of insurance contracts issued is considered onerous when the measurement leads to a negative CSM either at issue or when subsequently measured. In this case, the CSM is not allowed to decrease below zero and a loss component is tracked.

The measurement of reinsurance contracts held is similar to insurance contracts issued with the following key differences: the CSM can be positive or negative, and the VFA measurement model cannot be used.

On transition to IFRS 17, the Company will apply the full retrospective approach to all identified insurance contracts unless it is impracticable to do so. When impracticable, the fair value approach will be applied.

The fair value approach calculates the CSM or loss component of the liability for remaining coverage as the difference between the fair value of a group of insurance contracts at the date of transition and the FCF measured at that date.

In addition, IFRS 9 will replace IAS 39, effective January 1, 2023. The standard provides changes to financial instruments accounting for the following:

- Classification and measurement of financial instruments based on a business model approach for managing financial assets and the contractual cash flow characteristics of the financial asset. All financial assets are measured as Fair Value Through Profit or Loss (FVTPL), Fair Value Through Other Comprehensive Income (FVOCI), or amortized cost;
- Allowances for credit losses (ACL) are based on an Expected Credit Loss (ECL) model for all financial assets, except for financial assets classified or designated as FVTPL and equity securities designated as FVOCI. Under the ECL model, a loss allowance is recognized and maintained equal to 12 months of expected credit losses upon initial recognition. If credit risk subsequently increases significantly, or an asset becomes credit-impaired, the loss allowance is increased to cover full, lifetime expected credit losses. Changes in the required loss allowance will be recorded in net investment income in the Consolidated Statements of Earnings; and
- Hedge accounting that incorporates the risk management practices of an entity, which will not have a material impact to the Company.

The current disclosure for the measurement and classification of the Company's portfolio investments (note 6 to the Company's December 31, 2022 annual consolidated financial statements) provides most of the information required by IFRS 9.

The Company’s date of initial application of IFRS 9 is January 1, 2023 and the Company anticipates electing the option of presenting comparative information about a financial asset as if the classification and measurement requirements of IFRS 9 had been applied to that financial asset in the comparative period, as permitted by the amendment to IFRS 17 published by the IASB in December 2021. IFRS 9 includes an accounting policy choice to retain the IAS 39 requirements for hedge accounting, which the Company is currently evaluating.

The adoption of IFRS 17 and IFRS 9 is expected to result in an overall reduction of total assets of approximately $16.4 billion, total liabilities of $13.0 billion, and total equity of approximately $3.4 billion to the transition balance sheet as at January 1, 2022.

Asset and liability reclassifications in the transition balance sheet were primarily driven by changes to the groupings of certain assets and liabilities, reclassifications of certain insurance contract liabilities to investment contract liabilities, and presenting liabilities on account of segregated fund policyholders separately between insurance and investment contract liabilities. IFRS 9 adjustments primarily relate to a change in designation of certain loans and receivables held at amortized cost under IAS 39 to FVTPL under IFRS 9. IFRS 17 adjustments relate to changes in insurance contract liabilities and reinsurance assets, which are primarily the result of the establishment of CSM for in-force contracts of $6.3 billion associated with the shareholders' account and $2.3 billion associated with the participating account, partially offset by the removal of provisions no longer required under IFRS 17. This does not include the CSM on in-force segregated fund business which does not have a material impact on capital or opening equity.

Total equity is expected to decrease by approximately $3.4 billion, split $0.2 billion for the participating account surplus and $3.2 billion for the shareholders' account surplus.

These impacts are based on the assessments undertaken to date. The exact financial impacts of the accounting changes of adopting IFRS 17 and IFRS 9 may be revised as further analysis is completed prior to presentation of financial information for periods including the date of initial application. The Company expects to be in a position to issue further guidance on the impact of adopting IFRS 17 and IFRS 9 in conjunction with the first quarterly report to shareholders for the financial year commencing January 1, 2023.

Standard	Summary of Future Changes
IAS 1 – *Presentation of Financial Statements*	In February 2021, the IASB published *Disclosure of Accounting Policies,* amendments to IAS 1, *Presentation of Financial Statements*. The amendments clarify how an entity determines whether accounting policy information is material. These amendments are effective for annual reporting periods beginning on or after January 1, 2023, with earlier application permitted. The Company does not anticipate a significant impact on its consolidated financial statements as a result of these amendments.
IAS 8 – *Accounting Policies, Changes in Accounting Estimates and Errors*	In February 2021, the IASB published *Definition of Accounting Estimates,* amendments to IAS 8, *Accounting Policies, Changes in Accounting Estimates and Errors.* The amendments clarify the difference between an accounting policy and an accounting estimate. These amendments are effective for annual reporting periods beginning on or after January 1, 2023, with earlier application permitted. The Company does not anticipate a significant impact on its consolidated financial statements as a result of these amendments.
IAS 12 – *Income Taxes*	In May 2021, the IASB published *Deferred Tax Related to Assets and Liabilities from a Single Transaction*, amendments to IAS 12, *Income Taxes*. The amendments clarify that for transactions in which both deductible and taxable temporary differences arise on initial recognition that result in deferred tax assets and liabilities of the same amount, deferred tax assets and liabilities are to be recognized. These amendments are effective for annual reporting periods beginning on or after January 1, 2023, with earlier application permitted. The Company does not anticipate a significant impact on its consolidated financial statements as a result of these amendments.
IFRS 16 – *Leases*	In September 2022, the IASB published *Lease Liability in a Sale and Leaseback*, amendments to IFRS 16, *Leases*. The amendments clarify that in a sale and leaseback transaction, the seller-lessee subsequent measurement of the lease liability arising from a leaseback does not recognize any amount of gain or loss related to the right of use it retains. These amendments are effective for annual reporting periods beginning on or after January 1, 2024 with earlier application permitted. The Company does not anticipate a significant impact on its consolidated financial statements as a result of these amendments.

OTHER INFORMATION

NON-GAAP FINANCIAL MEASURES AND RATIOS

The Company uses several non-GAAP financial measures to measure overall performance of the Company and to assess each of its business units. A financial measure is considered a non-GAAP measure for Canadian securities law purposes if it is presented other than in accordance with generally accepted accounting principles (GAAP) used for the Company's consolidated financial statements. The consolidated financial statements of the Company have been prepared in compliance with IFRS as issued by the IASB. Non-GAAP financial measures do not have a standardized meaning under GAAP and may not be comparable to similar financial measures presented by other issuers. Investors may find these financial measures useful in understanding how management views the underlying business performance of the Company.

Base earnings (loss)

Base earnings (loss) reflect management's view of the underlying business performance of the Company and provides an alternate measure to understand the underlying business performance compared to IFRS net earnings. Base earnings (loss) exclude the following items:

- The impact of actuarial assumption changes and other management actions;
- The net earnings impact related to the direct equity and interest rate market impacts on insurance and investment contract liabilities, net of hedging, and related deferred tax liabilities, which includes:
  - the impact of hedge ineffectiveness related to segregated fund guarantee liabilities that are hedged and the performance of the related hedge assets;
  - the impact on segregated fund guarantee liabilities not hedged;
  - the impact on general fund equity and investment properties supporting insurance contract liabilities;
  - other market impacts on insurance and investment contract liabilities and deferred tax liabilities, including those arising from the difference between actual and expected market movements; and
- Certain items that, when removed, assist in explaining the Company's underlying business performance including restructuring costs, integration costs related to business acquisitions, material legal settlements, material impairment charges related to goodwill and intangible assets, impact of substantially enacted income tax rate changes and other tax impairments and net gains, losses or costs related to the disposition or acquisition of a business.

Lifeco

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Base earnings	**$ 892**	$ 688	$ 825	**$ 3,219**	$ 3,260
Items excluded from Lifeco base earnings					
Actuarial assumption changes and other management actions (pre-tax)	**$ 49**	$ 24	$ 28	**$ 88**	$ 148
Income tax (expense) benefit	**—**	44	(5)	**41**	(14)
Market-related impact on liabilities (pre-tax)	**46**	(54)	22	**(41)**	35
Income tax (expense) benefit	**(8)**	9	(2)	**8**	(11)
Transaction costs related to acquisitions (pre-tax)	**(5)**	16	(76)	**(68)**	(207)
Income tax (expense) benefit	**—**	4	2	**19**	18
Restructuring and integration costs (pre-tax)	**(43)**	(58)	(21)	**(178)**	(90)
Income tax (expense) benefit	**11**	15	6	**47**	24
Tax legislative changes impact (pre-tax)	**55**	—	—	**55**	—
Income tax (expense) benefit	**29**	—	—	**29**	(21)
Net gain/charge on business dispositions (pre-tax)	**—**	—	(14)	**—**	(14)
Total pre-tax items excluded from base earnings	**$ 102**	$ (72)	$ (61)	**$ (144)**	$ (128)
Impact of items excluded from base earnings on income taxes	**32**	72	1	**144**	(4)
Net earnings - common shareholders	**$ 1,026**	$ 688	$ 765	**$ 3,219**	$ 3,128

Canada

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Base earnings	**$ 295**	$ 283	$ 317	**$ 1,146**	$ 1,220
Items excluded from base earnings					
Actuarial assumption changes and other management actions (pre-tax)	**$ 1**	$ (164)	$ (18)	**$ (161)**	$ (58)
Income tax (expense) benefit	**1**	44	5	**44**	15
Market-related impacts on liabilities (pre-tax)	**(2)**	(4)	4	**4**	13
Income tax (expense) benefit	**1**	1	(1)	**(1)**	(3)
Tax legislative changes impact (pre-tax)	**55**	—	—	**55**	—
Income tax (expense) benefit	**29**	—	—	**29**	—
Net earnings - common shareholders	**$ 380**	$ 160	$ 307	**$ 1,116**	$ 1,187

United States

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Base earnings	**$ 185**	$ 204	$ 156	**$ 652**	$ 671
Items excluded from base earnings					
Actuarial assumption changes and other management actions (pre-tax)	**$ —**	$ —	$ 2	**$ —**	$ 7
Income tax (expense) benefit	**—**	—	—	**—**	(1)
Market-related impact on liabilities (pre-tax)	**12**	(28)	(1)	**(40)**	(5)
Income tax (expense) benefit	**(3)**	6	—	**8**	—
Restructuring and integration costs (pre-tax)	**(43)**	(58)	(21)	**(178)**	(90)
Income tax (expense) benefit	**11**	15	6	**47**	24
Transaction costs related to acquisitions (pre-tax)	**—**	21	(52)	**(48)**	(115)
Income tax (expense) benefit	**—**	4	2	**19**	8
Net earnings - common shareholders	**$ 162**	$ 164	$ 92	**$ 460**	$ 499

Europe

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Base earnings	**$ 239**	$ 200	$ 213	**$ 892**	$ 830
Items excluded from base earnings					
Actuarial assumption changes and other management actions (pre-tax)	**$ 38**	$ 77	$ 59	**$ 128**	$ 219
Income tax (expense) benefit	**(1)**	(8)	(13)	**(11)**	(33)
Market-related impact on liabilities (pre-tax)	**21**	(17)	19	**(7)**	27
Income tax (expense) benefit	**(5)**	2	(1)	**2**	(8)
Transaction costs related to acquisitions (pre-tax)	**(5)**	(5)	(24)	**(20)**	(24)
Income tax (expense) benefit	**—**	—	—	**—**	—
Tax legislative changes impact	**—**	—	—	**—**	(21)
Net gain/charge on business dispositions (pre-tax)	**—**	—	(14)	**—**	(14)
Net earnings - common shareholders	**$ 287**	$ 249	$ 239	**$ 984**	$ 976

Capital and Risk Solutions	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Base earnings	**$ 187**	$ 1	$ 145	**$ 532**	$ 547
Items excluded from base earnings					
Actuarial assumption changes and other management actions (pre-tax)	**$ 10**	$ 111	$ (15)	**$ 121**	$ (20)
Income tax (expense) benefit	**—**	8	3	**8**	5
Market-related impact on liabilities	**15**	(5)	—	**2**	—
Income tax (expense) benefit	**(1)**	—	—	**(1)**	—
Net earnings - common shareholder	**$ 211**	$ 115	$ 133	**$ 662**	$ 532

Lifeco Corporate	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Base earnings (loss)	**$ (14)**	$ —	$ (6)	**$ (3)**	$ (8)
Items excluded from base earnings (loss)					
Transaction costs related to acquisitions (pre-tax)	**$ —**	$ —	$ —	**$ —**	$ (68)
Income tax (expense) benefit	**—**	—	—	**—**	10
Net earnings (loss) - common shareholder	**$ (14)**	$ —	$ (6)	**$ (3)**	$ (66)

Premiums and deposits

Total premiums and deposits include premiums on risk-based insurance and annuity products net of ceded reinsurance (as defined under IFRS as net premium income), premium equivalents on self-funded group insurance ASO contracts, deposits on individual and group segregated fund products as well as deposits on proprietary mutual funds and institutional accounts. This measure provides an indicator of top-line growth.

Premiums and deposits	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Total net premiums	**$ 8,544**	$ 13,921	$ 12,989	**$ 52,821**	$ 52,813
Policyholder deposits (segregated funds)[1]	**13,775**	11,723	8,337	**40,618**	29,657
Self-funded premium equivalents (ASO contracts) and other	**2,684**	2,637	4,556	**10,953**	11,108
Proprietary mutual funds and institutional deposits	**19,162**	15,984	21,772	**69,787**	75,225
Total premiums and deposits	**$ 44,165**	$ 44,265	$ 47,654	**$ 174,179**	$ 168,803

1 For additional details, refer to note 14(b) to the Company's December 31, 2022 annual consolidated financial statements.

Assets under management (AUM) and assets under administration (AUA)
Assets under management and assets under administration are non-GAAP measures that provide an indicator of the size and volume of the Company's overall business. Administrative services are an important aspect of the overall business of the Company and should be considered when comparing volumes, size and trends.

Total assets under administration includes total assets per financial statements, proprietary mutual funds and institutional assets and other assets under administration.

Lifeco

	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021
Total assets per financial statements	**$ 701,455**	$ 672,764	$ 630,488
Other AUM	**331,734**	319,141	377,155
Total AUM	**$ 1,033,189**	$ 991,905	$ 1,007,643
Other AUA[1]	**1,464,523**	1,392,368	1,283,949
Total AUA[1]	**$ 2,497,712**	$ 2,384,273	$ 2,291,592

1 2021 comparative figures have been restated to include Financial Horizons Group and Excel Private Wealth Inc. assets under administration in the Canada segment.

Canada

	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021
Canada wealth fee business AUA[1]			
Segregated fund assets	**$ 93,816**	$ 89,892	$ 101,537
Other AUM	**4,057**	3,964	5,742
Wealth fee business other AUA[1]	**23,975**	23,143	27,340
Total Canada wealth fee business AUA[1]	**$ 121,848**	$ 116,999	$ 134,619
Add: Other balance sheet assets	**$ 101,266**	$ 99,304	$ 102,445
Add: Other AUA	**2,369**	2,362	2,275
Consolidated Canada balance sheet assets	**$ 195,082**	$ 189,196	$ 203,982
Consolidated Canada other AUM	**4,057**	3,964	5,742
Consolidated Canada other AUA[1]	**26,344**	25,505	29,615
Total Canada AUA[1]	**$ 225,483**	$ 218,665	$ 239,339

1 2021 comparative figures have been restated to include Financial Horizons Group and Excel Private Wealth Inc. assets under administration.

United States

	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021
Financial Services			
Personal Capital other AUM	**$ 31,171**	$ 28,371	$ 29,231
Empower AUA			
General account	**99,839**	102,856	47,408
Segregated funds	**159,901**	156,492	109,450
Other AUM	**53,482**	50,544	53,413
Other AUA	**1,426,834**	1,356,223	1,241,974
Empower AUA	**$ 1,740,056**	$ 1,666,115	$ 1,452,245
Putnam other AUM	**$ 222,363**	$ 217,679	$ 257,216
Subtotal	**$ 1,993,590**	$ 1,912,165	$ 1,738,692
Add: Other AUM consolidation adjustment	**$ (29,878)**	$ (28,166)	$ (28,927)
Add: Other balance sheet assets	**51,013**	43,672	51,353
Consolidated United States balance sheet assets	**$ 310,753**	$ 303,020	$ 208,211
Consolidated United States other AUM	**277,138**	268,428	310,933
Consolidated United States other AUA	**1,426,834**	1,356,223	1,241,974
Total United States AUA	**$ 2,014,725**	$ 1,927,671	$ 1,761,118

Europe

	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021
Europe wealth and investment only AUA			
Segregated fund assets	**$ 127,807**	$ 116,788	$ 138,963
Other AUM	**50,539**	46,749	60,480
Other AUA	**11,345**	10,640	12,360
Total Europe wealth and investment only AUA	**$ 189,691**	$ 174,177	$ 211,803
Add: Other balance sheet assets	**$ 51,467**	$ 48,495	$ 61,936
Consolidated Europe balance sheet assets	**$ 179,274**	$ 165,283	$ 200,899
Consolidated Europe other AUM	**50,539**	46,749	60,480
Consolidated Europe other AUA	**11,345**	10,640	12,360
Total Europe AUA	**$ 241,158**	$ 222,672	$ 273,739

Core net earnings (loss)

For its Asset Management (Putnam) business unit in the U.S segment, the Company discloses core net earnings (loss), which is a measure of the business unit's performance. Core net earnings (loss) includes the impact of dealer commissions and software amortization and excludes the impact of certain corporate financing charges and allocations, certain tax adjustments and other non-recurring transactions.

Core net earnings (loss)[1]
(In US$ million, unless otherwise noted)

	For the three months ended			For the twelve months ended	
	Dec. 31 2022	Sept. 30 2022	Dec. 31 2021	**Dec. 31 2022**	Dec. 31 2021
Fee and net investment income	**$ 220**	$ 200	$ 254	**$ 853**	$ 990
Less: Expenses	**218**	214	225	**873**	890
Core earnings	**$ 2**	$ (14)	$ 29	**$ (20)**	$ 100
Less: Income taxes	**1**	(1)	9	**(2)**	26
Core net earnings (loss)	**$ 1**	$ (13)	$ 20	**$ (18)**	$ 74
Non-core net earnings (loss)	**(21)**	(4)	15	**(32)**	2
Net earnings (loss)	**$ (20)**	$ (17)	$ 35	**$ (50)**	$ 76
Net earnings (loss) (C$)	**$ (27)**	$ (22)	$ 43	**$ (66)**	$ 95

[1] For the Asset Management business unit, there were no differences between net earnings (loss) and base earnings (loss) in the periods presented.

NON-GAAP RATIOS

A non-GAAP ratio is a financial measure in the form of a ratio, fraction, percentage or similar representation that is not disclosed in the financial statements of the Company and has a non-GAAP financial measure as one or more of its components. These financial measures do not have a standardized definition under IFRS and might not be comparable to similar financial measures disclosed by other issuers.

The non-GAAP ratios disclosed by the Company each use base earnings (loss) as the non-GAAP component. Base earnings (loss) reflect management's view of the underlying business performance of the Company and provides an alternate measure to understand the underlying business performance compared to IFRS net earnings.

- **Base dividend payout ratio** - Dividends paid to common shareholders are divided by base earnings (loss).
- **Base earnings per share** - Base earnings (loss) for the period is divided by the number of average common shares outstanding for the period.
- **Base earnings per share (diluted)** - Base earnings (loss) for the period is divided by the number of average common shares outstanding on a diluted basis for the period.
- **Base return on equity** - Base earnings (loss) for the trailing four quarters are divided by the average common shareholders' equity over the trailing four quarters. This measure provides an indicator of business unit profitability.
- **Core margin (pre-tax)** - The metrics relates to the Asset Management line of business within the United States segment and is calculated by dividing core earnings by fee and net investment income.
- **Cost of management ratio** – Compares the amount paid by the Company to compensate its Named Executive Officers (NEOs) relative to the Company's base earnings for the same period. Calculated by dividing total annual compensation paid to NEOs (as disclosed in the Executive Compensation section of the Company's management proxy circular) by base earnings for the year.
- **Effective income tax rate - base earnings - common shareholders** - Calculated by adjusting the Company's reported income taxes and net earnings before income taxes attributable to common shareholders to remove the impact of items excluded from base earnings, to calculate the effective tax rate for common shareholders.

GLOSSARY

- **Actuarial assumption changes and other management actions** - In accordance with the OSFI "Source of Earnings Disclosure (Life Insurance Company)" Guideline D-9, actuarial assumption changes and other management actions represent the impact on net income resulting from management actions, changes in actuarial assumptions or methodology, changes in margins for adverse deviations, and correction of errors. Within the Source of Earnings Disclosure, management actions include the net gain or charge on business dispositions and transactions costs related to acquisition. The reconciliation between net earnings (loss) - common shareholders and base earnings (loss) presents the net gain or charge on business dispositions and transactions costs related to acquisition separately from actuarial assumption changes and other management actions.
- **Book value per common share** - Measure is calculated by dividing Lifeco's common shareholder's equity by the number of common shares outstanding at the end of the period.
- **Common shareholder's equity** - A financial measure comprised of the following items from Lifeco's balance sheet: share capital - common shares, accumulated surplus, accumulated other comprehensive income and contributed surplus.
- **Dividend payout ratio** - Dividends paid to common shareholders are divided by net earnings - common shareholders.
- **Financial leverage ratio** - Defined as debt, hybrid securities, and preferred shares divided by total consolidated capitalization.
- **Impact of currency movement (constant currency basis) -** Items impacting the Company's Consolidated Statements of Earnings, such as income and benefits and expenses and net earnings, are translated into Canadian dollars at an average rate for the period. These measures highlight the impact of changes in currency translation rates on Canadian dollar equivalent IFRS results and have been calculated using the average rates, as shown below, in effect at the date of the comparative period. These measures provide useful information as it facilitates the comparability of results between periods.

	Period ended	
	Dec. 31 2022	Dec. 31 2021
United States dollar	**1.36**	1.26
British pound	**1.59**	1.70
Euro	**1.39**	1.44

- **Market-related impacts on liabilities** - The net earnings impact related to the direct equity and interest rate market impacts on insurance and investment contract liabilities, net of hedging, and related deferred tax liabilities, which includes:
  - the impact of hedge ineffectiveness related to segregated fund guarantee liabilities that are hedged and the performance of the related hedge assets;
  - the impact on segregated fund guarantee liabilities not hedged;
  - the impact on general fund equity and investment properties supporting insurance contract liabilities;
  - other market impacts on insurance and investment contract liabilities and deferred tax liabilities, including those arising from the difference between actual and expected market movements.
- **Office of the Superintendent of Financial Institutions Canada (OSFI)** - is an independent Canadian federal government agency that regulates and supervises federally regulated financial institutions and pension plans to determine whether they are in sound financial condition and meeting their requirements.

- **Return on common shareholder's equity (ROE)** - Net earnings (loss) for the trailing four quarters are divided by the average common shareholders' equity over the trailing four quarters. This measure provides an indicator of business unit profitability.
- **Sales** - Sales are measured according to product type:
  - For risk-based insurance and annuity products, sales include 100% of single premium and annualized premiums expected in the first twelve months of the plan.
  - Group insurance and ASO sales reflect annualized premiums and premium equivalents for new policies and new benefits covered or expansion of coverage on existing policies.
  - For individual wealth management products, sales include deposits on segregated fund products, proprietary mutual funds and institutional accounts as well as deposits on non-proprietary mutual funds.
  - For group wealth management products, sales include assets transferred from previous plan providers and the expected annual contributions from the new plan.
- **Segmented common shareholder's equity** - The Company has a capital allocation methodology, which allocates financing costs in proportion to allocated capital. For the Canada, Europe and Capital and Risk Solutions segments (essentially Canada Life), this allocation method generally tracks the regulatory capital requirements, while for U.S. Financial Services and U.S. Asset Management (Putnam), it tracks the financial statement carrying value of the business units. Total leverage capital is consistently allocated across all business units in proportion to total capital resulting in a debt-to-equity ratio in each business unit mirroring the consolidated Company.

  The capital allocation methodology allows the Company to calculate comparable ROE for each business unit. These ROEs are therefore based on the capital the business unit has been allocated and the financing charges associated with that capital. IFRS does not prescribe the calculation of ROE and therefore a comparable measure under IFRS is not available.
- **Other assets under management** - Includes external client funds where the Company has oversight of the investment policies. Services provided in respect of proprietary mutual funds and institutional assets include the selection of investments, the provision of investment advice and discretionary portfolio management on behalf of clients.
- **Other assets under administration** - Includes assets where the Company only provides administration services for which the Company earns fees and other income. These assets are beneficially owned by the clients and the Company does not direct the investing activities. Services provided relating to assets under administration include recordkeeping, safekeeping, collecting investment income, settling of transactions or other administrative services. Administrative services are an important aspect of the overall business of the Company and should be considered when comparing volumes, size and trends.
- **Net cash flows and net asset flows** - Indicator of the Company's ability to attract and retain business. Net cash flows and net asset flows are measured by the following:
  - Canada wealth management net cash flows include cash inflows and outflows related to segregated fund assets and proprietary and non-proprietary mutual funds.
  - Europe wealth and investment only net cash flows include cash inflows and outflows related to segregated fund assets, proprietary mutual funds and institutional assets as well as other assets under administration.
  - Empower net cash flows include cash inflows and outflows related to segregated fund assets, general fund assets, proprietary and non-proprietary mutual funds as well as other assets under management.
  - Putnam net asset flows include mutual fund and institutional sales and redemptions.

SELECTED ANNUAL INFORMATION

Selected annual information *(in $ millions, except per share amounts)*	**Years ended December 31**		
	2022	2021	2020
Total revenue	**$ 44,662**	$ 64,417	$ 60,583
Earnings - common shareholders			
Net earnings	**3,219**	3,128	2,943
Base earnings[1]	**3,219**	3,260	2,669
Net earnings per common share			
Basic - net earnings	**3.455**	3.365	3.173
Diluted - net earnings	**3.452**	3.360	3.172
Basic - base earnings[2]	**3.455**	3.507	2.878
Diluted - base earnings[2]	**3.452**	3.502	2.877
Total assets under administration			
Total assets	**$ 701,455**	$ 630,488	$ 600,490
Proprietary mutual funds and institutional assets[3]	**331,734**	377,155	350,943
Total assets under management[1]	**1,033,189**	1,007,643	951,433
Other assets under administration[3,4]	**1,464,523**	1,283,949	1,034,096
Total assets under administration[1,4]	**$ 2,497,712**	$ 2,291,592	$ 1,985,529
Total liabilities	**$ 669,137**	$ 600,005	$ 573,475
Dividends paid per share			
Series F First Preferred[5]	**—**	1.4750	1.4750
Series G First Preferred	**1.3000**	1.3000	1.3000
Series H First Preferred	**1.21252**	1.21252	1.21252
Series I First Preferred	**1.1250**	1.1250	1.1250
Series L First Preferred	**1.41250**	1.41250	1.41250
Series M First Preferred	**1.450**	1.450	1.450
Series N First Preferred[6]	**0.437252**	0.437252	0.544000
Series O First Preferred[7]	**—**	—	0.556412
Series P First Preferred	**1.350**	1.350	1.350
Series Q First Preferred	**1.2875**	1.2875	1.2875
Series R First Preferred	**1.200**	1.200	1.200
Series S First Preferred	**1.312500**	1.312500	1.312500
Series T First Preferred	**1.2875**	1.2875	1.2875
Series Y First Preferred[8]	**1.1250**	0.2589	—
Common	**1.960**	1.804	1.752

1 This metric is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.
2 This metric is a non-GAAP ratio. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.
3 Refer to the "Glossary" section of this document for additional details on the composition of this measure.
4 2021 and 2020 comparative figures have been restated to include Financial Horizons Group and Excel Private Wealth Inc. assets under administration in the Canada segment.
5 On December 31, 2021, Lifeco redeemed all of its outstanding 5.90% Non-Cumulative First Preferred Shares, Series F, at a redemption price of $25.00 per share plus an amount equal to all declared and unpaid dividends, less any tax required to be deducted and withheld by Lifeco.
6 The Series N First Preferred Share dividend was reset to a five year fixed dividend rate of 1.749% per annum which applies until December 30, 2025.
7 Floating dividend rate which is reset quarterly to the three month Government of Canada Treasury Bill yield plus 1.30%. On December 31, 2020, all outstanding Series O Shares were automatically converted into Series N Shares on a one-for-one basis.
8 On October 8, 2021, the Company issued 8,000,000, 4.50% Non-Cumulative First Preferred Shares, Series Y. Please refer to the "Lifeco Capital Structure" section of this document for additional details on the issuance.

QUARTERLY FINANCIAL INFORMATION

Quarterly financial information
(in $ millions, except per share amounts)

	2022				2021			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Total revenue	**$ 14,072**	$ 12,372	$ 9,188	$ 9,030	$ 18,122	$ 17,432	$ 17,955	$ 10,908
Common shareholders								
Base earnings								
Total[2]	**$ 892**	$ 688	$ 830	$ 809	$ 825	$ 870	$ 826	$ 739
Basic - per share[1]	**0.957**	0.738	0.893	0.869	0.887	0.934	0.889	0.796
Diluted - per share[1]	**0.956**	0.738	0.892	0.868	0.885	0.932	0.888	0.796
Net earnings								
Total	**$ 1,026**	$ 688	$ 735	$ 770	$ 765	$ 872	$ 784	$ 707
Basic - per share	**1.101**	0.738	0.789	0.827	0.822	0.938	0.844	0.762
Diluted - per share	**1.100**	0.738	0.788	0.825	0.820	0.936	0.842	0.761

[1] This metric is a non-GAAP ratio. Refer to the "Non-GAAP Financial Measures and Ratios" section of this document for additional details.
[2] This metric is a non-GAAP financial measure. The following items were excluded from base earnings in each quarter:

Items excluded from base earnings

	2022				2021			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Actuarial assumption changes and other management actions (pre-tax)	**$ 49**	$ 24	$ 24	$ (9)	$ 28	$ 74	$ 42	$ 4
Income tax (expense) benefit	**—**	44	(3)	—	(5)	(5)	(5)	1
Market-related impact on liabilities (pre-tax)	**46**	(54)	(19)	(14)	22	52	(14)	(25)
Income tax (expense) benefit	**(8)**	9	4	3	(2)	(5)	(5)	1
Transaction costs related to acquisitions (pre-tax)	**(5)**	16	(71)	(8)	(76)	(104)	(25)	(2)
Income tax (expense) benefit	**—**	4	14	1	2	14	1	1
Restructuring and integration costs (pre-tax)	**(43)**	(58)	(60)	(17)	(21)	(32)	(21)	(16)
Income tax (expense) benefit	**11**	15	16	5	6	8	6	4
Net gain/charge on business dispositions (pre-tax)	**—**	—	—	—	(14)	—	—	—
Income tax (expense) benefit	**—**	—	—	—	—	—	—	—
Tax legislative changes impact (pre-tax)	**55**	—	—	—	—	—	—	—
Income tax (expense) benefit	**29**	—	—	—	—	—	(21)	—
Total post-tax items excluded from base earnings	**$ 134**	$ —	$ (95)	$ (39)	$ (60)	$ 2	$ (42)	$ (32)

Lifeco's consolidated net earnings attributable to common shareholders were $1,026 million for the fourth quarter of 2022 compared to $765 million reported a year ago. On a per share basis, this represents $1.101 per common share ($1.100 diluted) for the fourth quarter of 2022 compared to $0.822 per common share ($0.820 diluted) a year ago.

Total revenue for the fourth quarter of 2022 was $14,072 million and comprises premium income of $8,544 million, regular net investment income of $2,176 million, a positive change in fair value through profit or loss on investment assets of $1,373 million and fee and other income of $1,979 million.

DISCLOSURE CONTROLS AND PROCEDURES

The Company's disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed by the Company in reports filed or submitted by it under provincial and territorial securities legislation is: (a) recorded, processed, summarized and reported within the time periods specified in the provincial and territorial securities legislation, and (b) accumulated and communicated to the Company's senior management, including the President and Chief Executive Officer and the Executive Vice-President and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Management evaluated the effectiveness of the Company's disclosure controls and procedures as at December 31, 2022 and, based on such evaluation, the President and Chief Executive Officer and the Executive Vice-President and Chief Financial Officer have concluded that the Company's disclosure controls and procedures are effective.

INTERNAL CONTROL OVER FINANCIAL REPORTING

The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. The Company's management is responsible for establishing and maintaining effective internal control over financial reporting. All internal control systems have inherent limitations and may become ineffective because of changes in conditions. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

The Company's management, under the supervision of the President and Chief Executive Officer and the Executive Vice-President and Chief Financial Officer, has evaluated the effectiveness of the Company's internal control over financial reporting based on the 2013 *Internal Control - Integrated Framework* (COSO Framework) published by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management adopted the revised 2013 COSO Framework in 2015 as the basis to evaluate the effectiveness of the Lifeco's internal control over financial reporting.

During the twelve months ended December 31, 2022, there have been no changes in the Company's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting. Internal controls over financial reporting have been adapted for the remote work environment that has resulted from the COVID-19 pandemic, as necessary, and were effective. Management evaluated the effectiveness of the Company's internal control over financial reporting as at December 31, 2022 and, based on such evaluation, the President and Chief Executive Officer and the Executive Vice-President and Chief Financial Officer have concluded that the Company's internal control over financial reporting is effective and that there are no material weaknesses in the Company's internal control over financial reporting.

Limitation on Disclosure Controls and Procedures & Internal Control Over Financial Reporting

As permitted by securities legislation, for the period ended December 31, 2022, the Company's management has limited the scope of its design of the Company's disclosure controls and procedures and the Company's internal control over financial reporting to exclude controls, policies and procedures of the Prudential's full-service retirement services business, which the Company acquired on April 1, 2022.

During the year ended December 31, 2022, the acquired Prudential retirement services business had revenue of $609 million, net earnings of $94 million post-tax (base earnings of $172 million post-tax excluding negative market-related impact on liabilities of $9 million and integration costs of $19 million post-tax) and other comprehensive loss of $43 million. The initial amounts assigned to the assets acquired, goodwill and intangible assets on April 1, 2022 and reported as at December 31, 2022 were $124,967 million. The initial amounts assigned to the liabilities assumed on April 1, 2022 and reported as at December 31, 2022 were $122,339 million. During the fourth quarter of 2022, the Company completed its comprehensive evaluation of the fair value of net assets acquired from Prudential and the purchase price allocation.

RELATIONSHIP WITH POWER CORPORATION GROUP OF COMPANIES

Lifeco's controlling shareholder is Power Financial Corporation (Power Financial), which is controlled by Power Corporation of Canada (Power Corporation) and, ultimately, by the Desmarais Family Residuary Trust. The Company is related to other members of the Power Corporation group of companies including IGM Financial Inc. (IGM), a company in the financial services sector, along with its subsidiaries. Power Corporation also controls Sagard Holdings Management Inc. (Sagard), a multi-strategy alternative asset manager, Power Sustainable, a global multi-platform alternative asset manager, and Portage Ventures (Portage), a global fintech venture capital investment strategy. Lifeco has a minority investment in Sagard. Lifeco and Mackenzie Financial Corporation, a wholly-owned subsidiary of IGM, are investors in Northleaf Capital Partners Ltd. (Northleaf), a global private equity, private credit and infrastructure fund manager. The Company and its subsidiaries invest in funds managed by Sagard, Power Sustainable, Portage and Northleaf. Some of these related entities operate in similar or related sectors to those in which Lifeco's subsidiaries operate. A number of the Company's directors are also directors or officers of Power Corporation or one of its affiliates.

Lifeco's relationship with Power Financial, Power Corporation, Power Sustainable, IGM, Sagard, Portage and other members of the Power Corporation group of companies enables Lifeco to access expertise and industry knowledge, achieve economies of scale and access investment opportunities. As a result of these relationships, Lifeco and other members of the Power Corporation group of companies may become aware of opportunities that are also of potential interest to other members of the group and Lifeco may share information for that purpose. Power Corporation and Power Financial from time to time also assist Lifeco to identify and analyze strategic corporate opportunities that may be of potential interest to it. However, Power Corporation and Power Financial have no commitment to Lifeco that would require them or their respective subsidiaries, directors or officers to offer any particular opportunity to Lifeco.

The Company has related party procedures that require, among other things, transactions between the Company and its subsidiaries and any member of the Power Corporation group of companies to be on terms no less favourable than market terms or where there is no open market, on terms that would reasonably be expected to provide at least fair value to the Company. Under the related party procedures, any material related party transactions must be reviewed and approved by a conduct review committee composed entirely of directors who are independent of management and Power Corporation and its affiliates.

TRANSACTIONS WITH RELATED PARTIES

In the normal course of business, Canada Life and Putnam enter into various transactions with related companies which include providing insurance benefits and sub-advisory services to other companies within the Power Corporation group of companies. In all cases, transactions were at market terms and conditions.

During the year, Canada Life provided to and received from IGM and its subsidiaries, a member of the Power Corporation group of companies, certain administrative and information technology services. During 2021, Canada Life and IGM executed a termination agreement covering the transition of shared information technology services from Canada Life to alternate providers over a number of years. Canada Life also provided life insurance, annuity and disability insurance products under a distribution agreement with IGM. In addition, Canada Life provided distribution services to IGM. All transactions were provided at market terms and conditions.

The Company owns 9,200,448 shares, held through Canada Life, representing 3.87% ownership interest in IGM, an affiliated company controlled by Power Corporation. The Company uses the equity method to account for its investment in IGM as it exercises significant influence. In 2022, the Company earned equity income of $30 million and received dividends of $21 million from the investment in IGM.

Segregated funds of the Company were invested in funds managed by IG Wealth Management and Mackenzie Investments. Mackenzie Investments also manages certain of the Company's portfolio investments. The Company also has interests in mutual funds, open-ended investment companies and unit trusts. Some of these funds are sub-advised by related parties of the Company and receive sub-advisory fees related to these services. During the year, the Company and its subsidiaries made additional investments in funds managed by related parties. All transactions were provided at market terms and conditions.

At December 31, 2022, the Company held $85 million ($105 million in 2021) of debentures issued by IGM.

The Company provides asset management, employee benefits and administrative services for employee benefit plans relating to pension and other post-employment benefits for employees of the Company and its subsidiaries. These transactions were provided at market terms and conditions.

There were no material loans or guarantees issued to or from related parties during 2022. There were no significant outstanding loans or guarantees with related parties at December 31, 2022. There were no provisions for uncollectible amounts with related parties at December 31, 2022.

TRANSLATION OF FOREIGN CURRENCY

Through its operating subsidiaries, Lifeco conducts business in multiple currencies. The four primary currencies are the Canadian dollar, the U.S. dollar, the British pound and the euro. Throughout this document, foreign currency assets and liabilities are translated into Canadian dollars at the market rate at the end of the reporting period. All income and expense items are translated at an average rate for the period. The rates employed are:

Translation of foreign currency **Period ended**	**Dec. 31 2022**	Sept. 30 2022	June 30 2022	Mar. 31 2022	Dec. 31 2021	Sept. 30 2021	June 30 2021	Mar. 31 2021
United States dollar								
Balance sheet	**$ 1.35**	$ 1.38	$ 1.29	$ 1.25	$ 1.27	$ 1.27	$ 1.24	$ 1.26
Income and expenses	**$ 1.36**	$ 1.31	$ 1.28	$ 1.27	$ 1.26	$ 1.26	$ 1.23	$ 1.27
British pound								
Balance sheet	**$ 1.64**	$ 1.54	$ 1.57	$ 1.64	$ 1.71	$ 1.71	$ 1.71	$ 1.73
Income and expenses	**$ 1.59**	$ 1.54	$ 1.60	$ 1.70	$ 1.70	$ 1.74	$ 1.72	$ 1.75
Euro								
Balance sheet	**$ 1.45**	$ 1.35	$ 1.35	$ 1.38	$ 1.44	$ 1.47	$ 1.47	$ 1.47
Income and expenses	**$ 1.39**	$ 1.31	$ 1.36	$ 1.42	$ 1.44	$ 1.48	$ 1.48	$ 1.53

Additional information relating to Lifeco, including Lifeco's most recent consolidated financial statements, CEO/CFO certification and Annual Information Form are available at www.sedar.com.