GREAT-WEST LIFECO INC.

2021 ANNUAL REPORT

CONTENTS

The financial information in this report is presented in millions of Canadian dollars for the period ended December 31, 2021, unless otherwise indicated.

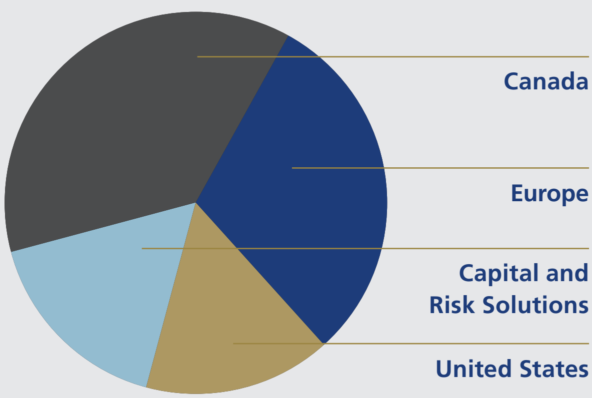
Readers are referred to the Cautionary Notes regarding forward-looking information and non-GAAP financial measures on page 17.

Who We Are

OUR MARKET LEADING BRANDS

Great-West Lifeco is well diversified across geographies and businesses, and is well positioned for growth by leveraging millions of strong customer and advisor relationships across our market leading brands.

OUR EARNINGS DIVERSIFICATION



38% Canada

31% Europe

17% Capital and Risk Solutions

16% United States

OUR CUSTOMERS

33M+
Customer relationships

$47.3B
Net policyholder benefits, dividends and experience refunds paid to customers

OUR EMPLOYEES

28,000+
Employees supporting our customers

170+
Years of delivering on our promises

Financial Highlights

MEDIUM-TERM FINANCIAL OBJECTIVES[1]	1-YEAR PERFORMANCE BASE[2]	3-YEAR PERFORMANCE BASE[2]
8-10% base EPS growth p.a.	21.9%	13.4%
14-15% base ROE	14.6%	13.6%
Target dividend payout ratio 45-55% of base earnings	51.4%	56.7%

NET FINANCIAL HIGHLIGHTS	1-YEAR PERFORMANCE NET[3]	3-YEAR PERFORMANCE NET[3]
EPS growth p.a.	6.1%	3.9%
ROE	14.0%	13.3%
Dividend payout ratio	53.6%	58.4%

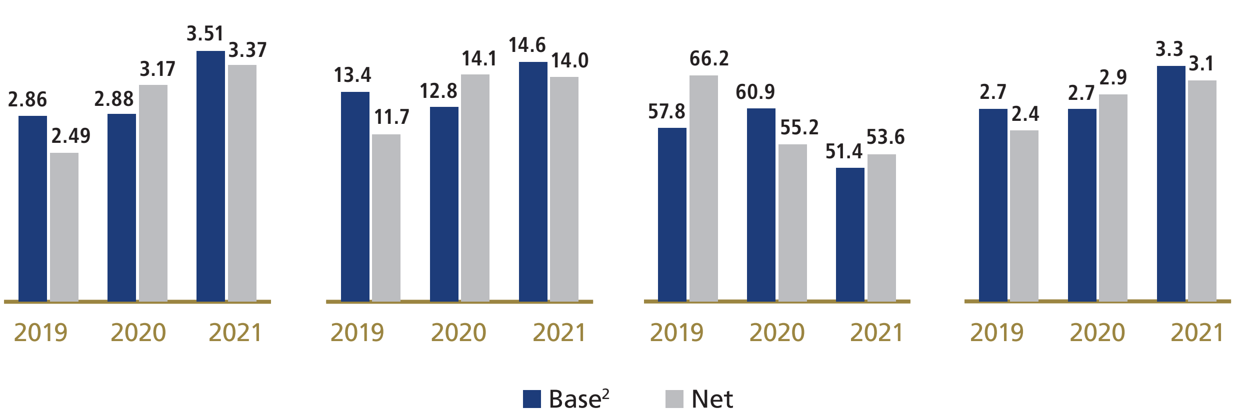
2021

$3.26B
Base earnings[2]

$3.13B
Net earnings

124%
LICAT ratio[4]

EARNINGS PER COMMON SHARE ($) | **RETURN ON COMMON SHAREHOLDERS' EQUITY (%)** | **DIVIDEND PAYOUT RATIO (%)** | **EARNINGS (BILLION $)**



1. Medium-term defined as the next 3-5 years. 2018 base EPS: $2.41; net EPS: $3.00 are used to calculate 3yr compound growth rates.
2. Base earnings per common share (EPS), base return on common shareholders' equity (ROE) and target dividend payout ratio (base) are non-GAAP ratios calculated using base earnings, a non-GAAP financial measure. These ratios/measures do not have standardized meanings under GAAP and might not be comparable to similar financial measures disclosed by other issuers. Additional information on these ratios/measures is incorporated by reference and can be found under "Non-GAAP Financial Measures and Ratios" in our 2021 Annual Management's Discussion and Analysis (MD&A), which can be accessed on SEDAR at www.sedar.com.
3. The description of net ROE and dividend payout ratio (net) is incorporated by reference and can be found under "Glossary" in our 2021 Annual MD&A.
4. LICAT ratio of The Canada Life Assurance Company, calculated in accordance with the OSFI Life Insurance Capital Adequacy Test guideline. For additional information, see "Capital Management and Adequacy" in our 2021 Annual MD&A.

Delivering On Our Promises

OUR FOUR VALUE-CREATION PRIORITIES

Focused on the customer and leveraging our risk and investment expertise, our four value-creation priorities will help drive growth across our business' portfolio. The priorities represent areas of strength where we are committed to investing to create shareholder value.

ADVICE-CENTERED VALUE CREATION

DIGITAL CAPABILITIES

WORKPLACE EXTENSIONS

RISK & INVESTMENT EXPERTISE

OUR PURPOSE

We're driven by our mission and values to promote financial, physical, and mental well-being; to make positive social and environmental contributions to communities through investments, sponsorships, donations, and volunteerism; to foster workplace diversity and inclusion; and to support the transition to a low-carbon economy.

OUR COMMITMENTS

Net Zero

- Net zero for operations well before 2050
- Net zero for financed emissions by 2050*
- Our goal is to develop and set responsible, science-based targets
- Immediate focus is to develop long-range plan with meaningful interim targets

Diversity, Equity & Inclusion

- Focus on developing and promoting DE&I in our workforce
- Employee Resource Groups for LGBTQ2+, black and persons of colour, Indigenous peoples, persons with disabilities, young professionals, and women in leadership
- Objective for at least 30 per cent female representation on our Board and senior management team

ESG Investing

- Inclusion of ESG information in investment analysis and decisions
- Established a global Sustainable Investment Council in 2019
- Signatories to the UN-supported Principles for Responsible Investment
- Recipient of Global Real Estate Sustainability Benchmark (GRESB) "Green Star" ratings

* Scope 3 financed GHG emissions related to Great-West Lifeco's General Account investment portfolio (invested assets)

2021 Directors' Report to Shareholders

Jeffrey Orr
Chair of the Board

Paul Mahon
President and Chief Executive Officer

We believe that to create sustainable value for shareholders, we must be committed to responding to the needs of all stakeholders. It's with this mindset that Great-West Lifeco and its operating companies continued their positive momentum and delivered strong results in 2021.

As the ongoing global pandemic has continued to impact the lives of so many people, the health and safety of our customers, communities, advisors, and employees has remained central to everything we do. We're proud to have had the opportunity to support them through the challenges and deliver on the promises we've made.

A COMMITMENT FOR A BETTER FUTURE

Over the past year, Great-West Lifeco has demonstrated its strength and resilience to succeed in a rapidly changing world. At the same time, we recognize that 2021 put a spotlight on societal challenges that require our collective actions.

These include the ongoing pandemic threatening both the health and economic well-being of so many people, the urgent need for climate action, and social injustices like the tragic legacy of residential schools in Canada and systemic racism present in many institutions and societies.

We recognize that we have a responsibility to our stakeholders to help address these challenges. We also recognize that by responding to these challenges, we will create a stronger and more resilient company. This begins by making values-based decisions on how we operate and impact our world. As part of this, we're thoughtfully developing and implementing strategies in support of the environment, diversity, equity & inclusion, and sustainability across our organization. This work enabled us to make a commitment to net zero greenhouse gas emissions by 2050.

OUR DIVERSIFICATION AND VALUE CREATION STRATEGY FOR GROWTH

During 2021, Great-West Lifeco delivered strong organic growth and deployed significant capital to strengthen and extend its diversified portfolio of companies. This growth and investment is enhancing our market leadership positions, strengthening our trusted brands, and creating greater resilience in support of future growth.

Core to our strategy are four value-creation priorities that represent areas of strength – Advice, Digital Capabilities, Workplace Relationships, and Risk & Investment Expertise. It's in these four areas where we've been investing to create shareholder value.

We believe that effective delivery of advice is key to creating lifetime value for our millions of customers. It's with this focus that we've been strengthening traditional advisor channels and extending our reach by acquiring and building new hybrid and digital advice channels.

Digitally enabled platforms, tools, and processes are core to our ability to meet the lifetime advice needs of our customers across all channels. The pandemic has accelerated a shift to digitally delivered service and digitally enabled advice across our businesses.

As a leading provider of workplace benefits and retirement solutions, we regularly connect with millions of customers through multiple service channels. Many of these customers represent under-advised segments of the market that are seeking more personalized guidance and advice around their financial, physical, and mental wellness. It is with this need in mind that we view the workplace as a platform to build digitally enabled lifetime customer relationships.

Core to our ability to deliver lifetime advice and solutions across multiple channels is our financial strength and expertise. We're employing our expertise in capital, risk, and investment management to create competitive and profitable wealth management and insurance solutions for our customers.

Several acquisitions this year have advanced these value-creation priorities and accelerated our growth. These include Empower's agreement to acquire Prudential Financial's full-service retirement business in the U.S., and the acquisitions of ClaimSecure in Canada through Canada Life and Ark Life in Ireland through Irish Life.

SHARING OUR GROWTH OBJECTIVES

In 2021, we announced for the first time medium-term financial objectives and are pleased to report our progress against them in this report.

We believe this approach provides greater insight into the value we have created and our growth ambitions as we deliver on our strategies.

Underpinning these objectives are the focused investments we've made to drive organic growth across our businesses, and the significant benefits we expect from capital deployed in acquisitions over the past two years.

LOOKING AHEAD

Moving into 2022, we remain focused on execution of our strategies to create greater value for all stakeholders. This will include continued discipline in deployment of capital and advancing our commitment to making a positive impact on the world around us, especially related to the environment, diversity, equity & inclusion, and sustainability.

Amid challenge and change, Great-West Lifeco is well-placed to deliver on our commitments to all stakeholders and create lasting value for shareholders. In business, and across our world, we can do more together.

THANK YOU

We'd like to extend our sincere thanks to our employees and advisors for their dedication, as well as to our customers and shareholders for your confidence in us. We're proud of the strong relationships we've built and look forward to delivering on our promises.

Jeffrey Orr
Chair of the Board

Paul Mahon
President and
Chief Executive Officer

Advice Centred Value Creation

Capturing value through advice-based wealth and insurance solutions

CONQUEST PLANNING PARTNERSHIP HELPS CLIENTS MEET GOALS

In 2021, Canada Life introduced new digital tools to make it easier for advisors to reach Canadians and provide them with great advice. We partnered with Conquest Planning to deliver a financial planning platform that empowers advisors to streamline the planning process and efficiently build plans to meet unique client goals. We also equipped approximately 3,000 advisors with CapIntel, an efficient sales enablement software that streamlines advisors' compliance activities, allowing them to maximize their time with clients. CapIntel is offered through Quadrus Investment Services Ltd.

EMPOWER RESEARCH DEBUNKS DEBATE OVER TDFs, MANAGED ACCOUNTS

A new analysis from Empower suggests investors don't have to choose between managed accounts and target date funds – rather, using the complementary strategies together can improve retirement savings outcomes. Study data was drawn from over two million participants in more than 17,000 workplace retirement plans. Research indicates including managed accounts in a plan significantly increases participation using professionally managed portfolios, which can lead to better savings outcomes.

FREE FINANCIAL WORKSHOPS AND RESEARCH EDUCATE CANADIANS

Working with CPA Canada, Canada Life launched a series of free, online financial literacy workshops aimed at school children. The materials developed for parents and teachers are geared to appeal to different youth age groups and cover savings and bank accounts; earning income and goal setting; credit cards and debt; and pet ownership. This material is needed, as suggested by a 10-question quiz testing Canadians' knowledge of general financial topics like saving, debt, investing and insurance. Despite two out of five Canadians claiming high confidence, the average grade on Canada Life's adult financial literacy quiz was 71 per cent.

EMPOWER'S PARTICIPANTS STUDY SHOWS ADVICE MATTERS FOR BETTER SAVINGS RATES

A study of 4 million 401(k) plan participants found people using a financial advisor feel more confident they're saving enough in their workplace retirement plans. Participants who received advice saw a 7.9 per cent higher savings rate and possessed more investing knowledge and comfort, too.

Digital Capabilities

Deliver advice and solutions through multiple digitally enabled channels

EMPOWER, PERSONAL CAPITAL PERSONALIZE A DIGITAL FINANCIAL WELLNESS EXPERIENCE

A new digital experience combines Empower and Personal Capital's technology and expertise to offer personalized financial wellness guidance and advice to over 12 million participants. The app and website illustrate a person's unique financial picture through an easy-to-read snapshot that tracks progress toward many goals, including saving for retirement, debt repayment, or establishing an emergency fund. Ultimately, it helps users better understand their current situation and future needs, while increasing their financial confidence.

CANADA LIFE GERMANY DEBUTS CRITICAL ILLNESS INSURANCE CALCULATOR

Advisors and clients can quickly and easily find the right critical illness insurance coverage for their needs thanks to Canada Life Germany's new online calculator. Along with the calculator, a new film educated audiences about critical illness' effect on financial well-being. Brokers also attended Canada Life Germany's virtual expert forum on income protection where they learned more about broadened coverage spanning more than 50 critical illnesses, in addition to another 25 illnesses.

IRISH LIFE HEALTH LAUNCHES DIGITAL COVERAGE TOOL

Nearly 5,000 Irish Life Health customers have put down the phone and clicked online instead to check their health insurance coverage. The new 'Am I Covered?' tool launched in September to help customers determine whether they're covered for a procedure or a medical specialist on their health insurance policy. It doesn't just increase customer convenience – it also reduces service costs, as approximately 40 per cent of inbound calls are related to coverage inquiries.

Workplace Extensions

Extend workplace participant relationships into lifetime customer relationships

EMPOWER AGREES TO ACQUIRE PRUDENTIAL FINANCIAL'S RETIREMENT BUSINESS

Empower's agreement to acquire Prudential Financial's full-service retirement business will help add expertise, capabilities, and an expanded product portfolio, and is expected to drive scale to benefit retirement investors and employer-sponsored workplace savings plans. The exciting transaction is expected to add over 4 million participants among thousands of workplace savings plans, as well as over $300 billion in assets.

claimsecure

CLAIMSECURE: GROWING DISTRIBUTION CAPABILITIES

Canada Life's acquisition of ClaimSecure, a leading health and dental claim management services provider, substantially increases its presence in a growing market segment. As a prominent player in the third-party administrator and third-party payor space, ClaimSecure allows Canada Life to extend products, plans, and solutions to new customers nationally. The transaction adds over $1.25 billion in annual claim payments and 1.5 million in total lives to Canada Life.

OFFERING SUPPORT THROUGH ONLINE THERAPY OPTIONS

Canada Life expanded their virtual health offering by adding Dialogue's internet-based cognitive behavioural therapy (iCBT) to all Canadian Consult+™ users this year. With iCBT, plan members can access self-led mental health support for mild to moderate depression and anxiety where and when they need it. The company was the first Canadian insurer to make Dialogue's Consult+™ virtual health care a standard benefit for all group health plans with up to 400 plan sponsors.

CANADA LIFE MAKES CANADIAN HISTORY

The largest group benefits contract in the history of the Canadian insurance industry goes to Canada Life for the Public Service Health Care Plan (PSHCP). The PSHCP is an important health care benefits plan for Canada and the Canadians who provide government services. Canada Life will care for an additional 1.5 million Canadians for a total of over 10 million group plan benefit participants under our portfolio. The contract terms span 12 years, and will be implemented July 1, 2023.

CANADA LIFE UK CONTINUES TO EXTEND WECARE

Canada Life UK group income protection customers were welcomed to the WeCare virtual services platform this year. Employees, whether insured or not, and their immediate family can access health and wellbeing services including physician and second opinion consultants, mental health support, and smoking, diet, and fitness counselling. WeCare supports over 40,000 users.

WeCare
by Teladoc Health

Risk and Investment Expertise

Leverage capabilities to enable and augment wealth and insurance solutions

PUTNAM GENERATES STRONG LONG-TERM INVESTMENT RESULTS

Putnam Investments generated strong long-term investment performance across asset classes relative to its peers in 2021. Highlights include:

90% of Putnam fund assets above Lipper median*

80% of Putnam assets in Lipper top quartile*

28 Putnam funds ranked 4 or 5 stars**

90% of Putnam equity funds assets ranked 4 or 5 star**

*over a 10 year period
**Morningstar industry research and ratings

CANADIAN OPEN PAR ACCOUNT INVESTMENT STRATEGY EVOLVES*

The Canadian Open par account investment strategy adjusted the target mix for assets backing liabilities to 70 per cent fixed income and 30 per cent non-fixed income, representing a shift of more than $2 billion dollars of assets. This includes increasing exposure to Canadian and U.S. real estate, along with U.S. public equity and private equity holdings. These changes help to increase asset class diversification and provide par policyowners exposure to alternative assets that are generally difficult for retail clients to invest in.

* The changes to the investment strategy also apply to Canada Life closed policies issued prior to demutualization on November 5th 1999

CANADA LIFE'S GLOBAL SEGREGATED FUNDS SEE PEAK PERFORMANCE

Investment research firm Morningstar ranked six of nine new Canada Life global segregated funds in the top two quartiles, as at the year ending May 31, 2021.

EXPANDING CRS SEGMENT'S GLOBAL FOOTPRINT

Capital and Risk Solutions' focus on creating new solutions for clients, and geographical diversification, continued with new transactions in Japan and Israel. The business segment also provided reinsurance covering mortality, longevity, health and lapse risks for insurers, reinsurers, and pension funds across the U.S., Europe, and the U.K. This demonstrates Capital and Risk Solutions' appeal as a partner for reinsurance transactions globally, leading to a continued strong business pipeline.

TAKING HOME IRISH PENSIONS AWARDS TROPHIES

For the second consecutive year, Irish Life Corporate Business won the Excellence in Defined Contribution award at the Irish Pensions Awards. Additionally, Irish Life Investment Managers took home the prestigious Risk Management Provider of the Year award.

CAPITAL AND RISK SOLUTIONS SUPPORT

The business segment paid over $800 million in reinsurance mortality claims to support U.S. families who have lost loved ones in the last year.

REINSURANCE DIVISION'S RANKINGS:

TOP 8
global reinsurer[1]

TOP 3
life reinsurer[1]

TOP 2
U.S. structured solutions[2]

[1] AM Best August 31, 2021 – Ranked by gross premium written 2020
[2] Financing/fee-based segment, NMG Consulting's 2021 US Structured Financial Solutions Study, covering individual and group life, health and annuities (bi-annual) Ranked by business capability index

Encouraging Sustainability

COMMITTING TO NET ZERO GREENHOUSE GAS EMISSIONS

Great-West Lifeco is committed to achieving net zero greenhouse gas emissions by 2050 for both operations and investments. Activities enabled through our loans, investments, and insurance underwriting offer opportunities to address climate change. That's why we've continuously increased the proportion of our general account investments for which we calculate financed emissions, while our asset management affiliates manage assets of over $189 billion in ESG-related strategies. Interim targets to reduce our emissions in line with climate science as part of our net zero journey will be announced in 2022.

EXPANDING SUSTAINABLE INVESTMENT OFFERINGS

2021 saw wealth offering expansions for Putnam Investments, PanAgora Asset Management, and Canada Life, respectively. In the U.S., Putnam launched its first actively managed ESG exchange-traded funds (ETFs). The new ETFs attractive features include intraday liquidity, tax efficiency and a competitive fee structure, all underpinned by rigorous fundamental research and advanced risk management techniques. PanAgora launched a Defensive Global Equity ESG Aware Fund. Meanwhile, in the Canadian marketplace, the new Canada Life Sustainable Portfolios elevated Canada Life's wealth presence and made it easier for customers to align their values and investments without sacrificing performance. Canada Life is also the first company to offer Sustainable Target Date Funds (TDFs), an important commitment given TDFs are often the default fund type under Group Defined Contribution plans. The three mutual fund portfolios provide access to investments diversified across asset classes, regions, and responsible investing strategies.

IRISH LIFE BEES

Irish Life's Dublin campus welcomed native Irish black bees, a subspecies of the European honeybee, to our rooftop in August. The first harvest produced almost 50 jars of honey.

U.K. HQ RECEIVES FITWEL® 2 STAR RATING

Canada Life UK's office in Hertfordshire was recognized for supporting occupant health and well-being, particularly in air and water quality, lighting, nature views, access to quiet spaces and healthy, responsibly sourced catering. Fitwel's building criteria includes over 55 evidence-based design and operational strategies in categories like building access, outdoor spaces and indoor environment, cafeterias and food retail, and emergency procedures.

ENGAGING INDUSTRY IN SUSTAINABLE FINANCE

Great-West Lifeco participated in Canada's Sustainable Finance Action Council (SFAC) plenary meetings and select subgroups in 2021. The SFAC helps lead the Canadian financial sector toward integrating sustainable finance into standard industry practice. SFAC has prioritized climate-related financial disclosure, recognizing the Government of Canada's commitment to the Task Force on Climate-Related Financial Disclosures (TCFD).

PHYSICAL CLIMATE RISK ASSESSMENT IN ACTION

Canada Life's subsidiary GWL Realty Advisors (GWLRA) strengthened its understanding of physical climate-related risks, which are expected to increase in frequency and magnitude over time, via risk exposure assessments. The review covered 20 natural and climate-related physical hazards across all portfolio assets and included climate change projections for 2045 and 2070 under three warming scenarios. Overall, GWLRA's managed portfolio's average score is classified as low risk when measured against its service provider's global benchmark.

COMMITTED TO SUSTAINABLE REAL ESTATE MANAGEMENT

In 2021, the Global Real Estate Sustainability Benchmark awarded 'Green Star' ratings to:

- Canada Life Asset Management's (U.K.) Property ACS and IA Funds
- Irish Life Investment Manager's Irish Life Pension Fund and Irish Residential Property Fund
- GWL Realty Advisors' Canadian Real Estate Investment Fund No. 1 and its managed portfolio.

U.N.-SUPPORTED PRINCIPLES FOR RESPONSIBLE INVESTMENT

- Irish Life Investment Managers
- Putnam Investments
- PanAgora Asset Management
- Setanta Asset Management

Advancing Focus on Diversity and Inclusion

FUNDING INNOVATIVE DIVERSITY LEADERSHIP INITIATIVES

A $250,000 gift from Canada Life helps Brescia University College launch diversity in leadership programming to address unconscious bias, organizational structure barriers for women and racialized individuals, and leadership challenges. The gift funds scholarships and bursaries for non-traditional students and also increases faculty and program development and research.

CREATING ACCESSIBILITY THROUGH INCLUSIVE DESIGN

Canada Life and GWLRA participated in the Rick Hansen Foundation's 'Buildings Without Barriers Challenge' to create accessible spaces for all through inclusive design. The London, Toronto, and Winnipeg head offices all attained Rick Hansen Foundation Accessibility Certification, and further site-level improvements will use the RHF Accessibility Certified certification as a guide to inform capital and operational planning.

PUTNAM/EMPOWER CFO NAMED AMONG TOP WOMEN LEADERS IN FINANCE

Women We Admire named Andra Bolotin, Putnam Investments' and Empower's Chief Financial Officer, one of the Top 100 Women Leaders in Finance in 2021. Andra joins a group of highly accomplished professionals recognized for their trailblazing achievements and determination to advance their industry and profession. Outstanding individual leadership, like Andra's, is a longstanding business hallmark and helps drive the firms' daily success.

Benefitting From Stable and Effective Governance

EFFECTIVE GOVERNANCE KEY TO CREATING VALUE

We understand that good corporate governance is important. Effective governance is key to creating consistently strong long-term performance and for developing positive outcomes for our shareholders, policyholders, customers, employees and for the communities in which we operate. Our Board of Directors, through its decision-making and oversight of management, leads our companies. Our sincere thanks go out to our Directors for their valuable contributions. At our 2021 Annual Meeting we announced the retirement of three of our long-standing directors: J. David A. Jackson, Jerome J. Selitto and James M. Singh. We thank Messrs. Jackson, Selitto and Singh for their years of dedicated service.

Supporting Our Communities

EMPOWER ASSOCIATES VOLUNTEER TIME THROUGH COMPANY GIVING PROGRAM

Empower's Associates Community Together (ACT) program brought employees together, in person and virtually, to volunteer with 15 non-profit organizations for the Denver Day of Service. Empower had the largest corporate participation in the event, which was sponsored by the Denver Broncos and Mile High United Way. Volunteer activities included packing meals, building homes, helping at the Children's Hospital Colorado, and serving breakfast to the unhoused. The ACT program offers employees 16 hours of paid time off to volunteer and matches donations up to US$5,000.

SUPPORTING GERMAN FLOOD EFFORTS & MAKING CHILDREN'S' WISHES COME TRUE

In July 2021 parts of Germany were hit by severe flooding. Canada Life Germany donated €1 million to victim support, distributed among aid organizations, while employees volunteered in relief efforts. Later in the year, employees helped children's Christmas wishes come true. Employees donated €15 per wish and organized nearly 400 presents in support of two children's villages, in addition to a special school impacted by flooding in Germany earlier this year.

BREAKING A COMPANY UNITED WAY DONATION RECORD

Canada Life's annual United Way Centraide workplace campaign brings people together to help create lasting impact where we live and work. In just under one month, the workplace campaign raised over $2 million. Combined with a corporate donation, the company contributed more than $3.7 million to United Ways across Canada – the largest donation in the company's history.

INTRODUCING THE NEW CANADA LIFE CENTRE

On July 1 – Canada Day – the home of the NHL team the Winnipeg Jets officially became the Canada Life Centre. The naming sponsorship strengthens the brand in the Canadian market and aligns with Canada Life and True North Sports + Entertainment's values. Connected by a shared sense of responsibility to give back and help build stronger communities, both companies are working together to bring awareness and support to a range of community events and programs.

COMMUNITY DONATIONS

Great-West Lifeco's companies donated over $14.8 million dollars and thousands of hours of volunteer work to stand up for local and global causes in 2021.

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, 2021 and includes a comparison to the corresponding periods in 2020, to the three months ended September 30, 2021, and to the Company's financial condition as at December 31, 2020, 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.

Businesses of Lifeco

Lifeco has operations in Canada, the United States (U.S.) and Europe through The Canada Life Assurance Company (Canada Life), Great-West Life & Annuity Insurance Company (GWL&A), 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) and national accounts, and Financial Horizons Group. 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. 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 employer-sponsored defined contribution plans, administrative and recordkeeping services, individual retirement accounts, fund management as well as investment and advisory services. This includes the retirement services business of Massachusetts Mutual Life Insurance Company (MassMutual) acquired on December 31, 2020. Personal Capital Corporation 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 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.

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. This 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.

Lifeco currently has no other material holdings and carries on no business or activities unrelated to its holdings in Canada Life, GWL&A, 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) 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, 2021.

Cautionary Note Regarding Forward-Looking Information

This MD&A may contain 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. These statements include, without limitation, statements about the Company's operations, business, financial condition, expected financial performance (including revenues, earnings or growth rates), ongoing business strategies or prospects, climate-related goals, 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 revenue and expense synergies of acquisitions and divestitures, including but not limited to the proposed acquisition of the full-service retirement business of Prudential Financial Inc. (Prudential) and the acquisitions of Personal Capital Corporation (Personal Capital) and the retirement services business of Massachusetts Mutual Life Insurance Company (MassMutual), the timing and completion of the proposed acquisition of the retirement business of Prudential, 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 expected benefits of the Company's strategic relationship with Sagard Holdings, the timing and completion of the joint venture between Allied Irish Banks plc 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 current 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 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. 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, 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 business of MassMutual and Prudential, the ability to leverage Empower's, Personal Capital's and 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. In addition, as we work to advance our climate goals, external factors outside of Lifeco's reasonable control may act as constraints on their achievement, including varying decarbonization efforts across economies, the need for thoughtful climate policies around the world, more and better data, reasonably supported methodologies, technological advancements, the evolution of consumer behavior, the challenges of balancing interim emissions goals with an orderly and just transition, and other significant considerations such as legal and regulatory obligations.

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 this MD&A under "Risk Management and Control Practices" and "Summary of Critical Accounting Estimates" and in the Company's annual information form dated February 9, 2022 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.

Cautionary Note Regarding Non-GAAP Financial Measures and Ratios

This MD&A contains some non-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", "effective income tax rate – base earnings – common shareholders "and "effective income tax rate – base earnings – total Lifeco". 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 Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	For the twelve months ended Dec. 31 2021	Dec. 31 2020
Earnings					
Base earnings [1]	$ **825**	$ 870	$ 741	$ **3,260**	$ 2,669
Net earnings – common shareholders	**765**	872	912	**3,128**	2,943
Per common share					
Basic:					
Base earnings [2]	**0.887**	0.934	0.799	**3.507**	2.878
Net earnings	**0.822**	0.938	0.983	**3.365**	3.173
Diluted net earnings	**0.820**	0.936	0.983	**3.360**	3.172
Dividends paid [3]	**0.490**	0.438	0.438	**1.804**	1.752
Book value [4]	**24.71**	24.40	22.97		
Base return on equity [2]	**14.6%**	14.5%	12.8%		
Return on equity [4]	**14.0%**	14.9%	14.1%		
Total net premiums	$ **12,989**	$ 14,921	$ 11,747	$ **52,813**	$ 43,019
Total premiums and deposits [1]	**47,654**	39,282	40,831	**168,803**	171,345
Fee and other income	**1,885**	1,858	1,569	**7,294**	5,902
Net policyholder benefits, dividends and experience refunds	**12,241**	10,915	9,916	**47,252**	38,159
Total assets per financial statements	$ **630,488**	$ 614,962	$ 600,490		
Proprietary mutual funds and institutional assets [4]	**377,155**	365,764	350,943		
Total assets under management [1]	**1,007,643**	980,726	951,433		
Other assets under administration [4]	**1,271,931**	1,213,074	1,024,414		
Total assets under administration [1]	**$2,279,574**	$2,193,800	$1,975,847		
Total equity	$ **30,483**	$ 30,232	$ 27,015		
The Canada Life Assurance Company consolidated LICAT Ratio [5]	**124%**	123%	129%		

(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) In 2021, Lifeco made dividend payments to common shareholders on each of March 31, June 30 and September 30 in the amount of $0.438 per share. On November 15, 2021, Lifeco announced an increase to the quarterly dividend of $0.052 per share. On December 31, 2021, Lifeco made a dividend payment to common shareholders in the amount of $0.490 per share.

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

(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 2021 Highlights

Financial Performance

- For the twelve months ended December 31, 2021, base earnings per common share were $3.507 compared to $2.878 a year ago, an increase of 22%, reflecting the strong performance of recent acquisitions as well as growth in all segments. For the twelve months ended December 31, 2021, base earnings of $3,260 million were up $591 million or 22% compared to 2020 base earnings of $2,669 million.
- For the twelve months ended December 31, 2021, net earnings per common share were $3.365, compared to $3.173 for the previous year, primarily reflecting growth in base earnings. In 2021, in addition to base earnings, Lifeco's net earnings included transaction costs of $189 million, compared to $78 million in 2020, related to acquisitions in the United States and Europe segments. 2021 net earnings also included $66 million of restructuring and integration costs, which is comparable to $67 million incurred in 2020. In 2020, net earnings also included a net gain of $94 million related to the sale of Irish Progressive Services International Limited (IPSI), a net gain of $143 million related to the sale of GLC Asset Management Group Ltd. (GLC) and restructuring and integration costs of $67 million related to the acquisitions of Personal Capital Corporation (Personal Capital) and the retirement services business of Massachusetts Mutual Life Insurance Company (MassMutual or MassMutual transaction) as well as strategic initiatives in the Canadian segment. In addition, 2020 net earnings include the positive impact of the revaluation of a deferred tax asset of $196 million as a result of higher expected U.S. segment earnings due to 2020 acquisitions.
- Recent acquisitions made in 2020 in the United States and Europe have performed well, resulting in pre-tax contingent consideration provisions of US$80 million and $14 million, respectively, recorded in 2021. These contingent consideration provisions are included within transaction costs related to acquisitions, which are excluded from base earnings.
- In November 2021, Lifeco announced an additional dividend of $0.052 per share for an increase of 12% to $0.490 per share. This additional dividend follows the announcement by the Office of the Superintendent of Financial Institutions (OSFI) on November 4, 2021 that it has withdrawn its expectation that all federally regulated financial institutions halt dividend increases.
- The Company maintained its strong capital position as evidenced by a Life Insurance Capital Adequacy Test (LICAT) Ratio at December 31, 2021 of 124% 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%.
- The Company's financial leverage ratio at December 31, 2021 was 33.2% compared to 33.8% in the previous year. The decrease was primarily due to retained earnings growth and repayment on the Company's committed line of credit related to GWL&A's acquisition of the retirement services business of MassMutual, partially offset by the impact of pre-financing a portion of planned acquisitions in 2022. As part of Lifeco's announcement on July 21, 2021, that its U.S. subsidiary, Empower, had reached a definitive agreement to acquire Prudential's full-service retirement business, Lifeco announced that the transaction was expected to be funded with a combination of Limited Recourse Capital Notes (LRCN Series 1), up to US$1.0 billion of short-term debt and existing resources. On August 16, 2021, Lifeco issued $1.5 billion (US$1.19 billion) LRCN Series 1.

Developments

Medium Term Financial Objectives

The Company introduced medium-term financial objectives during 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.

The Company has achieved or exceeded the objectives for the year ended December 31, 2021.

	1-Year	3-Year
Medium-Term Financial Objectives	**Base** (1)	**Base** (1)
8-10% base EPS growth per annum (1)	21.9%	13.4% CAGR
14-15% base ROE (1)	14.6%	13.6% average
Target dividend payout ratio 45-55% of base earnings (1)	51.4%	56.7% average
Net Financial Highlights	**Net**	**Net**
Net EPS growth per annum	6.1%	3.9% CAGR
Net ROE	14.0%	13.3% average
Dividend payout ratio (2)	53.6%	58.4% 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.

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

Strategic Highlights and Transactions

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

United States

On July 21, 2021, a Lifeco subsidiary, Great-West Life & Annuity Insurance Company (GWL&A), which operates primarily as 'Empower', announced a definitive agreement to acquire Prudential Financial, Inc.'s (Prudential) full-service retirement business. The acquisition will add significant scale and capabilities and further solidify Empower's position as the second largest retirement plan service provider in the United States and is expected to strengthen Empower's overall offering for participants and sponsors through additional expertise, an expanded product offering and new technology from Prudential. It also is expected to increase the synergy potential of Empower's 2020 acquisition of hybrid wealth manager, Personal Capital, across a larger combined business.

The total transaction value of US$3.55 billion includes purchase price consideration of US$1.12 billion, reinsurance ceding commission of US$0.33 billion and US$2.1 billion of required capital to support the business. The Company issued $1.5 billion (US$1.19 billion) of LRCN Series 1 on August 16, 2021 (see Capital Transactions below) and intends to fund the remaining purchase price with up to US$1.0 billion short-term debt and existing internal resources.

In the first quarter of 2021, the Company completed its acquisition of the retirement services business of Truist Bank, a former private-label recordkeeping client. This acquisition brings approximately 300 retirement plans, consisting of more than 73,000 plan participants.

Canada

On September 1, 2021, a Lifeco subsidiary, The Canada Life Assurance Company (Canada Life) completed the acquisition of ClaimSecure Inc., an industry-leading healthcare management firm that provides health and dental claim management services to private and public businesses in Canada.

Europe

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. The new life assurance company, which is expected to launch over the next twelve months, will offer AIB customers a range of life protection, pensions, savings and investment options enhanced by integrated digital solutions with continued access to qualified financial advisors. Once established, the existing distribution agreement between AIB and Irish Life will cease. The joint venture agreement is subject to customary regulatory approval and authorization processes.

On November 1, 2021, a Lifeco subsidiary, Irish Life Group Limited (Irish Life), completed the acquisition of Ark Life Assurance Company dac (Ark Life) from Phoenix Group Holdings plc for a total cash consideration of €230 million. The acquisition adds scale to Irish Life's retail division and enhances Irish Life's ability to provide customers with market-leading wealth and insurance solutions.

Lifeco

On November 19, 2021, the Company completed the sale of its United States-based subsidiaries, EverWest Real Estate Investors, LLC and EverWest Advisors, LLC (EverWest) to Sagard Holdings Inc. (Sagard), a wholly-owned subsidiary of Power Corporation, in exchange for a minority shareholding in Sagard's subsidiary, Sagard Holdings Management Inc. EverWest was a wholly-owned subsidiary of Canada Life and its principal activity is real estate investment management services. As part of the transaction, the Company has made a capital commitment of approximately US$500 million into certain Sagard strategies. The Company has also committed to investing a further approximately US$2 billion in real estate investments to support EverWest's future growth within Sagard.

Capital Transactions

The Company made payments of US$500 million in the third quarter of 2021 on its committed line of credit related to GWL&A's acquisition of the retirement services business of MassMutual on December 31, 2020, reducing the balance drawn on this line of credit to nil.

On August 16, 2021, the Company issued $1.5 billion aggregate principal amount 3.60% LRCN Series 1 (Subordinated Indebtedness) at par, maturing on December 31, 2081. The LRCN Series 1 bear interest at a fixed rate of 3.60% per annum payable semi-annually, up to but excluding December 31, 2026. On December 31, 2026 and every five years thereafter until December 31, 2076, the interest rate on the LRCN Series 1 will be reset at an interest rate equal to the five-year Government of Canada Yield as defined in the trust indenture governing the LRCN Series 1, plus 2.641%. Commencing November 30, 2026, the Company will have the option to redeem the LRCN Series 1 every five years during the period from November 30 to December 31, in whole or in part at par, together in each case with accrued and unpaid interest. The Company will be required to redeem the LRCN Series 1 in whole at par, together with accrued and unpaid interest, if GWL&A's acquisition of Prudential's full-service retirement business is terminated prior to, or has not closed on or prior to, May 3, 2022 (or such later date as extended pursuant to the acquisition agreement).

On October 8, 2021, the Company issued 8,000,000, 4.50% Non-Cumulative First Preferred Shares, Series Y at $25.00 per share for gross proceeds of $200 million. The shares are redeemable at the option of the Company on or after December 31, 2026 for $25.00 per share plus a premium if redeemed prior to December 31, 2030, in each case together with all declared and unpaid dividends up to but excluding the date of redemption.

The Company redeemed all of the outstanding 5.90% Non-Cumulative First Preferred Shares, Series F on December 31, 2021 at a redemption rate of $25.00 per share, for a total of $194 million, plus an amount equal to all declared and unpaid dividends, less any tax required to be deducted and withheld by the Company.

COVID-19 Pandemic Impacts

The COVID-19 pandemic continues to cause material disruption to businesses globally, resulting in continued economic pressures. While governments in different regions have moved to ease restrictions put in place, many factors continue to extend economic uncertainty, including but not limited to: the availability, adoption and uncertainty around the effectiveness of vaccines; the emergence of COVID-19 variants; and the extent and timing of related government and central bank actions.

The Company's financial outlook for 2022 will depend in part on the duration and intensity of the COVID-19 pandemic impacts as discussed above. The impact of the pandemic on mortality, longevity, disability and other claims experience in future periods remains uncertain and may differ by region and business line. The Company is actively monitoring and, to date, net impacts have been modest, reflecting the Company's diversified business. The Company continues to manage risks of changes to mortality and longevity rates by issuing a diversified range of insurance, annuity and fee income products along with using reinsurance and capital market solutions where appropriate.

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

Outlook for 2022

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

- Lifeco is continuing to focus on its core strategies: delivering financial security and wellness through the workplace, providing advice-centered wealth management, delivering strong investment and asset management and leveraging risk and capital management expertise. 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 2020 and 2021, the Company will continue to focus on completing and integrating acquisitions to enhance the customer experience and realize target synergies to maximize contributions to base and net earnings in 2022. This includes GWL&A's acquisition of Prudential's full-service retirement business expected to close in the first half of 2022.
- The Company will remain focused on future regulatory changes, including the implementation of accounting changes related to IFRS 17, *Insurance Contracts* and IFRS 9, *Financial Instruments.* The Company will continue executing on its global implementation plan during 2022 and will be compliant with these standards, which are effective on January 1, 2023 for the Company.
- 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 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. In its Individual Customer business, Canada Life will continue to advance on its strong advisor value proposition across all channels, ensuring the best tools and strategies are in place to drive long-term financial security for its customers. Operational resiliency and disciplined expense management will also be key to delivering strong financial results in 2022.
- In the U.S., the Company will focus on the successful closing of the acquisition of the full-service retirement business of Prudential Financial, Inc., which will add significant expertise, a broader set of capabilities and an expanded product portfolio to Empower and further solidify its position as the second largest player in the U.S. retirement market. The Company will also focus on the continued integration of Personal Capital and MassMutual, which are expected to generate further synergies in 2022 and provide new capabilities to better serve customers' financial needs and goals. At Putnam, efforts will continue to drive growth and market share through innovative product and service offerings, strong investment performance and enhanced brand recognition.
- In the U.K., the Company is focusing on the growing retirement market by developing solutions for individuals who require additional pension flexibility and expanding 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. 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 explore opportunities in new geographies where the Company's innovative reinsurance solutions can be deployed to support clients' evolving needs.

NET EARNINGS

Consolidated base earnings and net earnings of Lifeco include the base earnings and net earnings of Canada Life and its operating subsidiaries, GWL&A 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 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Base earnings (loss) (1)					
Canada	**$ 317**	$ 312	$ 348	**$ 1,220**	$ 1,206
United States	**156**	221	90	**671**	273
Europe	**213**	232	195	**830**	688
Capital and Risk Solutions	**145**	107	124	**547**	536
Lifeco Corporate	**(6)**	(2)	(16)	**(8)**	(34)
Lifeco base earnings (1)	**$ 825**	$ 870	$ 741	**$ 3,260**	$ 2,669
Items excluded from base earnings					
Actuarial assumption changes and other management actions (2)	**$ 23**	$ 69	$ (23)	**$ 134**	$ 113
Market-related impacts on liabilities (2)	**20**	47	(31)	**24**	(127)
Transaction costs related to acquisitions (3)	**(74)**	(90)	(47)	**(189)**	(78)
Restructuring and integration costs	**(15)**	(24)	(67)	**(66)**	(67)
Tax legislative changes impact on liabilities	**–**	–	–	**(21)**	–
Net gain/charge on business dispositions (4)	**(14)**	–	143	**(14)**	237
Revaluation of deferred tax asset	**–**	–	196	**–**	196
Items excluded from Lifeco base earnings	**$ (60)**	$ 2	$ 171	**$ (132)**	$ 274
Net earnings (loss) – common shareholders					
Canada	**$ 307**	$ 305	$ 300	**$ 1,187**	$ 1,070
United States	**92**	168	208	**499**	380
Europe	**239**	357	253	**976**	913
Capital and Risk Solutions	**133**	102	167	**532**	614
Lifeco Corporate	**(6)**	(60)	(16)	**(66)**	(34)
Lifeco net earnings – common shareholders	**$ 765**	$ 872	$ 912	**$ 3,128**	$ 2,943

(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. Included in the three and twelve months ended December 31, 2020 is a net gain of $143 million on the sale of GLC in the Canada Corporate business unit. Included in the twelve months ended December 31, 2020 is a net gain of $94 million related to the sale of IPSI in the Europe Ireland 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 2021 of $825 million ($0.887 per common share) increased by $84 million or 11% from $741 million ($0.799 per common share) a year ago. The increase was primarily due to MassMutual business related base earnings of $55 million (US$44 million), the impact of higher equity markets across all jurisdictions and business growth in the Capital and Risk Solutions segment. The Company acquired the retirement services business of MassMutual on December 31, 2020. The Company also had less adverse claims experience in the life business in the Capital and Risk Solutions segment as well as favourable morbidity experience in the Europe segment. These items were partially offset by less favourable morbidity experience in the Canada segment.

For the twelve months ended December 31, 2021, Lifeco's base earnings were $3,260 million ($3.507 per common share) compared to $2,669 million ($2.878 per common share) a year ago. The 22% increase was primarily due to MassMutual business related base earnings of $234 million (US$188 million) as well as the impact of higher equity markets across all jurisdictions and business growth in the Capital and Risk Solutions segment. The Company also had favourable investment and morbidity experience and a pension settlement gain in the Europe segment as well as favourable morbidity experience in the Canada segment. These items were partially offset by higher life mortality claims and a net loss estimate of $61 million after-tax primarily for estimated claims resulting from the impact of recent major weather events recorded in the third quarter of 2021 in the Capital and Risk Solutions segment.

Net earnings

Lifeco's net earnings for the three month period ended December 31, 2021 of $765 million ($0.822 per common share) decreased by $147 million or 16% compared to $912 million ($0.983 per common share) a year ago. The decrease was primarily due to the positive impact of the revaluation of a deferred tax asset of $196 million in the U.S. segment and a net gain of $143 million related to the sale of GLC recorded in the fourth quarter of 2020. The decrease was partially offset by an increase in base earnings, lower restructuring and integration costs in the Canada and U.S. segments as well as favourable market-related impacts on liabilities.

For the twelve months ended December 31, 2021, Lifeco's net earnings were $3,128 million ($3.365 per common share) compared to $2,943 million ($3.173 per common share) a year ago. The 6% increase was primarily due to an increase in base earnings and favourable market-related impacts on liabilities. The increase was partially offset by the positive impact in 2020 of the revaluation of a deferred tax asset and the net gain on the sale of GLC discussed in the in-quarter results, as well as a net gain of $94 million related to the sale of IPSI in the third quarter of 2020. In addition, the Company had higher transaction costs related to the MassMutual and Personal Capital acquisitions and a provision for payments relating to the Company's acquisition of The Canada Life Assurance Company.

Lifeco's net earnings for the three months period ended December 31, 2021 of $765 million ($0.822 per common share) decreased by $107 million or 12% compared to $872 million ($0.938 per common share) in the previous quarter. The decrease in net earnings was primarily due to less favourable actuarial assumption changes, higher expenses in the U.S. segment and less favourable market-related impacts on liabilities.

Actuarial Assumption Changes and Other Management Actions

For the three months ended December 31, 2021, actuarial assumption changes and other management actions resulted in a positive net earnings impact of $23 million. This compares to a negative impact of $23 million for the same quarter last year and a positive impact of $69 million for the previous quarter.

In Europe, net earnings were positively impacted by $46 million, primarily due to updated economic assumptions. In Canada, net earnings were negatively impacted by $13 million, primarily due to mortality updates. In Capital and Risk Solutions, net earnings were negatively impacted by $12 million, primarily due to updated assumptions for expenses. In the U.S., net earnings were positively impacted by $2 million, due to updated longevity assumptions.

For the twelve months ended December 31, 2021, actuarial assumption changes and other management actions resulted in a positive net earnings impact of $134 million, compared to positive $113 million for the same period in 2020. Effective October 15, 2021, the Canadian Actuarial Standards Board published revised standards for the valuation of insurance contract liabilities. The revised standards include decreases to ultimate reinvestment rates, revised calibration criteria for stochastic risk-free interest rates and an increase to the maximum net credit spread on reinvestment over the long term. The Company adopted these standard changes in the third quarter of 2021, which resulted in a negative net earnings impact of $33 million, which is included in the actuarial assumption changes and other management action for the twelve months ended December 31, 2021.

Market-Related Impacts

In the regions where the Company operates, average equity market indices for the three months ended December 31, 2021 were up by 29% in the U.S. (as measured by S&P 500), 25% in Canada (as measured by S&P TSX), 23% in broader Europe (as measured by EURO STOXX 50) and 17% in the U.K. (as measured by FTSE 100) compared to the same period in 2020. The major equity indices finished the fourth quarter of 2021 up 11% in the U.S., 6% in Canada, 6% in broader Europe and 4% in the U.K. compared to September 30, 2021. For the twelve months ended December 31, 2021, average equity market levels were higher in the U.S., Canada, the U.K. and broader Europe compared to the same period in 2020.

Market-related impacts on liabilities positively impacted net earnings by $20 million in the fourth quarter of 2021 (negative impact of $31 million in the fourth quarter of 2020), primarily reflecting updated cash flow projections for real estate which support insurance contract liabilities in Europe.

For the twelve months ended December 31, 2021, market-related impacts on liabilities positively impacted net earnings by $24 million (negative impact of $127 million in 2020). The 2021 year-to-date positive impact was primarily due to the same reasons discussed for the in-quarter results. While equity markets rebounded during the second to fourth quarters of 2020, the 2020 year-to-date negative impact reflects the significant decline and volatility in equity markets and interest rates in the first quarter of 2020, driven by the onset of the COVID-19 pandemic. This impacted the value of segregated fund and variable annuity guarantees, including related hedging ineffectiveness and was only partially recovered during 2020.

In countries where the Company operates, interest rates increased during 2021, which had an immaterial impact on net earnings. 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, including the impact of changes in fair values of bonds backing insurance contract liabilities recorded through profit or loss which was 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 consolidated financial statements for the period ended December 31, 2021.

Foreign Currency

The average currency translation rate for the fourth quarter of 2021 decreased for the U.S. dollar, the British pound and the euro compared to the fourth quarter of 2020. The overall impact of currency movement on the Company's net earnings for the three months ended December 31, 2021 was a decrease of $18 million (decrease of $68 million year-to-date) compared to translation rates a year ago.

From September 30, 2021 to December 31, 2021, the market rates at the end of the reporting period used to translate euro assets and liabilities to the Canadian dollar decreased, while the U.S. dollar and British pound were comparable. 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 $15 million in-quarter ($286 million net unrealized loss 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, 2021			For the twelve months ended December 31, 2021		
Canada	$ (2)	$ –	$ (2)	$ (11)	$ (1)	$ (12)
United States	–	–	–	–	(1)	(1)
Europe	–	3	3	(3)	(3)	(6)
Capital and Risk Solutions	–	–	–	–	(1)	(1)
Total	**$ (2)**	**$ 3**	**$ 1**	**$ (14)**	**$ (6)**	**$ (20)**
	For the three months ended December 31, 2020			For the twelve months ended December 31, 2020		
Total	$ (3)	$ –	$ (3)	$ (13)	$ (66)	$ (79)

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

As a result of the COVID-19 pandemic, many areas of the credit markets exhibited extreme volatility in March of 2020 with spreads widening in investment grade and high yield markets. However, since March 2020, credit spreads narrowed significantly. Some downgrades have been seen across industries from the rating agencies, particularly to issuers in sectors most affected by economic shutdowns or perceived deterioration in future business models. The Company experienced a smaller negative impact from rating changes during 2021 compared to a larger negative impact from downgrades in 2020. There could be a negative impact from downgrades in future periods if economies that are currently open are shut down or restricted due to a resurgence of COVID-19 cases.

In the fourth quarter of 2021, the Company experienced net charges on impaired investments, including dispositions, which negatively impacted common shareholders' net earnings by $2 million ($3 million net negative impact in the fourth quarter of 2020). 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 to provisions for future credit losses in insurance contract liabilities, which positively impacted common shareholders' net earnings by $3 million (negligible impact in the fourth quarter of 2020), primarily due to upgrades of various corporate and government bond holdings.

For the twelve months ended December 31, 2021, the Company experienced net charges on impaired investments, including dispositions, which negatively impacted common shareholders' net earnings by $14 million ($13 million net negative impact in 2020), primarily due to a commercial mortgage impairment. Separately, related to non-impaired invested assets, changes in credit ratings in the Company's fixed income portfolio resulted in a net increase in provisions for future credit losses in insurance contract liabilities, which negatively impacted common shareholders' net earnings by $6 million year-to-date ($66 million net negative impact in 2020), primarily due to net downgrades of various corporate bond holdings.

Income Taxes

The Company's effective income tax rate is generally lower than the statutory income tax rate of 26.50% due to benefits related to non-taxable investment income and lower income tax in foreign jurisdictions.

Effective income tax rate

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Base earnings – Common shareholders [1]	**9.4%**	9.6%	13.3%	**9.5%**	10.1%
Net earnings – Common shareholders	**9.8%**	8.4%	(20.4)%	**9.9%**	(0.9)%
Base earnings – Total Lifeco [1]	**3.7%**	10.9%	11.0%	**7.6%**	8.7%
Net earnings – Total Lifeco	**3.8%**	9.8%	(24.4)%	**7.9%**	(2.7)%

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

In the fourth quarter of 2021, the effective income tax rate on base earnings for the shareholder account of 9.4% was down from 13.3% in the fourth quarter of 2020, primarily due to changes in certain tax estimates. The effective income tax rate on base earnings for the total Company of 3.7%, was lower than 9.4% for the shareholder account, primarily due to non-taxable investment income attributable to the participating account.

In the fourth quarter of 2021, the Company had an overall effective income tax rate on net earnings of 3.8%, up from negative 24.4% in the fourth quarter of 2020. The increase was primarily due to the revaluation of a deferred tax asset related to losses in a U.S. subsidiary and non-taxable gains on the sale of shares of GLC in the fourth quarter of 2020, which resulted in a decrease in the effective income tax rate in the fourth quarter of 2020 by 31.7 points. Excluding the impact of these two items, the overall effective income tax rate for the fourth quarter of 2021 of 3.8% was down from 7.3% in the fourth quarter of 2020, primarily due to changes in certain tax estimates.

The Company had an effective income tax rate on base earnings of 7.6% for the twelve months ended December 31, 2021, down from 8.7% for the same period last year, primarily due to changes in certain tax estimates.

The Company had an overall effective income tax rate on net earnings of 7.9% for the twelve months ended December 31, 2021, up from negative 2.7% for the same period last year. The increase was primarily due to the impact in 2020 of the revaluation of the deferred tax asset discussed for the in-quarter results and the non-taxable gains on the sale of the shares of GLC and IPSI, which decreased the 2020 overall effective income tax rate by 8.5 points. Excluding the impact of these 2020 items, the overall effective income tax rate for the twelve months ended December 31, 2021 of 7.9% was up from 5.8% for the same period last year, primarily due to jurisdictional mix of earnings.

Refer to note 26 to the Company's consolidated financial statements for the period ended December 31, 2021 for further details.

Total Net Premiums, Premiums and Deposits and Sales

Total net premiums

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Canada	**$ 4,114**	$ 3,300	$ 3,628	**$ 13,900**	$ 13,188
United States	**611**	1,116	1,386	**4,518**	6,773
Europe	**1,042**	1,942	1,397	**4,862**	3,651
Capital and Risk Solutions	**7,222**	8,563	5,336	**29,533**	19,407
Total net premiums	**$ 12,989**	$ 14,921	$ 11,747	**$ 52,813**	$ 43,019

Premiums and deposits (1)

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Canada	**$ 7,918**	$ 6,945	$ 7,017	**$ 29,357**	$ 25,838
United States	**24,932**	16,269	20,582	**79,896**	93,479
Europe	**7,582**	7,505	7,896	**30,017**	32,621
Capital and Risk Solutions	**7,222**	8,563	5,336	**29,533**	19,407
Total premiums and deposits (1)	**$ 47,654**	$ 39,282	$ 40,831	**$ 168,803**	$ 171,345

Sales (2) (3)

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Canada	**$ 4,881**	$ 3,466	$ 3,729	**$ 16,425**	$ 12,271
United States	**40,104**	29,173	27,439	**204,584**	136,884
Europe	**6,493**	6,968	6,874	**26,613**	28,996
Total sales (3)	**$ 51,478**	$ 39,607	$ 38,042	**$ 247,622**	$ 178,151

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

(3) 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 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Investment income earned (net of investment properties expenses)	**$ 1,647**	$ 1,610	$ 1,380	**$ 6,481**	$ 5,664
Allowances for credit losses on loans and receivables	**(2)**	4	(6)	**(30)**	(16)
Net realized gains (losses)	**42**	32	220	**139**	466
Regular investment income	**1,687**	1,646	1,594	**6,590**	6,114
Investment expenses	**(50)**	(57)	(34)	**(197)**	(151)
Regular net investment income	**1,637**	1,589	1,560	**6,393**	5,963
Changes in fair value through profit or loss	**1,611**	(936)	1,984	**(2,083)**	5,699
Total net investment income	**$ 3,248**	$ 653	$ 3,544	**$ 4,310**	$ 11,662

Total net investment income in the fourth quarter of 2021 decreased by $296 million compared to the same quarter last year. The changes in fair value in the fourth quarter of 2021 were an increase of $1,611 million compared to $1,984 million for the fourth quarter of 2020. In the fourth quarter of 2021, the net increase to fair values was primarily due to an increase in Canadian equity markets and a decline in long duration Canadian bond yields. In the fourth quarter of 2020, 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 2021 of $1,637 million increased by $77 million compared to the same quarter last year. The increase was primarily due to income earned on bonds and mortgages acquired through the MassMutual transaction on December 31, 2020, partially offset by lower net realized gains. Net realized gains include gains on available-for-sale securities of $8 million for the fourth quarter of 2021 compared to $13 million for the same quarter last year.

For the twelve months ended December 31, 2021, total net investment income decreased by $7,352 million compared to the same period last year. The changes in fair value for the twelve month period in 2021 were a decrease of $2,083 million compared to an increase of $5,699 million during the same period in 2020. The changes in fair value were primarily due to an increase in bond yields across all geographies, partially offset by an increase in Canadian equity markets in 2021, compared to a decline in bond yields across all geographies in 2020.

Regular net investment income for the twelve months ended December 31, 2021 of $6,393 million increased by $430 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 include gains on available-for-sale securities of $27 million for the twelve months ended December 31, 2021 compared to $141 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 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Canada					
Segregated funds, mutual funds and other	**$ 452**	$ 457	$ 407	**$ 1,765**	$ 1,568
Administrative services only (ASO) contracts	**69**	52	54	**226**	188
	521	509	461	**1,991**	1,756
United States					
Segregated funds, mutual funds and other	**998**	995	754	**3,880**	2,769
Europe					
Segregated funds, mutual funds and other	**364**	352	351	**1,415**	1,366
Capital and Risk Solutions					
Reinsurance and other	**2**	2	3	**8**	11
Total fee and other income	**$ 1,885**	$ 1,858	$ 1,569	**$ 7,294**	$ 5,902

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 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Canada	**$ 2,522**	$ 2,486	$ 2,556	**$10,171**	$ 9,276
United States	**1,654**	1,344	1,072	**7,310**	5,028
Europe	**1,000**	947	1,003	**3,909**	3,948
Capital and Risk Solutions	**7,065**	6,138	5,285	**25,862**	19,907
Total	**$12,241**	$ 10,915	$ 9,916	**$47,252**	$ 38,159

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, 2021, net policyholder benefits, dividends and experience refunds were $12.2 billion, an increase of $2.3 billion from the same period in 2020 driven by higher net policyholder benefits. The increase in benefit payments was primarily due to new reinsurance agreements as well as volume changes relating to existing business in the Capital and Risk Solutions segment as well as higher surrender benefits in the U.S segment, driven by the acquisition of the MassMutual retirement services business.

For the twelve months ended December 31, 2021, net policyholder benefits, dividends and experience refunds were $47.3 billion, an increase of $9.1 billion from the same period in 2020 driven by higher net policyholder benefits. The increase in benefit payments was primarily due to the same reasons discussed for the in-quarter results as well as higher group insurance claims in the Canada segment.

Other Benefits And Expenses

Other benefits and expenses

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Operating and administrative expenses	**$ 1,688**	$ 1,557	$ 1,498	**$ 6,337**	$ 5,492
Commissions	**717**	631	657	**2,664**	2,396
Premium taxes	**134**	122	124	**500**	480
Amortization of finite life intangible assets and impairment reversal	**89**	82	63	**336**	238
Financing charges	**89**	83	79	**328**	284
Restructuring and integration expenses	**21**	32	134	**90**	134
Total	**$ 2,738**	$ 2,507	$ 2,555	**$10,255**	$ 9,024

Other benefits and expenses for the fourth quarter of 2021 of $2,738 million increased by $183 million compared to the fourth quarter of 2020. The increase was primarily due to higher operating and administrative expenses, driven by transaction costs related to acquisitions in the U.S. and Europe segments as well as MassMutual related expenses and higher commissions, driven by higher sales in the U.S. and Canada segments. The increase was partially offset by lower restructuring and integration expenses in the Canada and U.S. segments, driven by the after-tax impact of $68 million of a restructuring provision for strategic activities in Canada included in the fourth quarter of 2020 as well as lower restructuring and integration expenses related to the acquisitions of Personal Capital and MassMutual compared to the same quarter last year.

For the twelve months ended December 31, 2021, other benefits and expenses increased by $1,231 million to $10,255 million compared to the same period last year, primarily due to higher operating and administrative expenses driven by MassMutual and Personal Capital related expenses and by transaction costs related to acquisitions in the U.S. and Europe segments. In addition, commissions were higher compared to the same period last year driven by the same reasons discussed for the in-quarter results. Restructuring and integration expenses decreased compared to the same period last year, primarily due to the same reasons discussed for the in-quarter results.

Consolidated Financial Position

Assets

Assets under administration (1)

	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**
Proprietary mutual funds and institutional assets (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)	**17,597**	**1,241,974**	**12,360**	**–**	**1,271,931**
Total assets under administration (1)	**$ 227,321**	**$1,761,118**	**$ 273,739**	**$ 17,396**	**$2,279,574**

	December 31, 2020				
	Canada	United States	Europe	Capital and Risk Solutions	Total
Assets					
Invested assets	$ 87,732	$ 54,522	$ 50,793	$ 5,951	$ 198,998
Goodwill and intangible assets	5,625	5,729	3,037	–	14,391
Other assets	3,661	30,347	10,151	8,910	53,069
Investments on account of segregated fund policyholders	90,680	117,982	125,370	–	334,032
Total assets	187,698	208,580	189,351	14,861	600,490
Proprietary mutual funds and institutional assets (2)	7,311	284,251	59,381	–	350,943
Total assets under management (1)	195,009	492,831	248,732	14,861	951,433
Other assets under administration (2)	18,554	994,989	10,871	–	1,024,414
Total assets under administration (1)	$ 213,563	$1,487,820	$ 259,603	$ 14,861	$1,975,847

(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.

Total assets under administration (AUA) at December 31, 2021 increased by $303.7 billion to $2.3 trillion compared to December 31, 2020, primarily due to the impact of equity market movement and new business growth primarily with respect to other assets under administration, partially offset by the impact of currency movement.

During the fourth quarter of 2021, the Company completed its comprehensive valuation of the fair value of the net assets acquired from MassMutual and the purchase price allocation. For additional details on assets acquired through business acquisitions, refer to "Business Acquisitions and Other Transactions", note 3 in the Company's consolidated financial statements for the period ended December 31, 2021.

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

	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%**

	December 31, 2020					
	Canada	United States	Europe	Capital and Risk Solutions	Total	
Bonds						
Government & related	$ 23,014	$ 4,006	$ 20,300	$ 2,069	$ 49,389	25%
Corporate & other	30,926	34,332	19,648	3,297	88,203	44
Sub-total bonds	53,940	38,338	39,948	5,366	137,592	69
Mortgages	16,036	5,957	5,746	64	27,803	14
Stocks	10,125	448	427	–	11,000	6
Investment properties	3,626	6	2,638	–	6,270	3
Sub-total portfolio investments	83,727	44,749	48,759	5,430	182,665	92
Cash and cash equivalents	962	4,544	2,032	408	7,946	4
Loans to policyholders	3,043	5,229	2	113	8,387	4
Total invested assets	$ 87,732	$ 54,522	$ 50,793	$ 5,951	$ 198,998	100%

At December 31, 2021, total invested assets were $205.8 billion, an increase of $6.8 billion from December 31, 2020. The increase in invested assets was primarily due to stock market value increases and net purchases of bonds and stocks. 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 $140.6 billion or 68% of invested assets at December 31, 2021 compared to $137.6 billion or 69% at December 31, 2020. The increase in the bond portfolio was primarily due to net purchases, partially offset by a decline in fair values resulting from an increase in bond yields across all geographies. The increase in the Capital and Risk Solutions bond portfolio was primarily driven by new reinsurance agreements. The overall quality of the bond portfolio remained high, with 99% of the portfolio rated investment grade and 74% rated A or higher.

Bond credit ratings reflect bond rating agency activity up to December 31, 2021. Management continues to closely monitor bond rating agency activity and general market conditions as economies emerge from the pandemic.

Bond portfolio quality

	December 31, 2021		December 31, 2020	
AAA	**$ 20,254**	**14%**	$ 21,820	16%
AA	**35,460**	**25**	35,530	26
A	**48,764**	**35**	45,673	33
BBB	**35,098**	**25**	33,382	24
BB or lower	**1,036**	**1**	1,187	1
Total	**$ 140,612**	**100%**	$ 137,592	100%

At December 31, 2021, non-investment grade bonds were $1.0 billion or 0.7% of the bond portfolio compared to $1.2 billion or 0.9% of the bond portfolio at December 31, 2020.

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 both the Canada and Europe 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

	December 31, 2021				December 31, 2020	
	Insured (1)	**Non-insured**	**Total**		Total	
Mortgage loans by type						
Single family residential	**$ 476**	**$ 1,503**	**$ 1,979**	**7%**	$ 2,063	7%
Multi-family residential	**2,930**	**4,671**	**7,601**	**26**	7,353	27
Equity release	**–**	**2,609**	**2,609**	**9**	2,020	7
Commercial	**218**	**16,445**	**16,663**	**58**	16,367	59
Total	**$ 3,624**	**$ 25,228**	**$ 28,852**	**100%**	$ 27,803	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 $28.9 billion or 14% of invested assets at December 31, 2021, compared to $27.8 billion or 14% of invested assets at December 31, 2020. The increase in the mortgage portfolio was primarily due to originations of equity release mortgages. Total insured loans were $3.6 billion or 13% 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 31% (26% at December 31, 2020).

Commercial mortgages

	December 31, 2021				
	Canada	**U.S.**	**Europe**	**Capital and Risk Solutions**	**Total**
Retail & shopping centres	**$ 3,770**	**$ 521**	**$ 991**	**$ 2**	**$ 5,284**
Industrial	**3,126**	**1,430**	**617**	**30**	**5,203**
Office buildings	**2,088**	**1,282**	**1,209**	**18**	**4,597**
Other	**380**	**463**	**736**	**–**	**1,579**
Total	**$ 9,364**	**$ 3,696**	**$ 3,553**	**$ 50**	**$ 16,663**

	December 31, 2020				
	Canada	U.S.	Europe	Capital and Risk Solutions	Total
Retail & shopping centres	$ 3,799	$ 731	$ 1,116	$ 3	$ 5,649
Industrial	2,516	1,097	774	1	4,388
Office buildings	2,252	1,327	1,369	19	4,967
Other	316	505	542	–	1,363
Total	$ 8,883	$ 3,660	$ 3,801	$ 23	$ 16,367

Equity portfolio – The total equity portfolio was $21.9 billion or 11% of invested assets at December 31, 2021 compared to $17.3 billion or 9% of invested assets at December 31, 2020. The equity portfolio consists of publicly traded stocks, privately held stocks and investment properties. The increase in publicly traded stocks of $2.2 billion and the increase in privately held stocks of $1.0 billion were primarily due to purchases and market value increases. The increase in investment properties of $1.5 billion was mainly the result of property acquisitions and market value increases.

Equity portfolio

	December 31, 2021		December 31, 2020	
Equity portfolio by type				
Publicly traded stocks	$ 12,424	57%	$ 10,208	59%
Privately held stocks	1,759	8	792	5
Sub-total	14,183	65	11,000	64
Investment properties	7,763	35	6,270	36
Total	$ 21,946	100%	$ 17,270	100%

Investment properties (1)

	December 31, 2021				December 31, 2020			
	Canada	U.S.	Europe	Total	Canada	U.S.	Europe	Total
Industrial	$ 1,740	$ –	$ 1,009	$ 2,749	$ 861	$ –	$ 812	$ 1,673
Office buildings	1,384	–	626	2,010	1,328	–	637	1,965
Retail	227	–	848	1,075	198	–	814	1,012
Other	1,562	8	359	1,929	1,239	6	375	1,620
Total	$ 4,913	$ 8	$ 2,842	$ 7,763	$ 3,626	$ 6	$ 2,638	$ 6,270

(1) The Capital and Risk Solutions segment does not hold any investment properties.

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

Impaired investments

	December 31, 2021				December 31, 2020			
	Gross amount	Impairment recovery	Impairment provision	Carrying amount	Gross amount	Impairment recovery	Impairment provision	Carrying amount
Fair value through profit or loss	$ 18	$ 1	$ (5)	$ 14	$ 23	$ 2	$ (5)	$ 20
Available-for-sale	6	1	–	7	16	1	–	17
Loans and receivables	99	–	(28)	71	80	–	(57)	23
Total	$ 123	$ 2	$ (33)	$ 92	$ 119	$ 3	$ (62)	$ 60

The gross amount of impaired investments totaled $123 million or 0.1% of invested assets at December 31, 2021 compared to $119 million or 0.1% at December 31, 2020, a net increase of $4 million. The increase in impaired investments was primarily due to the impairment of a commercial mortgage, partly offset by the disposal of previously impaired commercial mortgages.

The impairment recovery at December 31, 2021 was $2 million, which reflects the improvement in market values of certain investments from the date at which they became impaired. The impairment provision at December 31, 2021 was $33 million compared to $62 million at December 31, 2020. The decrease was primarily due to the disposal of previously impaired commercial mortgages, partially offset by a commercial mortgage impairment. While the fair values have improved on certain impaired assets, these assets remain impaired based on other 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, 2021 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, 2021, the total actuarial provision for future credit losses in insurance contract liabilities was $3,271 million compared to $3,368 million at December 31, 2020, a decrease of $97 million, primarily due to interest rate movements, partially offset by normal business activity.

The aggregate of impairment provisions of $33 million ($62 million at December 31, 2020) and actuarial provisions for future credit losses in insurance contract liabilities of $3,271 million ($3,368 million at December 31, 2020) represents 1.8% of bond and mortgage assets, including funds held by ceding insurers, at December 31, 2021 (1.9% at December 31, 2020).

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 2021. 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, 2021, total financial collateral, including initial margin and overcollateralization, received on derivative assets was $318 million ($211 million at December 31, 2020) and pledged on derivative liabilities was $480 million ($560 million at December 31, 2020). Collateral received on derivatives assets increased and collateral pledged on derivative liabilities decreased, 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.

During the twelve month period ended December 31, 2021, the outstanding notional amount of derivative contracts increased by $6.5 billion to $36.6 billion, primarily due to regular hedging activities and increases to net investment hedges. During the twelve month period, the Company entered into net investment hedges, with notional amounts of €1 billion and £0.5 billion, to reduce the volatility of its Canadian dollar exposure to net investments in foreign operations in the Europe segment.

The Company's exposure to derivative counterparty credit risk, which reflects the current fair value of those instruments in a gain position, increased to $967 million at December 31, 2021 from $829 million at December 31, 2020. 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 2021 and all had investment grade ratings as of December 31, 2021. Refer to "Financial Instruments Risk Management", note 8 in the Company's December 31, 2021 annual consolidated financial statements for details of the Company's derivative counterparties' ratings.

Goodwill and Intangible Assets

Goodwill and intangible assets

	December 31	
	2021	2020
Goodwill	**$ 9,081**	$ 10,106
Indefinite life intangible assets	**2,786**	2,798
Finite life intangible assets	**2,728**	1,487
Total	**$14,595**	$ 14,391

The Company's goodwill and intangible assets relate primarily to its acquisitions of London Life, Canada Life, Putnam, Irish Life, Personal Capital and MassMutual. Goodwill and intangible assets of $14.6 billion at December 31, 2021 were comparable to December 31, 2020. Goodwill decreased by $1.0 billion and finite life intangible assets increased by $1.2 billion, primarily due to the recognition and measurement of finite life intangible assets related to the completion of the comprehensive evaluation of the fair value of the net assets acquired from MassMutual and the purchase price allocation.

IFRS principles require the Company to assess at the end of each reporting period whether there is any indication that an asset may be impaired and to perform an impairment test on goodwill and indefinite life intangible assets at least 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. Finite life intangible assets are reviewed annually to determine if there are indications of impairment and assess whether the amortization periods and methods are appropriate. In the fourth quarter of 2021, the Company conducted its annual impairment testing of goodwill and intangible assets based on September 30, 2021 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, 2021 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

	December 31	
	2021	2020
Reinsurance assets	**$ 21,138**	$ 22,121
Funds held by ceding insurers	**17,194**	18,383
Premiums in course of collection, accounts and interest receivable	**6,366**	6,102
Other assets	**4,522**	3,347
Deferred tax assets	**1,057**	975
Derivative financial instruments	**967**	829
Owner occupied properties	**736**	741
Fixed assets	**422**	426
Current income taxes	**268**	145
Total	**$ 52,670**	$ 53,069

Total other general fund assets at December 31, 2021 were $52.7 billion, a decrease of $0.4 billion from December 31, 2020. The decrease was primarily due to a decrease of $1.2 billion in funds held by ceding insurers and a decrease of $1.0 billion in reinsurance assets. The decrease was partially offset by an increase of $1.2 billion in other assets, driven by an increase in Putnam trading account assets.

Other assets comprise several items including prepaid expenses and accounts receivable. Refer to note 12 in the Company's December 31, 2021 annual consolidated financial statements for a breakdown of other assets.

Investments on Account of Segregated Fund Policyholders

Segregated funds

	December 31	
	2021	2020
Stock and units in unit trusts	**$134,568**	$112,675
Mutual funds	**133,916**	127,577
Bonds	**60,647**	65,338
Investment properties	**12,776**	12,430
Cash and other	**10,010**	11,836
Mortgage loans	**2,377**	2,686
Sub-total	**$354,294**	$332,542
Non-controlling mutual funds interest	**3,125**	1,490
Total	**$357,419**	$334,032

Investments on account of segregated fund policyholders, which are measured at fair value, increased by $23.4 billion to $357.4 billion at December 31, 2021 compared to December 31, 2020. The increase was primarily due to the combined impact of market value gains and investment income of $36.7 billion and $2.8 billion related to the Ark Life acquisition. The increase was partially offset by net withdrawals of $10.7 billion and the impact of currency movement of $7.1 billion.

Proprietary Mutual Funds and Institutional Assets (1)

Proprietary mutual funds and institutional assets

	December 31	
	2021	2020
Mutual funds		
Blend equity	**$ 22,334**	$ 23,478
Growth equity	**26,605**	23,523
Equity value	**30,479**	24,341
Fixed-income	**46,246**	52,009
Exchange Traded Funds	**58**	–
Money market	**199**	317
Empower Funds (2)	**57,749**	42,514
Sub-total	**$183,670**	$166,182
Institutional assets		
Equity	**$126,064**	$112,439
Fixed-income	**60,681**	63,681
Other	**6,740**	8,641
Sub-total	**$193,485**	$184,761
Total proprietary mutual funds and institutional assets	**$377,155**	$ 350,943

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

(2) At December 31, 2021, Empower funds exclude $24.9 billion of Putnam managed funds ($21.3 billion at December 31, 2020), which are included in the categories above.

At December 31, 2021, total proprietary mutual funds and institutional assets include $310.9 billion at Putnam and GWL&A, $60.5 billion at Irish Life and $5.7 billion at Canada Life Investment Management Ltd. (CLIML). Proprietary mutual funds and institutional assets under management increased by $26.2 billion, primarily due to market movement, partially offset by net cash outflows and the impact of currency movement. GWL&A includes proprietary mutual funds related to Empower including assets acquired in the Personal Capital and MassMutual transactions.

Liabilities

Total liabilities

	December 31	
	2021	2020
Insurance and investment contract liabilities	**$220,833**	$218,047
Other general fund liabilities	**21,753**	21,396
Investment and insurance contracts on account of segregated fund policyholders	**357,419**	334,032
Total	**$600,005**	$573,475

Total liabilities increased by $26.5 billion to $600.0 billion at December 31, 2021 from December 31, 2020.

Investment and insurance contracts on account of segregated fund policyholders increased by $23.4 billion, primarily due to the combined impact of market value gains and investment income of $36.7 billion and $2.8 billion related to the Ark Life acquisition, partially offset by net withdrawals of $10.7 billion and the impact of currency movement of $7.1 billion. Insurance and investment contract liabilities increased by $2.8 billion, primarily due to the impact of new business and the acquisition of Ark Life, partially offset by fair value adjustments, the impact of currency movement and normal business movements.

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

	Participating Account	Non-Participating Canada	United States	Europe	Capital and Risk Solutions	Total
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**
December 31, 2020						
Bonds	$ 27,768	$ 23,898	$ 31,631	$ 34,941	$ 2,365	$ 120,603
Mortgage loans	11,150	4,498	4,586	5,746	52	26,032
Stocks	6,227	2,789	46	332	–	9,394
Investment properties	2,992	360	–	2,536	–	5,888
Other assets [(1)]	10,127	3,904	29,440	4,533	8,126	56,130
Total	$ 58,264	$ 35,449	$ 65,703	$ 48,088	$ 10,543	$ 218,047
Total insurance and investment contract liabilities	$ 58,264	$ 35,449	$ 65,703	$ 48,088	$ 10,543	$ 218,047

(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. Reinsurance assets include assets recognized as a result of the indemnity reinsurance agreement with Protective Life Insurance Company (Protective Life).

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

	December 31 2021	2020
Debentures and other debt instruments	**$ 8,804**	$ 9,693
Other liabilities	**6,063**	5,147
Accounts payable	**3,032**	2,698
Funds held under reinsurance contracts	**1,542**	1,648
Deferred tax liabilities	**1,089**	646
Derivative financial instruments	**1,030**	1,221
Current income taxes	**193**	343
Total	**$ 21,753**	$ 21,396

Total other general fund liabilities at December 31, 2021 were $21.8 billion, an increase of $0.4 billion from December 31, 2020. The increase was primarily due to an increase of $0.9 billion in other liabilities and an increase of $0.4 billion in deferred tax liabilities, partially offset by a decrease of $0.9 billion in debentures and other debt instruments. The Company made payments of US$500 million in the third quarter of 2021 on its committed line of credit related to GWL&A's acquisition of the retirement services business of MassMutual on December 31, 2020, reducing the balance drawn on this line of credit to nil.

Other liabilities of $6.1 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, 2021 annual consolidated financial statements for a breakdown of the other liabilities balance and note 15 in the Company's December 31, 2021 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 offers group variable annuities with guaranteed minimum withdrawal benefits (GMWB) and group standalone GMDB products which mainly provide return of premium on death.

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.

London Reinsurance Group Inc. (LRG) 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, 2021, the amount of GMWB product in-force in Canada, the U.S., Ireland and Germany was $3,316 million ($3,375 million at December 31, 2020).

Segregated fund and variable annuity guarantee exposure

		December 31, 2021 Investment deficiency by benefit type			
	Market Value	Income	Maturity	Death	Total (1)
Canada	$ 36,808	$ –	$ 9	$ 18	$ 18
United States	21,521	2	–	21	23
Europe	11,645	2	–	732	732
Capital and Risk Solutions (2)	908	189	–	–	189
Total	**$ 70,882**	**$ 193**	**$ 9**	**$ 771**	**$ 962**

(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, 2021.

(2) Capital and Risk Solutions exposure is to markets in Canada and the U.S.

Investment deficiency at December 31, 2021 decreased by $355 million to $962 million compared to December 31, 2020, primarily due to increases in market values. 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, 2021 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 $3 million in-quarter (nil for the fourth quarter of 2020) and $10 million year-to-date ($20 million year-to-date for 2020), with the majority arising in the Capital and Risk Solutions segment related to a legacy block of business. The market value increased by $5,592 million to $70,882 million compared to December 31, 2020, primarily due to the year-to-date increase 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, 2021, debentures and other debt instruments decreased by $889 million to $8,804 million compared to December 31, 2020.

During 2021, the Company made payments of US$500 million on its committed line of credit related to GWL&A's acquisition of the retirement services business of MassMutual on December 31, 2020, reducing the balance drawn on its line of credit to nil.

Refer to note 15 in the Company's December 31, 2021 annual consolidated financial statements for further details of the Company's debentures and other debt instruments.

Capital Trust Securities

At December 31, 2021, 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, 2021 were CLiCS – Series B with a fair value of $53 million and principal value of $37 million (fair value of $55 million at December 31, 2020).

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, 2021 was $9,968 million, which comprises $5,748 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.

On August 16, 2021, the Company issued $1.5 billion aggregate principal amount 3.60% LRCN Series 1 (Subordinated Indebtedness) at par, maturing on December 31, 2081. The LRCN Series 1 bear interest at a fixed rate of 3.60% per annum payable semi-annually, up to but excluding December 31, 2026. On December, 2026, and every five years thereafter until December 31, 2076, the interest rate on the LRCN Series 1 will be reset at an interest rate equal to the five-year Government of Canada Yield as defined in the trust indenture governing the LRCN Series 1, plus 2.641%. Commencing November 30, 2026, the Company will have the option to redeem the LRCN Series 1 every five years during the period from November 30 to December 31, in whole or in part at par, together in each case with accrued and unpaid interest. The Company will be required to redeem the LRCN Series 1 in whole at par, together with accrued and unpaid interest, if GWL&A's acquisition of Prudential's full-service retirement business is terminated prior to, or has not closed on or prior to, May 3, 2022 (or such later date as extended pursuant to the acquisition agreement).

Common shares

At December 31, 2021, the Company had 930,620,338 common shares outstanding with a stated value of $5,748 million compared to 927,853,106 common shares with a stated value of $5,651 million at December 31, 2020.

The Company renewed its normal course issuer bid (NCIB) effective January 27, 2021 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, 2021, the Company did not purchase any common shares under the current NCIB (nil for the twelve months ended December 31, 2020, under the previous NCIB).

Subsequent to December 31, 2021, 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, 2022 and terminating January 26, 2023 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, 2021, 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.

On October 8, 2021, the Company issued 8,000,000 4.50% Non-Cumulative First Preferred Shares, Series Y at $25.00 per share for gross proceeds of $200 million. The shares are redeemable at the option of the Company on or after December 31, 2026 for $25.00 per share plus a premium if redeemed prior to December 31, 2030, in each case together with all declared and unpaid dividends up to but excluding the date of redemption.

On December 31, 2021, the Company redeemed all of its issued and outstanding 5.90% Non-Cumulative First Preferred Shares, Series F for $25.00 per share for a total of $194 million.

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

	Series G	Series H	Series I	Great-West Lifeco Inc. Series L	Series M	Series N	Series P
General Type	Fixed Rate	Fixed Rate	Fixed Rate	Fixed Rate	Fixed Rate	5-Year Rate Reset	Fixed Rate
Cumulative/Non-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	Feb 22, 2012
Shares Outstanding	12,000,000	12,000,000	12,000,000	6,800,000	6,000,000	10,000,000	10,000,000
Amount Outstanding (Par)	$300,000,000	$300,000,000	$300,000,000	$170,000,000	$150,000,000	$250,000,000	$250,000,000
Yield	5.20%	4.85%	4.50%	5.65%	5.80%	1.749%	5.40%
Earliest Issuer Redemption Date	Dec 31, 2009	Sep 30, 2010	Jun 30, 2011	Dec 31, 2014	Mar 31, 2015	Dec 31, 2020	March 31, 2017

	Series Q	Series R	Series S	Great-West Lifeco Inc. Series T	Series Y
General Type	Fixed Rate	Fixed Rate	Fixed Rate	Fixed Rate	Fixed Rate
Cumulative/Non-Cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative
Date Issued	Jul 6, 2012	Oct 11, 2012	May 22, 2014	May 18, 2017	Oct 8, 2021
Shares Outstanding	8,000,000	8,000,000	8,000,000	8,000,000	8,000,000
Amount Outstanding (Par)	$200,000,000	$200,000,000	$200,000,000	$200,000,000	$200,000,000
Yield	5.15%	4.80%	5.25%	5.15%	4.50%
Earliest Issuer Redemption Date	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, 2021 annual consolidated financial statements for further details of the Company's non-controlling interests.

Non-controlling interests

	December 31 2021	2020
Participating account surplus in subsidiaries:		
Canada Life	**$ 3,126**	$ 2,858
GWL&A	**12**	13
	$ 3,138	$ 2,871
Non-controlling interests in subsidiaries	**$ 129**	$ 116

At December 31, 2021, the carrying value of non-controlling interests increased by $280 million to $3,267 million compared to December 31, 2020. For the twelve months ended December 31, 2021, net earnings attributable to participating account before policyholder dividends were $1,708 million and policyholder dividends were $1,406 million.

LIQUIDITY AND CAPITAL MANAGEMENT AND ADEQUACY

LIQUIDITY

Total Liquid Assets

	December 31, 2021		
	On-balance sheet assets	Non-liquid/ Pledged	Net liquid assets
Cash and cash equivalents (1)	**$ 6,075**	**$ 32**	**$ 6,043**
Short-term bonds (2)	**5,671**	**1,923**	**3,748**
Cash, cash equivalents and short-term bonds	**$ 11,746**	**$ 1,955**	**$ 9,791**
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**
Other assets and marketable securities	**$ 177,976**	**$ 76,324**	**$ 101,652**
Total assets	**$ 189,722**	**$ 78,279**	**$ 111,443**

	December 31, 2020		
	On-balance sheet assets	Non-liquid/ Pledged	Net liquid assets
Cash and cash equivalents (1)	$ 7,946	$ 27	$ 7,919
Short-term bonds (2)	4,402	1,124	3,278
Cash, cash equivalents and short-term bonds	$ 12,348	$ 1,151	$ 11,197
Government bonds (2)	$ 46,099	$ 12,464	$ 33,635
Corporate bonds (2)	87,091	34,508	52,583
Stocks (1)	11,000	792	10,208
Mortgage loans (1)	27,803	24,018	3,785
Other assets and marketable securities	$ 171,993	$ 71,782	$ 100,211
Total assets	$ 184,341	$ 72,933	$ 111,408

(1) Refer to the consolidated balance sheet in the Company's December 31, 2021 annual consolidated financial statements for on-balance sheet amounts.
(2) Refer to note 8(ii) in the Company's December 31, 2021 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, 2021, the Company and its operating subsidiaries held liquid cash, cash equivalents and short-term bonds of $9.8 billion ($11.2 billion at December 31, 2020) and other liquid assets and marketable securities of $101.7 billion ($100.2 billion at December 31, 2020). Included in the cash, cash equivalents and short-term bonds at December 31, 2021 was $0.6 billion ($0.9 billion at December 31, 2020) 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. On November 4, 2021, OSFI withdrew its guidance provided in March 2020 at the outset of the COVID-19 pandemic that Canadian banks and insurers should suspend share buybacks and not increase dividend payments. In the U.K. and Ireland, where some of the Company's regulated subsidiaries operate, the regulatory authorities have maintained their guidance that insurance companies should exercise prudence in respect of dividend distributions, share buybacks and similar transactions, but at the end of the third quarter of 2021 the Irish regulator removed the temporary cap that it had also been applying to significant insurance companies such as Irish Life Assurance plc. Refer to "Risk Management – COVID-19 Pandemic Impact" section for additional discussion of the impact of the current environment.

Cash Flows

Cash flows

	For the three months ended December 31		For the twelve months ended December 31	
	2021	2020	**2021**	2020
Cash flows relating to the following activities:				
Operations	**$ 1,829**	$ 1,896	**$ 10,373**	$ 9,610
Financing	**(425)**	381	**(992)**	2,010
Investment	**(2,201)**	464	**(11,212)**	(8,202)
	(797)	2,741	**(1,831)**	3,418
Effects of changes in exchange rates on cash and cash equivalents	**(18)**	(167)	**(40)**	(100)
Increase (decrease) in cash and cash equivalents in the period	**(815)**	2,574	**(1,871)**	3,318
Cash and cash equivalents, beginning of period	**6,890**	5,372	**7,946**	4,628
Cash and cash equivalents, end of period	**$ 6,075**	$ 7,946	**$ 6,075**	$ 7,946

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 2021, cash and cash equivalents decreased by $815 million from September 30, 2021. Cash flows provided by operations during the fourth quarter of 2021 of $1,829 million were comparable to the fourth quarter of 2020. Cash flows used in financing were $425 million, primarily used for the payment of dividends to common and preferred shareholders of $491 million. For the three months ended December 31, 2021, cash flows were used by the Company to acquire an additional $2,201 million of investment assets.

For the twelve months ended December 31, 2021, cash and cash equivalents decreased by $1,871 million from December 31, 2020. Cash flows provided by operations were $10,373 million, an increase of $763 million compared to the same period in 2020. Cash flows used in financing of $992 million were primarily used for the payment of dividends to common and preferred shareholders of $1,811 million and a decrease in the line of credit of a subsidiary of $764 million, partially offset by the issuance of the LRCN Series 1 of $1,500 million. For the twelve months ended December 31, 2021, cash flows were used by the Company to acquire an additional $11,212 million of investment assets.

Commitments/Contractual Obligations

Commitments/contractual obligations

	Payments due by period						
At December 31, 2021	Total	1 year	2 years	3 years	4 years	5 years	Over 5 years
1) Debentures and other debt instruments	$ 8,529	$ –	$ 720	$ –	$ 635	$ 720	$ 6,454
2) Lease obligations	664	83	71	63	55	52	340
3) Purchase obligations	436	192	85	44	35	15	65
4) Credit-related arrangements							
(a) Contractual commitments	4,027	3,831	188	2	–	–	6
(b) Letters of credit	see note 4(b) below						
5) Pension contributions	306	306	–	–	–	–	–
Total contractual obligations	**$ 13,962**	**$ 4,412**	**$ 1,064**	**$ 109**	**$ 725**	**$ 787**	**$ 6,865**

(1) Refer to note 15 in the Company's December 31, 2021 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, 2021 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$1,904 million of which US$1,599 million were issued as of December 31, 2021. There are six primary facilities within Lifeco.

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$1,313 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$217 million has been issued to external parties. Clients residing in the United States are required pursuant to their insurance regulations 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 2022 are excluded due to the significant variability in the assumptions required to project the timing of future contributions.

Capital Management and Adequacy

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.

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.

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 range of the LICAT Ratio for Lifeco's major Canadian operating subsidiaries is 110% to 120% (on a consolidated basis).

Canada Life's consolidated LICAT Ratio at December 31, 2021 was 124% (129% at December 31, 2020). The LICAT Ratio does not take into account any impact from $0.6 billion of liquidity at the Lifeco holding company level at December 31, 2021 ($0.9 billion at December 31, 2020).

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

LICAT Ratio

	Dec. 31 2021	Dec. 31 2020
Tier 1 Capital	**$12,584**	$ 11,593
Tier 2 Capital	**4,417**	4,568
Total Available Capital	**17,001**	16,161
Surplus Allowance & Eligible Deposits	**13,225**	14,226
Total Capital Resources	**$30,226**	$ 30,387
Required Capital	**$24,323**	$ 23,607
Total Ratio (OSFI Supervisory Target = 100%) (1)	**124%**	129%

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

The LICAT Ratio increased one point in the quarter but decreased five points year-to-date. The phasing in of the impact of the LICAT interest rate scenario shifts in North America which occurred during 2020 and 2021 (described below) contributed three points of the year-to-date ratio decrease. The remainder of the year-to-date decrease in the LICAT Ratio was due to additional capital requirements arising from market movements and new business growth, partly offset by the favourable impact of net earnings.

GWL&A, 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, GWL&A's target RBC ratio may change as future risks and business needs change. GWL&A 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, 2021, GWL&A's RBC ratio is estimated to be well in excess of 400% as it includes prefunded capital consideration for the Prudential full-service retirement business acquisition expected to close in the first half of 2022.

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.

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, 2021. 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, 2021			
	20% increase	10% increase	10% decrease	20% decrease
Potential increase (decrease) on LICAT Ratio	(1 point)	0 points	1 point	(1 point)

Interest Rates

Canada Life's consolidated LICAT Ratio will generally increase in an environment of declining interest rates and vice-versa. Lower interest rates will increase the value of the Company's surplus assets and other regulatory capital resources. These sensitivity estimates are illustrative. Sensitivity to interest rates is dependent on many factors and may result in non-linear impacts to the LICAT Ratio. Actual movement in credit spreads or government treasury rates may produce different movements in Canada Life's consolidated 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, 2021	
	50 bps increase	50 bps decrease
Potential increase (decrease) on LICAT Ratio	(3 points)	3 points

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 change in the level and term structure of interest rates used can cause a shift in the interest rate scenario applied in the LICAT calculation. This results in a discontinuity where capital requirements can change materially. OSFI prescribes a smoothing calculation to address potential volatility in the interest rate risk capital requirement for participating insurance products. The smoothing calculation averages the participating interest rate risk requirements over the trailing six quarters, thereby reducing unwarranted volatility.

In the third quarter of 2020, the Company experienced a shift in the most adverse interest rate scenario in North America. The cumulative impact of the third quarter of 2020 scenario change was a decrease of approximately 5.5 points to the LICAT Ratio. The six quarter smoothing period is now complete. The Company experienced another shift in the interest rate scenario in North America during the current quarter. The net impact to the LICAT Ratio during the quarter for smoothing in the impact of this scenario shift and the third quarter of 2020 interest rate scenario shift was immaterial.

As a result of the scenario change this quarter, a smoothing of the impact of reduced requirements for participating interest rate risk will occur over the next five quarters. The Canada Life LICAT Ratio is expected to increase by approximately one point per quarter as a result of the smoothing calculation assuming the Company remains on the now current scenario.

OSFI Regulatory Capital Initiatives

OSFI issued an Advisory effective for January 1, 2021, which confirmed the interest rate risk smoothing calculation on participating insurance, and provided clarification of available capital for certain participating insurance blocks. The Advisory will remain in effect until January 1, 2023, when it will be subsequently incorporated into the LICAT guideline.

The International Accounting Standards Board (IASB) has issued IFRS 17, *Insurance Contracts*, which will replace IFRS 4, *Insurance Contracts* with an effective date of January 1, 2023. IFRS 17 includes new requirements for the recognition, measurement, presentation and disclosure of insurance contracts the Company issues and reinsurance contracts it holds. The new standard is expected to have a significant impact for insurers related to the timing of earnings recognition from insurance contracts and on the presentation and disclosure of results. Adoption of the standard is expected to lead to further review and possible amendments to the OSFI LICAT Guideline. Refer to the "Accounting Policies – International Financial Reporting Standards" section for further details.

During the quarter, the Company participated in the OSFI public consultation of its OSFI Quantitative Impact Study for IFRS 17, *Insurance Contracts* and IFRS 9, *Financial Instruments*. The Company will continue to work with OSFI, the Canadian Institute of Actuaries, and other industry participants, as OSFI finalizes the adaptations related to the IFRS 17 and IFRS 9 accounting standards for the 2023 LICAT Guideline. The Company will also work with OSFI in its developments relating to future Segregated Fund Guarantee Risk requirements.

RETURN ON EQUITY (ROE) (1)

Base Return on Equity (2)	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020
Canada	**17.2%**	17.3%	18.5%
U.S. Financial Services	**12.2%**	11.6%	8.6%
U.S. Asset Management (Putnam)	**5.3%**	4.7%	0.7%
Europe	**14.6%**	13.2%	11.8%
Capital and Risk Solutions	**33.7%**	33.9%	38.8%
Total Lifeco Base Earnings Basis (2)	**14.6%**	14.5%	12.8%

Return on Equity (1)	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020
Canada	**16.7%**	16.3%	16.4%
U.S. Financial Services	**8.7%**	7.7%	5.6%
U.S. Asset Management (Putnam)	**5.0%**	15.6%	11.6%
Europe	**17.2%**	16.1%	15.7%
Capital and Risk Solutions	**32.8%**	36.5%	44.4%
Total Lifeco Net Earnings Basis (1)	**14.0%**	14.9%	14.1%

(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 14.6% at December 31, 2021, compared to 14.5% at September 30, 2021 and 12.8% at December 31, 2020. The Company reported return on equity of 14.0% at December 31, 2021, compared to 14.9% at September 30, 2021 and 14.1% at December 31, 2020.

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 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 2021, the existing credit ratings for Lifeco and its major operating subsidiaries were unchanged. Lifeco also obtained three new subordinated debt ratings from DBRS Morningstar, Fitch Ratings, and S&P Global Ratings, for its LRCN Series 1 issued on August 16, 2021 (set out in table below). 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. 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.

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 benefits from the strong implicit financial support and collective ownership by Lifeco. There were no changes to the Company's group credit ratings in 2021.

Rating agency	Measurement	Lifeco	Canada Life	Irish Life	GWL&A
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-		

As part of Lifeco's announcement on July 21, 2021, that its U.S. subsidiary, Empower, had reached a definitive agreement to acquire Prudential's full-service retirement business, Lifeco announced that the transaction was expected to be funded with a combination of Limited Recourse Capital Notes, up to US$1.0 billion of short-term debt and existing resources. On August 16, 2021, Lifeco issued $1.5 billion (US$1.19 billion) LRCN Series 1. In addition, Lifeco noted that the short-term financing would facilitate leverage ratio reduction as the business generates meaningful earnings and cash.

Following the July 21, 2021 announcement, and having regard to the financing plan and its impact on leverage in the near-term, all five rating agencies affirmed the ratings as set out above. Four of the five agencies affirmed the rating outlook as stable; Fitch's rating outlook remains negative.

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, GWL&A (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 Financial Corporation 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 has been a focus over the past several years as the Company seeks to provide customized solutions to increasingly unique customer needs. Products to address the needs of mental health in the workplace, high cost medications, optional products purchased by plan members directly and wellness programs are examples of this focus. 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

- A leader in individual life insurance sales measured by new annualized premium with 17.3% market share [(1)]
- A significant provider of individual disability and critical illness insurance with 13.9% market share of new sales [(1)]
- An industry leader with 25.5% market share of individual segregated fund assets [(2)]

Products and Services

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
- Banking products

Distribution [(3) (4)]

Advisor Solutions
- 4,306 financial security advisors

Affiliated Partnerships
- 7,090 independent brokers associated with 32 MGAs
- 1,214 advisors associated with 14 national accounts
- 1,616 IG Wealth Management consultants who actively sell Canada Life products
- 84 direct brokers and producer groups

Financial Horizons Group [(5)]
- 5,300 independent brokers selling products from across the insurance industry, including Canada Life

Quadrus Investment Services Ltd.
(also included in Advisor Solutions advisor counts):
- 3,049 investment representatives

(1) Nine months ended September 30, 2021.
(2) As at November 30, 2021.
(3) As at December 31, 2021.
(4) Advisor Solutions includes all contracted advisors. Affiliated Partnerships and Financial Horizons Group include advisors who placed new business in 2021.
(5) Financial Horizons Group advisors that placed Canada Life business in 2021 are also included in the MGA independent broker count.

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

- Employee benefits to over 27,800 plan sponsors [(1)]
- 21% market share for employee benefit plans [(2)]
- Leading market share for creditor products with coverage provided to 7.0 million plan members [(1)]
- 19% market share of group capital accumulation plans [(2)]

Products and Services

Group Life & 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 & 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
- Dialogue™
- Best Doctors™
- Contact
- Individual Health

Distribution

- 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 24 offices across the country, including 112 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, 2021.
(2) As at December 31, 2020.

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 exclusive 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 exclusive 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 21%, which is supported by an extensive distribution network who have 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. Helping 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.

2021 Developments

- On December 1, 2021, Canada Life was awarded the Public Service Health Care Plan (PSHCP) in the largest sale in the history of the Canadian group benefit market. As a result, effective July 1, 2023, Group Customer will support the well-being of 1.5 million more Canadians, covering eligible public servants and their dependents from coast to coast. The Company expects to administer an estimated $26 billion in claims on behalf of the PSHCP over a 12-year contract. The PSHCP represents over 3% of the group benefit market.
- On September 1, 2021, Canada Life completed the acquisition of ClaimSecure Inc., an industry-leading healthcare management firm that provides health and dental claim management services to private and public businesses in Canada. The acquisition increases the number of plan members served by Canada Life by 1.25 million individuals, with annual claims payments of more than $1.2 billion.
- During 2021, Canada Life launched new funds that seek to invest in companies that demonstrate strong environmental, social and governance (ESG) practices:
  - Canada Life Sustainable Portfolios launched on September 20, 2021, gives investors access to investments diversified across asset classes, regions and responsible investing strategies.
  - Canada Life Sustainable Target Date Funds launched on December 7, 2021, gives plan sponsors and members sustainable investing options to help members meet their retirement savings goals. The funds are the first of their kind in the Canadian group plan marketplace and exclusive to Canada Life.
- During 2021, Canada Life launched new products and services to improve customer experience and help customers meet their financial and wellness objectives:
  - On December 2, 2021, Dialogue's internet-based cognitive behavioural therapy (iCBT) program was made available to all Consult+ users across Canada, allowing access to timely mental health support.
  - Canada Life began providing HumanisRx's MedCheckUp program to its customers who are receiving disability benefits and have complex or unique medication needs. Canada Life is the first national insurer to offer medication reviews for disability.
  - *My Term* launched on April 5, 2021, a new customizable product allowing customers to choose the coverage option that works for them.
- During 2021, Canada Life delivered new platforms to support advisors to build better businesses and serve more Canadians:
  - An innovative, digital financial planning platform, through a partnership with Conquest Planning Inc., which empowers its Advisor Solutions network to streamline the planning process and efficiently build plans to meet unique client goals.
  - An intuitive digital sales platform, through a partnership with CapIntel, which helps streamline advisors' compliance activities, allowing them to maximize their time with clients.
- On July 1, 2021, the home of the Winnipeg Jets and Manitoba Moose was officially renamed Canada Life Centre™. The 10-year sponsorship agreement with True North Sports + Entertainment gives Canada Life national brand and media exposure, as the arena typically hosts more than 140 events each year and is recognized as one of the premier sports and entertainment venues in North America.

Selected Financial Information – Canada

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Base earnings (loss) [1]					
Individual Customer	**$ 140**	$ 140	$ 132	**$ 580**	$ 552
Group Customer	**194**	168	205	**705**	677
Canada Corporate	**(17)**	4	11	**(65)**	(23)
Base earnings (loss) [1]	**$ 317**	$ 312	$ 348	**$ 1,220**	$ 1,206
Items excluded from base earnings					
Actuarial assumption changes and other management actions [2]	**$ (13)**	$ (11)	$ (147)	**$ (43)**	$ (194)
Market-related impacts on liabilities [2]	**3**	4	(10)	**10**	(51)
Net gain/charge on business dispositions [3]	**–**	–	143	**–**	143
Restructuring costs [3]	**–**	–	(34)	**–**	(34)
Net earnings	**$ 307**	$ 305	$ 300	**$ 1,187**	$ 1,070
Sales [2]					
Individual Insurance	**$ 120**	$ 93	$ 116	**$ 421**	$ 408
Individual Wealth	**3,274**	2,402	2,818	**11,468**	9,133
Group Insurance	**189**	101	111	**667**	414
Group Wealth	**1,298**	870	684	**3,869**	2,316
Sales [2]	**$ 4,881**	$ 3,466	$ 3,729	**$ 16,425**	$ 12,271
Wealth Management net cash flows [2]					
Individual Customer	**$ 332**	$ 447	$ 75	**$ 1,324**	$ 295
Group Customer	**(509)**	(241)	(76)	**(1,252)**	68
Wealth Management net cash flows [2]	**$ (177)**	$ 206	$ (1)	**$ 72**	$ 363
Fee and other income					
Individual Customer	**$ 292**	$ 296	$ 251	**$ 1,138**	$ 981
Group Customer	**217**	197	195	**794**	716
Canada Corporate	**12**	16	15	**59**	59
Fee and other income	**$ 521**	$ 509	$ 461	**$ 1,991**	$ 1,756
Total assets [4]	**$ 203,982**	$ 197,244	$ 187,698		
Proprietary mutual funds and institutional assets [2] [4]	**5,742**	5,534	7,311		
Total assets under management [1]	**209,724**	202,778	195,009		
Other assets under administration [2]	**17,597**	21,162	18,554		
Total assets under administration [1]	**$ 227,321**	$ 223,940	$ 213,563		

(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 net gain on the sale of GLC and restructuring costs are included in the Canada Corporate business unit.
(4) At December 31, 2021, proprietary mutual funds excluded $2.4 billion in funds accounted for as investments on account of segregated fund policyholders ($0.5 billion at December 31, 2020).

Base and net earnings

In the fourth quarter of 2021, Canada segment's net earnings of $307 million increased by $7 million compared to the same quarter last year. Base earnings of $317 million decreased by $31 million compared to the same quarter last year, primarily due to less favourable morbidity experience in Group Customer and the impact of changes to certain tax estimates.

Items excluded from base earnings were negative $10 million compared to negative $48 million for the same quarter last year. Actuarial assumption changes and management actions were negative $13 million compared to negative $147 million for the same quarter last year, which reflected the unfavourable impact of insurance contract liability basis changes in the fourth quarter of 2020. Market-related impacts were positive $3 million in the fourth quarter of 2021 compared to negative $10 million in the same quarter last year.

For the twelve months ended December 31, 2021, net earnings increased by $117 million to $1,187 million compared to the same period last year. Base earnings of $1,220 million increased by $14 million compared to the same period last year, primarily due to favourable morbidity experience in Group Customer, higher impact of new business and fee income. The increase was partially offset by the impact of lower surplus investment income on seed money and changes in certain tax estimates.

For the twelve months ended December 31, 2021, items excluded from base earnings were negative $33 million compared to negative $136 million for the same period last year. Actuarial assumption changes and management actions were negative $43 million compared to negative $194 million for the same period last year, primarily due to the same reason discussed for in-quarter results. Market-related impacts were positive $10 million compared to negative $51 million for the same period last year, which was impacted by equity market declines and volatility in the first quarter of 2020 on segregated fund guarantees and their related hedging ineffectiveness.

For the fourth quarter of 2021, the net loss attributable to the participating account was $25 million compared to net earnings of $9 million for the same quarter last year, primarily due to unfavourable contributions from insurance contract liability basis changes. The decrease was partially offset by restructuring costs of $18 million related to strategic initiatives included in participating account earnings for the fourth quarter of 2020.

For the twelve months ended December 31, 2021, net earnings attributable to the participating account were $304 million compared to $76 million for the same period last year, primarily due to favourable contributions from insurance contract liability basis changes, favourable impact of new business driven by higher insurance sales and the restructuring costs discussed for the in-quarter results. The increase was partially offset by lower contributions from investment experience on participating account surplus assets.

Sales

Sales for the fourth quarter of 2021 of $4.9 billion increased by $1.2 billion compared to the same quarter last year, primarily due to higher single premium group annuities, individual and group segregated fund sales as well as higher individual third party mutual fund sales.

For the twelve months ended December 31, 2021, sales increased by $4.2 billion to $16.4 billion compared to the same period last year, primarily due to higher individual and group segregated fund sales, large case group wealth and insurance sales in the first quarter of this year as well as higher individual mutual fund sales.

In the fourth quarter of 2021, wealth management net cash outflows were $177 million compared to $1 million for the same quarter last year. Net cash inflows for the twelve months ended December 31, 2021 were $72 million compared to $363 million for the same period last year.

Fee and other income

Fee and other income for the fourth quarter of 2021 of $521 million increased by $60 million compared to the same quarter last year. The increase was primarily due to higher Individual Customer and Group Customer fee income as a result of higher average assets under administration driven by higher average equity market levels.

For the twelve months ended December 31, 2021, fee and other income increased by $235 million to $1,991 million 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.

Individual Customer

The Individual Customer business unit delivered strong core business results in 2021. The new single brand and company provides efficiencies and focus that when added to the Company's reputation for strength and stability, prudent business practices and the depth and breadth of its distribution channels, positions the Company well for 2022 and beyond.

In 2022, 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. A key distribution strategy will be to 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 its 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 a number of 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 2021, Group Customer delivered strong business results and maintained its competitive position in the Canadian group market with 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.

The COVID-19 pandemic has impacted the overall Canada employment rate and this may impact employee attrition in existing Group plans; however, the impact to date has been limited. While uncertainty remains about the future of the economy, the supports that employers and Canada Life have put in place have helped preserve the critical benefits and savings programs for those on reduced working hours, temporary layoffs, or leaves of absences.

In 2022, 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 and artificial intelligence. Group Customer also plans to take advantage of being awarded the PSHCP 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 2022 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 take advantage of its member base by offering enhanced products that will be more readily available to its members. 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.

UNITED STATES

The United States segment operating results for Lifeco include the results of GWL&A (which operates primarily as '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 the Empower brand, the Company provides an array of financial security products, including employer-sponsored defined contribution plans, administrative and recordkeeping services, individual retirement accounts, fund management as well as investment and advisory services. This includes the retirement services business acquired from MassMutual on December 31, 2020. The Financial Services business unit also includes the results of Personal Capital, a hybrid wealth manager that provides financial tools and advice to individuals, following the completion of its acquisition in the third quarter of 2020. In addition, a retained block of life insurance, predominately participating policies, which are now administered by Protective Life, as well as a closed retrocession block of life insurance are also included in the Financial Services business unit.

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 plans, enrollment services, communication materials, investment options, education services, individual retirement accounts and taxable brokerage accounts. The Great-West Investments brand offers fund management, investment and advisory services. The Empower Institutional brand offers private label recordkeeping and administrative services for other providers of 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

FINANCIAL SERVICES

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

MARKET POSITION

- Second largest defined contribution service provider in the country [1] by participants providing services for 13.0 million participant accounts and approximately 67,000 plans [2]
- 19.9% market share in state and local government deferred compensation plans, based on number of participant accounts [3]
- Great-West Lifetime Funds are the 16th largest target date fund offering in the U.S.[2]

PRODUCTS AND SERVICES

- Employer-sponsored defined contribution plans, enrollment services, communication materials, investment options and education services
- Administrative and recordkeeping services for financial institutions and employer-sponsored defined contribution plans and associated defined benefit plans
- Fund management, investment and advisory services
- Individual retirement accounts (IRAs) and taxable brokerage accounts

DISTRIBUTION

- 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

(1) As at June 30, 2021.
(2) As at December 31, 2021.
(3) As at September 30, 2020.

Asset Management

Market Position
• A global investment manager with assets under management of US$202.5 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
Products and Services ***Investment Management Products & Services*** • Individual retail investors – a family of open-end mutual funds and closed-end funds, a line of actively-managed semi-transparent 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
Distribution ***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 135,000 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, 2021.

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.

2021 Developments

Financial Services Developments

- On July 21, 2021, Empower announced a definitive agreement to acquire the retirement services business of Prudential Financial, Inc. (Prudential), further strengthening Empower's leadership position as the second largest retirement plan service provider in the U.S. Empower will acquire the retirement services business of Prudential for a total value of approximately US$3.55 billion. The value includes purchase price consideration of US$1.12 billion, reinsurance ceding commission of US$0.33 billion and US$2.1 billion of required capital to support the business. The transaction is expected to close in the first half of 2022, subject to regulatory approval and other customary closing conditions.

  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. Revenue synergies of US$20 million are expected on a run-rate basis by the end of 2023 and are expected to grow to US$50 million by 2025.

  Empower expects to incur one-time integration and restructuring expenses of US$170 million pre-tax and transaction costs of approximately US$55 million pre-tax, US$1 million and US$7 million pre-tax of which were incurred in the fourth quarter of 2021 and in the twelve months ended December 31, 2021, respectively. The integration is expected to be completed 24 months following closing.

	For the three months ended		For the twelve months ended	Total incurred to date
(in US$ millions)	Dec. 31 2021	Sept. 30 2021	Dec. 31 2021	Dec. 31 2021
Transaction costs (pre-tax)	$ 1	$ 6	$ 7	$ 7
Transaction costs (post-tax)	1	5	6	6

- At December 31, 2021, GWL&A's RBC ratio is estimated to be well in excess of 400% as it includes prefunded capital consideration for the Prudential full-service retirement business acquisition expected to close in the first half of 2022.

- As of December 31, 2021, US$80 million of pre-tax run rate cost synergies have been achieved related to Empower's acquisition of MassMutual's retirement services business compared to US$60 million pre-tax as of September 30, 2021.

  Empower remains on track to achieve run rate cost synergies of US$160 million pre-tax at the end of integration in 2022 and to achieve run rate revenue synergies of US$30 million in 2022 and continue to grow beyond 2022.

  Empower expects to incur restructuring and integration expenses of US$125 million pre-tax related to the MassMutual transaction. The integration is expected to be completed in the second half of 2022.

	For the three months ended		For the twelve months ended	Total incurred to date
(in US$ millions)	Dec. 31 2021	Sept. 30 2021	Dec. 31 2021	Dec. 31 2021
Restructuring and integration (pre-tax)	$ 10	$ 19	$ 45	$ 74
Restructuring and integration (post-tax)	6	15	33	56
Transaction costs (pre-tax)	–	–	4	55
Transaction costs (post-tax)	–	–	4	44

- As a result of the acquisition of Personal Capital in the third quarter of 2020, Empower expects to incur total integration expenses of US$57 million pre-tax. The integration remains on track to be completed in the first half of 2022. Empower recognized pre-tax contingent consideration transaction expense of US$41 million in the fourth quarter of 2021 and US$80 million for the twelve months ended December 31, 2021 for a total contingent consideration provision of US$100 million, based on a higher best estimate of net new assets above the amount assumed in the purchase price. The maximum amount of contingent consideration related to this transaction is US$175 million

	For the three months ended		For the twelve months ended	Total incurred to date
(in US$ millions)	Dec. 31 2021	Sept. 30 2021	Dec. 31 2021	Dec. 31 2021
Restructuring and integration (pre-tax)	$ 7	$ 7	$ 23	$ 26
Restructuring and integration (post-tax)	6	5	17	19
Transaction costs (pre-tax)	41	22	80	102
Transaction costs (post-tax)	39	20	76	96

- Empower assets under administration (AUA) were US$1.1 trillion at December 31, 2021, up from US$958 billion at December 31, 2020. Empower participant accounts have grown to 13.0 million at December 31, 2021, up from 11.9 million at December 31, 2020. The increases in AUA and participants since December 31, 2020 were primarily driven by strong equity markets and large plan sales, including one sale with approximately 316,000 participants and US$49 billion in AUA in the first quarter of 2021.
- During 2021, the Company completed its acquisition of the retirement services business of Truist Bank, a former private-label recordkeeping client. This acquisition brings approximately 300 retirement plans consisting of more than 73,000 plan participants.
- During 2021, the Company received the following awards and rankings:
  - Empower led the defined contribution plan recordkeeper industry in growth by both participants and assets, based on a survey published by Pensions & Investments in April 2021. The Company solidified its position as the second largest defined contribution recordkeeper in the country, improving its market share to 12% by participants and 11% by assets.
  - On September 29, 2021, Financial Advisor IQ released their 2021 Service Awards in which more than 900 financial advisors were surveyed to identify the firms they consider to be leaders in the investment management business. Empower received the Gold Medal for best overall recordkeeper, best reporting, best client service, best price and best participant tools.
- Subsequent to the fourth quarter of 2021, on February 1, 2022, the Company announced a fresh brand identity aimed at simplifying how the organization connects with customers. The name "Empower" replaced "Empower Retirement" as U.S. Financial Services' public-facing brand name. The new mark is a positive development reflecting Empower's broadening stature and rapid growth.

Asset Management Developments

- Putnam's ending assets under management (AUM) at December 31, 2021 of US$202.5 billion increased by US$11.0 billion compared to the same period last year, while average AUM for the twelve months ended December 31, 2021 of US$198.1 billion increased by US$24.4 billion compared to the same period last year.
- Putnam continues to sustain strong investment performance relative to its peers. As of December 31, 2021, approximately 84% and 83% of Putnam's fund assets performed at levels above the Lipper median on a three-year and five-year basis, respectively. In addition, 50% and 37% of Putnam's fund assets were in the Lipper top quartile on a three-year and five-year basis, respectively. Putnam has 25 funds currently rated 4 or 5 stars by Morningstar Ratings.
- In March 2021, Putnam International Value Fund received a 2021 Refinitiv Lipper Fund Award for Best International Large-Cap Value Fund in the five-year and ten-year performance categories, recognizing the fund's superior risk-adjusted long-term investment results compared to its peers.
- On May 26, 2021, Putnam launched its first actively managed ETFs, which are based on four of its leading equity strategies. The new offerings represent Putnam's first ETF products, in addition to an array of current offerings including retail mutual funds, separately managed accounts, collective investment trusts, private funds and non-U.S. funds.
- In February 2021, Putnam hired an experienced team to build Putnam's collateralized loan obligation (CLO) business under the 37 Capital brand, which is applied to Putnam's alternative investment strategies. On November 18, 2021, Putnam closed its first CLO fund called 37 Capital CLO 1, a US$400+ million transaction. Putnam is actively investing for its second CLO transaction.
- For the 32nd consecutive year, Putnam has been recognized by DALBAR Inc. for mutual fund service quality. This recognition includes Putnam being named as a DALBAR Mutual Fund Service Award winner for 30 of those years. Additionally, Putnam has been named the sole recipient of DALBAR's Total Client Experience Award recognizing overall mutual fund customer service quality for the past eleven years.

Selected Financial Information – United States

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Base earnings (US$) (1)					
Financial services	**$ 110**	$ 149	$ 49	**$ 482**	$ 200
Asset Management (Putnam) Core (1)	**20**	24	37	**74**	51
Asset Management (Putnam) Non-core (1)	**15**	3	(11)	**2**	(37)
Total Asset Management (Putnam)	**$ 35**	$ 27	$ 26	**$ 76**	$ 14
U.S. Corporate	**(20)**	(2)	(7)	**(23)**	(9)
Base earnings (US$) (1)	**$ 125**	$ 174	$ 68	**$ 535**	$ 205
Items excluded from base earnings (US$)					
Actuarial assumption changes and other management actions (2)	**$ 1**	$ 4	$ 2	**$ 5**	$ 31
Market-related impact on liabilities (2)	**(1)**	(1)	(1)	**(3)**	(15)
Transaction costs related to acquisitions	**(40)**	(25)	(36)	**(86)**	(60)
Restructuring and integration costs	**(12)**	(20)	(25)	**(54)**	(25)
Revaluation of a deferred tax asset	**–**	–	151	**–**	151
Net earnings – common shareholders (US$)	**$ 73**	$ 132	$ 159	**$ 397**	$ 287
Net earnings – common shareholders (C$)	**$ 92**	$ 168	$ 208	**$ 499**	$ 380
Sales (US$) (2)					
Financial Services	**$ 17,994**	$ 14,363	$ 8,151	**$ 117,036**	$ 45,641
Asset Management (Putnam)	**13,835**	8,790	12,957	**45,419**	56,541
Sales (US$) (2)	**$ 31,829**	$ 23,153	$ 21,108	**$ 162,455**	$ 102,182
Sales (C$) (2)	**$ 40,104**	$ 29,173	$ 27,439	**$ 204,584**	$ 136,884
Fee and other income (US$)					
Financial Services	**$ 534**	$ 539	$ 329	**$ 2,103**	$ 1,171
Asset Management (Putnam)					
Investment management fees	**$ 175**	$ 175	$ 157	**$ 682**	$ 599
Performance fees	**9**	1	25	**12**	23
Service fees	**29**	29	28	**116**	111
Underwriting & distribution fees	**45**	45	42	**179**	166
Total Asset Management (Putnam)	**$ 258**	$ 250	$ 252	**$ 989**	$ 899
Fee and other income (US$)	**$ 792**	$ 789	$ 581	**$ 3,092**	$ 2,070
Fee and other income (C$)	**$ 998**	$ 995	$ 754	**$ 3,880**	$ 2,769
Total assets (US$)	**$ 163,946**	$ 163,878	$ 164,236		
Proprietary mutual funds and institutional assets (2)	**244,829**	235,067	223,820		
Total assets under management (1)	**408,775**	398,945	388,056		
Other assets under administration (2)	**977,932**	929,041	783,456		
Total assets under administration (US$) (1)	**$1,386,707**	$1,327,986	$1,171,512		
Total assets under administration (C$) (1)	**$1,761,118**	$1,686,542	$1,487,820		

(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 2021, the U.S. segment's net earnings of US$73 million decreased by US$86 million compared to the same quarter last year. Base earnings of US$125 million increased by US$57 million compared to the same quarter last year, primarily due to an increase of US$61 million in Financial Services and an increase of US$9 million in Putnam. The increase in Financial Services was primarily due to MassMutual related base earnings of US$44 million, growth in the legacy Empower business attributable to higher average equity markets, an increase in participants, as well as higher contributions from investment experience. The increase in Financial Services was partially offset by a Personal Capital related base loss of US$6 million. The increase in Putnam's results was primarily due to the favourable impact of certain tax items and higher AUM-based fee revenue, partially offset by lower net investment income and performance fee revenue as well as higher operating expenses.

Items excluded from base earnings for the fourth quarter of 2021 were negative US$52 million compared to positive US$91 million for the same quarter last year. The decrease was primarily related to the revaluation of a deferred tax asset of US$151 million in the fourth quarter of 2020 which had been de-recognized in the fourth quarter of 2019. Transaction costs related to acquisitions were US$40 million in the fourth quarter of 2021 and included US$39 million of additional contingent consideration expense related to the acquisition of Personal Capital based on a higher best estimate of net new assets above the amount assumed in the purchase price.

For the twelve months ended December 31, 2021, net earnings increased by US$110 million to US$397 million compared to the same period last year. Base earnings of US$535 million increased by US$330 million compared to the same period last year, primarily due to an increase of US$282 million in Financial Services and an increase of US$62 million in Putnam. The increase in Financial Services was primarily due to MassMutual related base earnings of US$188 million and the same reasons discussed for the in-quarter results, partially offset by a Personal Capital related base loss of US$28 million. The increase in Putnam's results was primarily due to higher AUM-based fee income and the favourable impact of certain tax items, partially offset by higher operating expenses as well as lower net investment income and performance fee revenue.

For the twelve months ended December 31, 2021, items excluded from base earnings decreased to negative US$138 million compared to positive US$82 million for the same period last year. The decrease was primarily related to the revaluation of a deferred tax asset in the prior year as discussed in the in-quarter results, higher restructuring and integration costs as well as lower contributions from insurance contract liability basis changes. Transaction costs related to acquisitions were US$86 million for the twelve months ended December 31, 2021 and included US$76 million of additional contingent consideration expense related to the acquisition of Personal Capital based on a higher best estimate of net new assets above the amount assumed in the purchase price.

Sales

Sales in the fourth quarter of 2021 of US$31.8 billion increased by US$10.7 billion compared to the same quarter last year. The increase was primarily due to an increase in Empower sales across all plan sizes, Personal Capital related sales and higher Putnam institutional sales, partially offset by lower Putnam mutual funds 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, 2021, sales increased by US$60.3 billion to US$162.5 billion compared to the same period last year, primarily due to an increase in Empower sales across all plan sizes and Personal Capital related sales, partially offset by lower Putnam mutual and institutional sales. Empower large plan sales for the first quarter of 2021 included one new client with approximately 316,000 participants.

Empower – assets under administration (US$)

	December 31	
	2021	2020
General account – fixed options	**$ 37,329**	$ 36,590
Segregated funds – variable options	**86,181**	87,578
Proprietary mutual funds (1)	**42,058**	50,232
Unaffiliated retail investment options & administrative services only	**977,932**	783,456
	$1,143,500	$ 957,856

(1) At December 31, 2021, proprietary mutual funds included US$19.6 billion in Putnam managed funds (US$16.8 billion at December 31, 2020).

Empower customer account values at December 31, 2021 of US$1.1 trillion increased by US$185.6 billion compared with December 31, 2020, primarily due to favourable equity market impacts and net cash inflows from unaffiliated retail investment options and administrative services only accounts.

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. Performance fee income for the Asset Management business varies based on seasonality.

Fee and other income for the fourth quarter of 2021 of US$792 million increased by US$211 million compared to the same quarter last year. The increase was primarily due to MassMutual related fee income of US$147 million as well as Empower higher average equity markets and growth in participants. Putnam fee and other income also increased by US$6 million, primarily due to higher investment management fees, partially offset by lower performance fee revenue.

For the twelve months ended December 31, 2021, fee and other income increased by US$1.0 billion to US$3.1 billion compared to the same period last year. The increase was primarily due to MassMutual related fee income of US$615 million and an increase in Personal Capital related fee income of US$104 million. In addition, Empower fee income and Putnam fee and other income increased compared to the same period last year driven by higher average equity markets.

Assets Under Management – Putnam

Assets under management (US$) (1)

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Beginning assets	**$ 196,887**	$ 198,571	$ 179,018	**$ 191,554**	$ 181,724
Sales – Mutual funds (1)	**5,206**	4,743	6,389	**22,343**	29,509
Redemptions – Mutual funds	**(6,812)**	(5,687)	(7,155)	**(26,605)**	(33,492)
Net asset flows – Mutual funds (1)	**(1,606)**	(944)	(766)	**(4,262)**	(3,983)
Sales – Institutional (1)	**8,629**	4,047	6,568	**23,076**	27,032
Redemptions – Institutional	**(7,063)**	(4,699)	(6,791)	**(26,109)**	(29,735)
Net asset flows – Institutional (1)	**1,566**	(652)	(223)	**(3,033)**	(2,703)
Net asset flows – Total (1)	**(40)**	(1,596)	(989)	**(7,295)**	(6,686)
Impact of market/performance	**5,685**	(88)	13,525	**18,273**	16,516
Ending assets	**$ 202,532**	$ 196,887	$ 191,554	**$ 202,532**	$ 191,554
Average AUM (1)					
Mutual funds	**98,425**	98,584	90,164	**97,155**	85,687
Institutional assets	**102,090**	102,021	95,261	**100,968**	88,065
Total average AUM (1)	**$ 200,515**	$ 200,605	$ 185,425	**$ 198,123**	$ 173,752

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

Putnam's average proprietary mutual funds and institutional assets for the three months ended December 31, 2021 were US$200.5 billion, an increase of US$15.1 billion or 8% compared to the same quarter last year, primarily due to strong equity markets. In-quarter mutual fund net asset outflows of US$1.6 billion were mostly offset by institutional net asset inflows of US$1.6 billion, compared to net asset outflows of US$1.0 billion for the same quarter last year.

Average proprietary mutual funds and institutional assets for the twelve months ended December 31, 2021 increased by US$24.4 billion to US$198.1 billion compared to the same period last year, primarily due to the same reason discussed for the in-quarter results. Net asset outflows for the twelve months ended December 31, 2021 were US$7.3 billion compared to US$6.7 billion for the same period last year.

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 closing of the acquisition of the full-service retirement business of Prudential Financial, Inc., expected to occur in the first half of 2022, will add 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 2022, 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 2021, significant progress was made on the integration of Personal Capital and MassMutual, which are expected to be completed in the first and second half of 2022, respectively. It is anticipated that Empower will realize further cost synergies through the continued migration of MassMutual's retirement services business onto Empower's recordkeeping platform. The Company also expects to begin realizing cost synergies related to the migration of Prudential's retirement services business in the second half of 2022.

In addition to the aforementioned 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 2022. 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 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.

In 2022, Putnam will continue to focus efforts on driving growth and market share through new sales and asset retention in all markets it serves 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 2022 as Putnam further develops and refines its product offerings, service features and operational functions, while bolstering its corporate and brand image with a broad range of constituents. Putnam continues to increasingly incorporate digital technology throughout its business to drive greater efficiencies and create business opportunities.

Putnam will remain focused on growth of revenues and assets in 2022, while also 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), individual protection and group insurance. These products are distributed through independent financial advisors and employee benefit consultants in the U.K. and Isle of Man.

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 employee benefits and wealth consultancy businesses in Ireland.

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 tied agents.

MARKET OVERVIEW

PRODUCTS AND SERVICES

EUROPE

MARKET POSITION

U.K.
- Group life market share 24% (1)
- Group income protection market share 16% (1)
- Payout annuities market share 16% (Advisor only) (2)
- A market leading international life company selling into the U.K. market, with over 15% market share (3)
- Among the top five in the onshore unit-linked single premium bond market, with 8% market share (Advisor only) (3)
- An award winning competitor in the equity release market, with 12% market share (4)

Ireland
- Life assurance company market share 34% (5)
- Retail life and pensions market share 26% (6)
- Group pensions, group risk and corporate annuities market share 45% (6)
- ILIM is one of the largest institutional fund managers in Ireland with €103 billion assets under management (7)
- Third largest health insurance business through Irish Life Health with a market share of 21% (8)

Germany
- 4% share of the broker market (7)

PRODUCTS AND SERVICES

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

EUROPE (CONT'D)

DISTRIBUTION

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 with various Irish banks

Germany
- Independent brokers
- Multi-tied agents

(1) As at December 31, 2020.
(2) Market share based on second quarter 2021 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, 2021.
(4) Equity Release Council market statistics for the fourth quarter of 2020 to the third quarter of 2021.
(5) As at October 31, 2021.
(6) As at June 30, 2021.
(7) As at December 31, 2021.
(8) As at September 30, 2021.

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 put Canada Life as one of the top investment bond providers in the U.K.

For individual annuities, the Company has benefited over 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 the greater pension flexibility introduced in recent years. 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. 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 market and demand from trustees remains strong. The market is expected to grow as pension plan funding improves and trustees consider ways to reduce risk. With expertise and experience in longevity and investment products, the Company is well placed to continue to grow its bulk annuity new business.

In international wealth management operations, the Company continued to focus efforts on increasing sales within the retail market while maintaining its strong presence in the institutional sector. 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.

IRELAND

The Company is the largest life assurance company in Ireland with a market share of ILA at 34% as at October 31, 2021. 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. It is expected that two of the smaller banks will exit from the Irish market in 2022.

Irish Life Investment Managers (ILIM) is one of Ireland's largest institutional fund managers with approximately €103 billion of assets under management, as at December 31, 2021. As a market leader in the domestic market, ILIM focuses on sustainability, specifically in the area of climate change, with the expansion of its sustainable solution range, the introduction of its Climate Action Pledge and becoming one of the first asset managers in Ireland to report in line with the Task Force on Climate-related Financial Disclosures (TCFD). ILIM's proprietary solutions all meet the new sustainability criteria including the Irish Life flagship product Multi Asset Portfolios (MAPS) which became the first flagship offering in Ireland to meet this new standard. ILIM continued to expand its real estate offerings and evolve its asset and liability management, liability-driven investments and bulk annuity services to large defined benefit pension schemes.

Setanta Asset Management had approximately €15 billion of assets under management as at December 31, 2021.

Irish Life Health brand has a top three position in the Irish market.

GERMANY

The Company has a leading position among providers of products to the German independent intermediary market. The Company is among the top six providers in the independent intermediary market through continuous product, technology and service improvements. The low interest rate environment for traditional German insurance products has been challenging leading to increased competition in the hybrid and lighter guarantee product categories that Canada Life offers.

2021 DEVELOPMENTS

- 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. The new life assurance company, which is expected to launch over the next twelve months, will offer AIB customers a range of life protection, pensions, savings and investment options enhanced by integrated digital solutions with continued access to qualified financial advisors. In the fourth quarter of 2021, the Company incurred transaction costs of $3 million related to this agreement. Once established, the existing distribution agreement between AIB and Irish Life will cease. The joint venture agreement is subject to customary regulatory approval and authorization processes.
- On November 1, 2021, Irish Life completed the previously announced acquisition of Ark Life Assurance Company dac (Ark Life) from Phoenix Group Holdings plc. for a total cash consideration of €230 million. Ark Life is closed to new business and manages a range of pensions, savings and protection policies for its customers in the Irish market.
- In the third quarter of 2021, Irish Life Investment Managers (ILIM) released a TCFD Report. The report illustrates ILIM's sustainable investment commitment, providing greater transparency to its stakeholders on key sustainability issues.
- During the fourth quarter of 2021, recurring annual premiums in the defined contribution (DC) group pension business line exceeded the €1 billion mark. In the same period, Irish Life won the Excellence in DC award for the second consecutive year at the 2021 Irish Pensions Awards.
- During the year, the Company's U.K. International Wealth business won the Best International Life Group – U.K. at the Global Financial Services Awards 2021 for the Company's commitment to the industry and a wide product range as well as recognition for quality and service.

Selected Financial Information – Europe

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Base earnings (loss) (1)					
United Kingdom	**$ 110**	$ 83	$ 96	**$ 366**	$ 334
Ireland	**67**	110	62	**288**	212
Germany	**41**	43	41	**196**	155
Europe Corporate	**(5)**	(4)	(4)	**(20)**	(13)
Base earnings (loss) (1)	**$ 213**	$ 232	$ 195	**$ 830**	$ 688
Items excluded from base earnings					
Actuarial assumption changes and other management actions (2)	**$ 46**	$ 81	$ 78	**$ 186**	$ 188
Market-related impacts on liabilities (2)	**18**	44	(20)	**19**	(57)
Transaction costs related to acquisitions	**(24)**	–	–	**(24)**	–
Tax legislative changes impact on liabilities	**–**	–	–	**(21)**	–
Net gain/charge on business dispositions	**(14)**	–	–	**(14)**	94
Net earnings – common shareholders	**$ 239**	$ 357	$ 253	**$ 976**	$ 913
Sales (2)					
Insurance	**$ 909**	$ 1,930	$ 1,078	**$ 4,202**	$ 2,651
Wealth Management	**5,584**	5,038	5,796	**22,411**	26,345
Sales (2)	**$ 6,493**	$ 6,968	$ 6,874	**$ 26,613**	$ 28,996
Wealth and investment only net cash flows (2)					
United Kingdom	**$ 42**	$ 109	$ (108)	**$ 348**	$ 178
Ireland	**1,354**	1,133	(1,282)	**3,085**	140
Germany	**266**	226	232	**925**	849
Wealth and investment only net cash flows (2)	**$ 1,662**	$ 1,468	$ (1,158)	**$ 4,358**	$ 1,167
Fee and other income					
United Kingdom	**$ 42**	$ 48	$ 43	**$ 175**	$ 168
Ireland	**200**	189	189	**772**	752
Germany	**122**	115	119	**468**	446
Fee and other income	**$ 364**	$ 352	$ 351	**$ 1,415**	$ 1,366
Total assets	**$ 200,899**	$ 191,878	$ 189,351		
Proprietary mutual funds and institutional assets (2)	**60,480**	61,695	59,381		
Total assets under management (1)	**261,379**	253,573	248,732		
Other assets under administration (2) (3)	**12,360**	12,030	10,871		
Total assets under administration (2)	**$ 273,739**	$ 265,603	$ 259,603		

(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, 2021, other assets under administration excludes $10.8 billion of assets managed for other business units within the Lifeco group of companies ($9.4 billion at September 30, 2021 and $7.4 billion at December 31, 2020).

Base and net earnings

In the fourth quarter of 2021, the Europe segment's net earnings of $239 million decreased by $14 million compared to the same quarter last year. Base earnings of $213 million increased by $18 million compared to the same quarter last year, primarily due to favourable morbidity experience and changes to certain tax estimates in the U.K. as well as fee income growth in Ireland. These items were partially offset by lower annuitant experience in the U.K., unfavourable mortality experience in Ireland and the impact of currency movement.

Items excluded from base earnings for the fourth quarter of 2021 were positive $26 million compared to positive $58 million for the same quarter last year. The decrease was primarily due to transaction costs and contingent consideration provisions related to recent acquisitions in Ireland, a net charge on business disposition in Corporate and lower contributions from actuarial assumption changes. These items were partially offset by growth in property market values.

For the twelve months ended December 31, 2021, net earnings increased by $63 million to $976 million compared to the same period last year. Base earnings of $830 million increased by $142 million compared to the same period last year. In the U.K., favourable investment and morbidity experience positively contributed to base earnings, partially offset by unfavourable changes to certain tax estimates. In Ireland, fee income growth, favourable morbidity experience and a pension settlement gain positively contributed to base earnings. The favourable impact of changes to certain tax estimates in Germany, resulting from the resolution of an outstanding issue with a foreign tax authority.

For the twelve months ended December 31, 2021, items excluded from base earnings decreased by $79 million to $146 million, primarily due to the same reasons discussed for the in-quarter results as well as the unfavourable impact of tax legislative changes on deferred tax liabilities in the second quarter of 2021 and a net gain on the sale of IPSI in the third quarter of 2020.

Sales

Sales for the fourth quarter of 2021 decreased by $0.4 billion to $6.5 billion compared to the same quarter last year, primarily due to lower fund management sales in Ireland, lower annuity sales in the U.K. and the impact of currency movement. These items were partially offset by growth in equity release mortgage sales in the U.K. and higher wealth management sales across all business units.

For the twelve months ended December 31, 2021, sales decreased by $2.4 billion to $26.6 billion compared to the same period last year, primarily due to lower fund management and wealth management sales in Ireland, and the impact of currency movement. These items were partially offset by higher annuity sales and growth in equity release mortgage sales in the U.K. as well as wealth management sales in both the U.K. and Germany.

In the fourth quarter of 2021, wealth and investment only net cash inflows were $1,662 million compared to net outflows of $1,158 million for the same quarter last year. The increase was primarily due to lower fund management outflows in Ireland. For the twelve months ended December 31, 2021, net cash inflows were $4,358 million compared to $1,167 million for the same period last year, primarily due to higher wealth management sales in the U.K. and Germany as well as lower Ireland outflows, partially offset by lower fund management sales in Ireland.

Fee and other income

Fee and other income for the fourth quarter of 2021 increased by $13 million to $364 million compared to the same quarter last year. The increase was primarily due to higher management fees on segregated fund assets in Ireland and Germany, partially offset by the impact of currency movement.

For the twelve months ended December 31, 2021, fee and other income increased by $49 million to $1,415 million compared to the same period last year, primarily due to the same reasons 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.

United Kingdom

The retail payout annuities market is expected to show modest growth in the medium to long-term. Individuals continue to have flexibility in accessing their savings in retirement. As expected, some individuals have chosen to remain invested in the market while drawing a 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 and the Company sees the opportunity to grow its payout annuity business in line with the expected growth in the overall retirement market.

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, pension consolidation and income drawdown. The Company will continue to develop products for individuals who require additional pension flexibility and will further develop its presence in the bulk annuity market where trustees of defined benefit schemes want to remove risk by insuring its pension liabilities near to or already in payment.

Canada Life continues to be a key player in the single premium investment bond marketplace. It will 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 an expectation that the market will recover from the COVID-19 pandemic and continue to grow. The majority of the Company's business growth is expected to be through discretionary fund management wealth advisors, the retail market and through tax and estate planning products.

The Group protection business maintained its position as a market leader and the Company believes that this market share position will facilitate continued growth in premium income. 2021 continued to see increased mortality claims from the COVID-19 pandemic, which were broadly balanced by increased annuitant mortality experience. That balance is expected to continue into 2022. In 2021, the Company did not see the anticipated levels of employment contraction arising from COVID-19 impact on the U.K. economy. The benefits covered in the group risk portfolio are expected to achieve moderate growth in 2022 with increased wage inflation.

Ireland

The Irish economy has performed extremely well during the pandemic, being one of only a handful of countries to experience positive GDP growth in 2021. Household net worth and deposits are at record levels and consumer confidence is recovering. Business sentiment readings have also risen sharply and are high in absolute and relative terms against global and European peers and are consistent with strong growth in the Irish economy. The multinational sector performed strongly, with record levels of employment creation.

Irish Life's vision to be "Ireland's home of Health and Wealth" continues to drive mergers and acquisitions, innovation and transformation initiatives in the Irish business unit. In 2022 the Company aims to consolidate its position in the wealth and employee benefits consulting markets following the acquisitions during 2020 and 2021. The Company 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 2021 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 relaunch of the Irish Life website and launch of WorkLife, a corporate wellness platform, has allowed Irish Life to further 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 as well as financial well-being. The Company's broadly diversified product portfolio, distribution channels and target market segments have helped it to adapt successfully to the challenges of the pandemic, and position it to benefit from the upturn in the Irish economy post-crisis.

Germany

The outlook for the German business continues to be positive and the Company expects growth in assets under management and its share of the market during 2022. Unit-linked products are expected to grow their market share, particularly as traditional guaranteed products become less attractive due to the increasing cost of guarantees and the impact of Solvency II on traditional insurance products. The Company has positioned itself to further strengthen its presence in the unit-linked market through continued 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. The Company is also focused on ensuring that its strong record of legal and regulatory compliance continues, including response to new regulatory requirements in respect of corporate governance standards, risk management and consumer protection.

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 GWL&A. 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

- 8th largest reinsurer worldwide by premium volume (1)
- 3rd largest life reinsurer worldwide by premium volume (1)
- Leading provider of structured reinsurance solutions in the U.S. and Europe market
- Leading provider of U.K. and European longevity reinsurance
- Ranked 7th for traditional mortality reinsurance in the U.S. (1)
- Long-standing provider of a range of property and casualty catastrophe retrocession coverages

Products and Services

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

Distribution

- Independent reinsurance brokers
- Direct placements

(1) As at December 31, 2020.

Competitive Conditions

Reinsurance

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 capital management transactions that produce capital benefits continues to grow. Demand for longevity reinsurance remains strong in the U.K., the Netherlands and some other continental European countries. As a result, there are now more reinsurers participating in this market.

2021 Developments

- The Company offers property catastrophe coverage to reinsurance companies and as a result the Company is exposed to claims arising from major weather events and other catastrophic events. The Company has been closely following a number of such events which have caused a high level of insured losses. Included in the Company's net earnings for the third quarter of 2021 were net losses of $61 million, 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. The Company's loss estimate may change as additional information becomes available.
- During 2021, the Company entered into the following long-term reinsurance agreements:
  - Two long-term reinsurance agreements in Japan, which cover blocks of in-force whole life policies. In exchange for a single upfront premium payment, Canada Life will pay the actual benefit obligations incurred under the respective agreements.
  - A longevity reinsurance agreement with an insurance company in the Netherlands, which covers approximately €4.7 billion of pension liabilities and approximately 104,500 in-payment and deferred policies. In exchange for ongoing premium payments, Canada Life will pay the actual benefit obligations incurred by the insurance company.
  - Two longevity reinsurance agreements with insurance companies in the U.K, which cover over £600 million of pension liabilities and over 3,000 in-payment and deferred policies. In exchange for ongoing premium payments, Canada Life will pay the actual benefit obligations incurred by the insurance companies.

Selected Financial Information – Capital and Risk Solutions

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Base earnings (loss) (1)					
Reinsurance	**$ 147**	$ 108	$ 124	**$ 552**	$ 539
Capital and Risk Solutions Corporate	**(2)**	(1)	–	**(5)**	(3)
Base earnings (loss) (1)	**$ 145**	$ 107	$ 124	**$ 547**	$ 536
Items excluded from base earnings					
Actuarial assumption changes and other management actions (2)	**(12)**	(5)	43	**(15)**	78
Net earnings – common shareholders	**$ 133**	$ 102	$ 167	**$ 532**	$ 614
Total net premiums					
Reinsurance	**$ 7,216**	$ 8,558	$ 5,330	**$ 29,514**	$ 19,385
Capital and Risk Solutions Corporate	**6**	5	6	**19**	22
Total net premiums	**$ 7,222**	$ 8,563	$ 5,336	**$ 29,533**	$ 19,407
Total assets (3)	**$ 17,396**	$ 17,715	$ 14,861		

(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 2021, the Capital and Risk Solutions segment's net earnings of $133 million decreased by $34 million compared to the same quarter last year. Base earnings of $145 million increased by $21 million compared to the same quarter last year, primarily due to growth in business in-force, changes in certain tax estimates and less adverse claims experience in the life business. The increase was partially offset by less favourable longevity experience.

Items excluded from base earnings were negative $12 million compared to positive $43 million for the same quarter last year. The fourth quarter of 2020 included positive contributions from insurance contract liability basis changes.

For the twelve months ended December 31, 2021, net earnings decreased by $82 million to $532 million compared to the same period last year. Base earnings of $547 million increased by $11 million compared to the same period last year. Base earnings for the twelve months ended December 31, 2021 included a loss estimate of $61 million after-tax for estimated claims resulting from the impact of recent major weather events recorded in the third quarter of 2021. Excluding this estimated loss, base earnings increased by $72 million compared to the same period last year, primarily due to favourable impacts from new business, higher business volumes and changes in certain tax estimates. The increase was partially offset by unfavourable claims experience in the U.S. life business and less favourable longevity experience.

For the twelve months ended December 31, 2021, items excluded from base earnings decreased by $93 million to negative $15 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 2021 of $7.2 billion increased by $1.9 billion compared to the same quarter last year, primarily due to new and restructured reinsurance agreements.

For the twelve months ended December 31, 2021, total net premiums increased by $10.1 billion to $29.5 billion compared to the same period last year, primarily due to the same reasons discussed for in-quarter results. The reinsurance agreements entered into in Japan contributed $4.3 billion to the increase.

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.

Reinsurance

In the U.S. traditional life reinsurance market, the COVID-19 pandemic remains a significant headwind and the Company is taking a cautious approach to new business and reviewing the pricing of existing business.

The U.S. health individual market has grown in the last few years with the implementation of the Affordable Care Act, which has created additional opportunities for reinsurance.

In Europe, low interest rates and the associated financial impact on reserve and capital positions under Solvency II is a key market dynamic. 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 2022.

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 2022.

2021 was the fifth consecutive year of significant hurricane and flood events. The Company expects 2022 retrocessional pricing to continue to increase. Insurance linked securities capacity has decreased due to trapped collateral from 2017 to 2021 events, together with a lower appetite for these risks. The Company's primary focus in the property catastrophe market for 2022 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 2021, Lifeco Corporate had a net loss of $6 million compared to $16 million for the same period last year, primarily due to higher investment income as well as lower operating expenses. There were no differences between net earnings (loss) and base earnings (loss) for the fourth quarter of 2021 and 2020.

For the twelve months ended December 31, 2021, Lifeco Corporate's net loss was $66 million compared to $34 million for the same period last year. The base loss of $8 million decreased by $26 million compared to the same period last year, primarily due to changes in certain tax estimates, partially offset by lower net investment income as well as higher operating expenses driven by variable compensation related expenses. Items excluded from base earnings (loss) were negative $58 million compared to nil for the same period last year, primarily due to a provision for payments relating to the Company's 2003 acquisition of Canada Life.

Risk Management

COVID-19 Pandemic Impact

The COVID-19 pandemic continues to cause disruption to businesses globally, resulting in continued economic pressures. The impact of the pandemic on mortality, longevity, disability and other claims experience in future periods remains uncertain and may differ by region and business line, to date, net impacts have been modest. The Company continues to monitor evolving trends and information regarding COVID-19, factors that may affect the length of the pandemic, and potential impacts on mortality improvement. Vaccination programs are well advanced, with many countries having a significant portion of the population vaccinated; however, vaccine hesitancy has slowed progress. New COVID-19 variants are more transmissible and may lead to impacts on vaccine efficacy and higher mortality rates. The Company continues to manage risks of changes to mortality and longevity rates by issuing a diversified range of insurance, annuity and fee income products, along with using reinsurance and capital market solutions where appropriate.

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 defence organization and overseen by the Board of Directors. The Company's three lines of defence 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 for all of us, both individually and collectively, across all three lines of defence; risk management skills and knowledge are developed and core to our ongoing success; objective challenge is expected and respected across all business operations and all three lines of defence. 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; and
- Periodically approving policies designed to support independence of the Internal Audit, Risk, Finance, Actuarial and Compliance oversight functions.

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, 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 structure and resources of the risk management and compliance functions;
- Evaluation of the Company's risk culture;
- 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;
- Periodically approve the recovery plan playbook;
- Review of the risk impact of business strategies, capital plans, financial plans and new business initiatives;
- Review and approve the mandate for and assessment of the performance of the Company's Chief Risk Officer (CRO) and Chief Compliance Officer (CCO);
- Monitoring 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 documents containing financial information and to report on such review to the Board, to be satisfied that adequate procedures are in place for the review of the Company's public disclosure documents that contain 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 material 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 Defence 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 the risk and have primary risk management as well as risk-taking responsibility and accountability through day-to-day operations within ongoing business process.
- **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 defence. 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:** Qualitative reflection of the aggregate level of risk and types of risk that the Company is willing to accept to achieve its business objective
- **Risk Preference:** Qualitative description of risk tolerances
- **Risk Limit Framework:** Quantitative components of the RAF including excess and escalation process

Risk Strategy

The Company's business strategy is aligned with its risk strategy and risk appetite. The risk strategy supports the Company's main objectives to keep its commitments while growing shareholder value. The risk strategy requires:

- diversification of products and services, customers, distribution channels and geographies;
- a prudent and measured approach to risk-taking;
- resilience of business operations and sustainable growth, taking into consideration corporate social responsibility;
- conducting business to safeguard the Company's reputation and deliver fair customer outcomes through maintaining high standards of integrity based on the 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 the customers, consideration of corporate social responsibility, and effective management of sustainability and reputational risk.

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 controlled. Processes are designed to ensure risks are considered, assessed, prioritized and addressed in all business initiatives 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.

A prolonged period of low interest rates may adversely impact the Company's earnings and regulatory 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.

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. 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.

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.

- 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 2021 by $37 million, $33 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, including the impact of instruments designated as hedges of net investments on foreign operations, in accumulated other comprehensive income (loss) of shareholders' equity by approximately $445 million, $214 million and $84 million, respectively, as at December 31, 2021.

Management may use forward foreign currency contracts and foreign denominated debt to mitigate the volatility arising from the movement of 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.

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.

Liquidity (1)

	December 31	
	2021	2020
Cash, cash equivalents and short-term bonds	**$ 9,791**	$ 11,197
Other liquid assets and marketable securities		
Government bonds	**35,331**	33,635
Corporate bonds (2)	**50,491**	52,583
Stocks	**12,424**	10,208
Mortgage loans	**3,406**	3,785
	$101,652	$ 100,211
Total	**$111,443**	$ 111,408

Cashable liability characteristics

	December 31	
	2021	2020
Surrenderable insurance and investment contract liabilities (1) (3)		
At market value	**$ 48,767**	$ 50,855
At book value	**54,232**	49,981
Total	**$102,999**	$ 100,836

(1) Amounts presented exclude non-liquid and pledged assets. Refer to the Liquidity table on page 38 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 $111.4 billion or 1.1 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 48% (approximately 48% in 2020) of insurance and investment contract liabilities are non-cashable prior to maturity or claim, with a further 24% approximately (26% in 2020) 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, 2021 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 owner 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 independently 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 and longevity risk are core business risks and the exchange of these risks into value is a core business activity. Policyholder behaviour risk and expense risk associated with offering core products are 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

While operational risks can be mitigated and managed, they remain an inherent feature of the business model, as multiple processes, systems, and stakeholders are required to interact across the enterprise on an ongoing basis. The Company actively manages operational risk across the enterprise to maintain a strong reputation, standing and financial strength and to protect customers and the Company's value, and to maintain operational resilience. Ongoing engagement of businesses and support functions across the enterprise through robust training and communications is regularly undertaken for identifying, assessing and mitigating operational risk issues.

Operational risk management governance and oversight reflects a combined effort between business units and oversight functions. The Risk Function is responsible for the development of operational risk management policies and operating standards as well as overseeing operational risk management activities performed in the first line of defence. The Operational Risk Committee has the primary mandate to provide risk oversight for operational risk across the enterprise. In addition, each business segment has established committees to oversee operational risk management within their business.

The Company has an Operational Risk Policy that 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 and risk data aggregation & 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 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 events 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.

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 company, 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 defence 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 Company's inability to attract, retain, train and develop the right talent from inadequate recruitment, talent management and succession planning programs and practices, ineffective governance practices or legal action related to discrimination, and can impact the ability of the Company to meet its business objectives. 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, to stay compliant with regulations, and to maintain its financial integrity and reputation. More specifically, Technology Risk includes Information and Cybersecurity 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 this 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 defence; and
- regular cyber security awareness sessions and mandatory cyber security training for all employees.

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.

Business Continuity Risk

Business continuity risk is the risk of loss as a result of the failure to provide for the continuity of 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.

Poor operational resiliency in the face of natural, technological, or human caused events could prevent the Company from carrying out important business services, with potential for lost revenue, regulatory sanctions and damage to reputation.

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 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 external fraud environment continues to intensify for financial institutions, as increasingly sophisticated methods of organized fraud and cyber fraud are employed. 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 manages fraud risk by focusing on its governance, assessment, prevention, detection, investigation and response. The Company promotes a culture of honesty, integrity, transparency and fairness in its operations and outlines roles and responsibilities in the Company's Fraud Risk Management Policy, Fraud Risk Operating Standard and Code of Conduct. The Company has processes and controls in place that are intended to prevent fraud and employs various methods to detect fraud. A fraud response protocol is in place to deal with events through a coordinated investigative strategy designed to protect stakeholders and the interests of the Company.

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 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:

- 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
- 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).

The Company's ability to maintain leadership positions in today's highly competitive environment is dependent on many factors, including scale, price and yields offered, distribution channels, digital capabilities, financial strength ratings, range of product lines and product quality, brand strength, investment performance, historical dividend levels to provide value added services to distributors and customers and the ability to innovate and deploy innovations rapidly.

Competitors and new entrants have significant potential to disrupt the Company's business through targeted strategies to reduce the Company's market share which may include targeting key people and other distributors or aggressively pricing their products. The Company's ability to achieve strategic objectives depends significantly upon the Company's capacity to anticipate and respond quickly to these competitive pressures.

The Company has placed strategic focus on improving technology infrastructure and capabilities. Not adapting effectively to changes in the technological environment or to evolving customer expectations could impact the Company's ability to remain competitive.

There are significant uncertainties relating to the political and economic environment. Increasing geopolitical tensions and slower global economic recovery may result in reduced trade and investment opportunities, failures of national, regional or global governance, interstate conflict or terrorism which may impact the Company's business.

The Company evaluates and optimizes strategy through a combined lens to meet strategic objectives. It assesses market attractiveness and the ability to drive leadership in the markets, sectors, and regions where the Company chooses to participate, evaluates portfolio and businesses from the lens of shareholder value creation and embeds resilience in strategies and operations to anticipate and respond quickly to external environment and competitive pressures. This enables the Company to dynamically manage tactical initiatives that ensure strategies will be both achievable in the short term and sustainable over the long term.

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.

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. 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's carefully aligns business strategies with the Risk Appetite.

In respect of new strategic initiatives, a review of the alignment with risk strategy and qualitative risk preferences is completed. Material change initiatives, including those related to new markets, mergers and acquisitions, distribution channels, product design and investments, are also subject to independent risk review.

Other Risks

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, GWL&A, 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

From time-to-time, the Company and its subsidiaries evaluate existing companies, businesses, assets, products and services, and such review could result in the Company or its subsidiaries acquiring or disposing 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, including integration risks, relating to companies, businesses or assets that the Company acquires or expose it to the risk of claims relating to those it has disposed of, 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. Integration risk can emerge also due to external risks that are difficult to anticipate resulting in reduced synergies and negative impact on value capture.

To mitigate these risks, due diligence reviews are undertaken and risks are assessed in the context of our Risk Appetite. The Company recognizes that integration risk can emerge due to external risks that are difficult to anticipate resulting in reduced synergies and negative impact on value capture. For each transaction, a robust integration strategy is established that considers the values, norms, and culture of the acquired companies, including monitoring of new and emerging risks that may impede efficiency and delay the consolidation process. Before acquiring or disposing of companies, businesses, business segments, or assets, businesses assess and provide assurance that systems and processes are in place to manage the risks after the transaction is completed.

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.

Recently, the Organization for Economic Co-operation and Development (OECD) published a framework 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 2023 or 2024. The countries where the Company currently operates have all indicated their participation; however, none have developed implementing legislation at this point. A number of these countries currently operate at a lower tax rate than the proposed minimum and if legislation is introduced, the Company's tax expense could be negatively impacted.

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.

Sustainability Risk

Sustainability 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 expectation related to corporate social responsibilities.

Dynamics and attitudes towards societal issues have solidified and been further amplified during COVID-19. 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, insurance) as well as non-financial risks (operational, conduct, strategic). Sustainability risk is not a stand-alone risk type, but underlies all risk types (e.g. credit, market, insurance, operational and strategic risk). As a result, the processes for managing sustainability risk are embedded in the processes for managing each risk type.

The Company endeavors to respect the environment and to take 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 Company has established and made available on its website, an Environmental Social Governance (ESG) scorecard that contains standardized ESG disclosures for its global operating companies. The scorecard is in alignment with the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines. The GRI Standards are the most widely adopted global standards for sustainability reporting, providing a globally recognized framework for companies to measure and communicate their environmental, economic, social and governance performance.

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. In 2020, the Company became an official TCFD supporter of the recommendations of the FSB's task Force on Climate-related Financial Disclosures. 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.

Also, the Company has committed to achieve net zero greenhouse gas (GHG) emissions by 2050 for both operations and investments (Scope 3 financed GHG emissions related to the General Account investment portfolio (invested assets)), with interim science-based targets to be announced in 2022.

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.

	Increase (decrease) in net earnings	
	2021	2020
Mortality – 2% increase	**$ (276)**	$ (288)
Annuitant mortality – 2% decrease	**$ (722)**	$ (756)
Morbidity – 5% adverse change	**$ (262)**	$ (279)
Investment returns		
Parallel shift in yield curve		
1% increase	**$ –**	$ –
1% decrease	**$ –**	$ –
Change in interest rates		
1% increase	**$ 197**	$ 224
1% decrease	**$ (555)**	$ (920)
Change in publicly traded common stock values		
20% increase	**$ 21**	$ 28
10% increase	**$ 13**	$ 15
10% decrease	**$ (19)**	$ (51)
20% decrease	**$ (66)**	$ (208)
Change in other non-fixed income asset values		
10% increase	**$ 79**	$ 34
5% increase	**$ 39**	$ 6
5% decrease	**$ (30)**	$ (69)
10% decrease	**$ (112)**	$ (108)
Change in best estimate return assumptions for equities		
1% increase	**$ 567**	$ 556
1% decrease	**$ (649)**	$ (682)
Expenses – 5% increase	**$ (207)**	$ (165)
Policy termination and renewal – 10% adverse change	**$ (1,002)**	$ (1,017)

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. These estimates and judgments are more challenging in a period of uncertainty as is currently being experienced as a result of the COVID-19 pandemic. 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 falls 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, 2021 annual consolidated financial statements for disclosure of the Company's financial instruments fair value measurement by hierarchy level as at December 31, 2021.

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 marketable 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 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 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 $276 million.
- A 2% decrease in the best estimate annuitant assumption would cause a decrease in net earnings of approximately $722 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 $262 million.

Property and casualty reinsurance – Insurance contract liabilities for property and casualty reinsurance written by Capital and Risk Solutions 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. Capital and Risk Solutions 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. 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 $219 million causing an increase in net earnings of approximately $197 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 $678 million causing a decrease in net earnings of approximately $555 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 falls in equity values, relative to the change in equity values. Falls 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 $16 million, causing an increase in net earnings of approximately $13 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 $22 million, causing a decrease in net earnings of approximately $19 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 $26 million, causing an increase in net earnings of approximately $21 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 $76 million, causing a decrease in net earnings of approximately $66 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 $46 million, causing an increase in net earnings of approximately $39 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 $38 million, causing a decrease in net earnings of approximately $30 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 $92 million, causing an increase in net earnings of approximately $79 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 $144 million, causing a decrease in net earnings of approximately $112 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 falls.

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 $715 million causing an increase in net earnings of approximately $567 million.
- A 1% decrease in the best estimate assumption would be expected to increase non-participating insurance contract liabilities by approximately $829 million causing a decrease in net earnings of approximately $649 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, 2021.

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 $207 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 Canada and Capital and Risk Solutions. 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 $1,002 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, 2021 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

	Defined benefit pension plans		Other post-employment benefits	
At December 31	**2021**	2020	**2021**	2020
Actuarial assumptions used to determine benefit cost				
Discount rate – past service liabilities	**2.2%**	2.6%	**2.5%**	3.1%
Discount rate – future service liabilities	**2.8%**	3.2%	**2.6%**	3.3%
Rate of compensation increase	**3.0%**	2.9%	**–**	–
Future pension increases (1)	**1.2%**	1.3%	**–**	–
Actuarial assumptions used to determine defined benefit obligation				
Discount rate – past service liabilities	**2.6%**	2.1%	**3.1%**	2.5%
Rate of compensation increase	**3.1%**	2.9%	**–**	–
Future pension increases (1)	**1.7%**	1.0%	**–**	–
Medical cost trend rates				
Initial medical cost trend rate			**4.7%**	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	
	2021	2020	**2021**	2020
Defined benefit pension plans:				
Impact of a change to the discount rate	**$ (1,199)**	$ (1,350)	**$ 1,568**	$ 1,784
Impact of a change to the rate of compensation increase	**299**	329	**(269)**	(291)
Impact of a change to the rate of inflation	**578**	662	**(507)**	(569)
Other post-employment benefits:				
Impact of a change to assumed medical cost trend rates	**$ 24**	$ 31	**$ (21)**	$ (26)
Impact of a change to the discount rate	**(36)**	(44)	**44**	53

(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 $299 million ($309 million in 2020) to the pension plans and made benefit payments of $19 million ($17 million in 2020) for post-employment benefits. The Company's subsidiaries expect to contribute $284 million to the pension plans and make benefit payments of $22 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 2021, 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 *Interest Rate Benchmark Reform – Phase 2* amendments to IFRS for IAS 39, *Financial Instruments: Recognition and Measurement*, IFRS 7, *Financial Instruments: Disclosures*, IFRS 4, *Insurance Contracts* and IFRS 16, *Leases,* effective January 1, 2021. The adoption of these amendments did not have a significant impact on the Company's consolidated financial statements.

For a further description of the impact of the accounting policy change, refer to note 2 of the Company's December 31, 2021 annual consolidated financial statements.

IFRS that have changed or may change subsequent to 2021 and could impact the Company in future reporting periods, are set out in the following table:

Standard	**Summary of Future Changes**
IFRS 17 – *Insurance Contracts*	In May 2017, the IASB issued IFRS 17, *Insurance Contracts* (IFRS 17), which will replace IFRS 4, *Insurance Contracts*. In June 2020, the IASB issued amendments to IFRS 17. The amended confirmed effective date for the standard is January 1, 2023. In addition, the IASB confirmed the extension to January 1, 2023 of the exemption for insurers to apply the financial instruments standard, IFRS 9, *Financial Instruments* (IFRS 9), keeping the alignment of the effective dates for IFRS 9 and IFRS 17. The adoption of IFRS 17 is a significant initiative for the Company supported by a formal governance framework and project plan, for which substantial resources are being dedicated. The Company has assembled a project team that is working on implementation which involves preparing the financial reporting systems and processes for reporting under IFRS 17, policy development and operational and change management. The project team is also monitoring developments from the IASB and various industry groups that the Company has representation on. The Company continues to make progress in implementing its project plan, with key policy decisions near final as well as significant progression on the technology solutions. IFRS 17 sets out the requirements for the recognition, measurement, presentation and disclosures of insurance contracts a company issues and reinsurance contracts it holds. IFRS 17 introduces three new measurement models depending on the nature of the insurance contracts: the General Measurement Model, the Premium Allocation Approach and the Variable Fee Approach. IFRS 17 requires entities to measure insurance contract liabilities on the balance sheet as the total of: (a) the fulfilment cash flows – the current estimates of amounts that a company expects to collect from premiums and pay out for claims, benefits and expenses, including an adjustment for the timing and risk of those amounts; and (b) the contractual service margin – the future profit for providing insurance coverage. Under IFRS 17, the discount rate used to reflect the time value of money in the fulfillment cash flows must be based on the characteristics of the liability. This is a significant change from IFRS 4 and the Canadian Asset Liability Method, where the discount rate was based on the yield curves of the assets supporting those liabilities. The future profit for providing insurance coverage (including impacts of new business) is reflected in the initial recognition of insurance contract liabilities and then recognized into profit or loss over time as the insurance services are provided. IFRS 17 also requires the Company to distinguish between groups of contracts expected to be profit making and groups of contracts expected to be onerous. The Company is required to update the fulfilment cash flows at each reporting date, using current estimates of the amount, timing and uncertainty of cash flows and discount rates. As a result of the new valuation methodologies required under IFRS 17, the Company expects its insurance contract liabilities to increase upon adoption. Specifically, the recognition of the contractual service margin liabilities will also have the effect of reducing accumulated surplus. IFRS 17 will affect how the Company accounts for its insurance contracts and how it reports financial performance in the Consolidated Statements of Earnings, in particular the timing of earnings recognition for insurance contracts. The adoption of IFRS 17 will also have a significant impact on how insurance contract results are presented and disclosed in the consolidated financial statements and on regulatory and tax regimes that are dependent upon IFRS accounting values. The Company is also actively monitoring potential impacts on regulatory capital and the associated ratios and disclosures. OSFI has stated that it intends to maintain capital frameworks consistent with current capital policies and minimizing potential industry-wide capital impacts. The Company continues to assess all these impacts through its global implementation plan, however the change will not impact the economics of the affected businesses or our business model.

Standard	Summary of Future Changes
IFRS 9 – *Financial Instruments*	In July 2014, the IASB issued a final version of IFRS 9, *Financial Instruments* (IFRS 9) to replace IAS 39, *Financial Instruments: Recognition and Measurement*. 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; • impairment based on an expected loss model; and • hedge accounting that incorporates the risk management practices of an entity. In September 2016, the IASB issued an amendment to IFRS 4, *Insurance Contracts* (IFRS 4). The amendment "Applying IFRS 9, *Financial Instruments* with IFRS 4, *Insurance Contracts*" provides qualifying insurance companies with two options to address the potential volatility associated with implementing the IFRS 9 standard before the new proposed insurance contract standard is effective. The two options are as follows: • *Deferral Approach* – provides the option to defer implementation of IFRS 9 until the effective date of the new insurance contract standard; or • *Overlay Approach* – provides the option to recognize the volatility that could arise when IFRS 9 is applied within other comprehensive income, rather than profit or loss. The Company qualifies for the amendment and is applying the deferral approach to allow adoption of both IFRS 9 and IFRS 17 simultaneously. The disclosure for the measurement and classification of the Company's portfolio investments provides most of the information required by IFRS 9. Upon adoption, the Company does not expect a material change in the level of invested assets, nor a material increase in earnings volatility, however the Company continues to evaluate the impact of the adoption of this standard with the adoption of IFRS 17. In December 2021, the IASB issued a narrow-scope amendment to the transition requirements of IFRS 17. The Amendment, *Initial Application of IFRS 17 and IFRS 9 — Comparative Information (Amendment to IFRS 17)*, provides entities that first apply IFRS 17 and IFRS 9 at the same time with the option to present comparative information about a financial asset as if the classification and measurement requirements of IFRS 9 had been applied to that financial asset before. The option is available on an instrument-by-instrument basis. In applying this option, entity is not required to apply the impairment requirements of IFRS 9.
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 is evaluating the impact of the adoption 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 is evaluating the impact of the adoption 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 is evaluating the impact of the adoption of these amendments.
IAS 37 – *Provisions, Contingent Liabilities and Contingent Assets*	In May 2020, the IASB issued amendments to IAS 37, *Provisions, Contingent Liabilities, and Contingent Assets*. The amendments specify which costs should be included when assessing whether a contract will be loss-making. These amendments are effective for annual reporting periods beginning on or after January 1, 2022, with early adoption permitted. The Company does not anticipate a significant impact on its consolidated financial statements as a result of these amendments.
Annual Improvements 2018-2020 Cycle	In May 2020, the IASB issued Annual Improvements 2018-2020 Cycle as part of its ongoing process to efficiently deal with non-urgent narrow scope amendments to IFRS. Two amendments were included in this issue that are applicable for the Company relating to IFRS 9, *Financial Instruments* and IFRS 16, *Leases*. The amendments are effective January 1, 2022. The Company does not anticipate a significant impact on its consolidated financial statements as a result of the amendment to IFRS 16, *Leases*. The Company continues to evaluate the impact for the adoption of the amendment to IFRS 9, *Financial Instruments* along with the adoption of IFRS 17 on January 1, 2023.

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 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Base earnings	**$ 825**	$ 870	$ 741	**$ 3,260**	$ 2,669
Items excluded from Lifeco base earnings					
Actuarial assumption changes and other management actions (pre-tax)	**$ 28**	$ 74	$ (71)	**$ 148**	$ 61
Income tax (expense) benefit	**(5)**	(5)	48	**(14)**	52
Market-related impact on liabilities (pre-tax)	**22**	52	(21)	**35**	(178)
Income tax (expense) benefit	**(2)**	(5)	(10)	**(11)**	51
Transaction costs related to acquisitions (pre-tax)	**(76)**	(104)	(59)	**(207)**	(95)
Income tax (expense) benefit	**2**	14	12	**18**	17
Restructuring and integration costs (pre-tax)	**(21)**	(32)	(88)	**(90)**	(88)
Income tax (expense) benefit	**6**	8	21	**24**	21
Tax legislative changes impact on liabilities	**–**	–	–	**(21)**	–
Net gain/charge on business dispositions (pre-tax)	**(14)**	–	137	**(14)**	232
Income tax (expense) benefit	**–**	–	6	**–**	5
Revaluation of a deferred tax asset	**–**	–	196	**–**	196
Total pre-tax items excluded from base earnings	**$ (61)**	$ (10)	$ (102)	**$ (128)**	$ (68)
Impact of items excluded from base earnings on income taxes	**1**	12	273	**(4)**	342
Net earnings – common shareholders	**$ 765**	$ 872	$ 912	**$ 3,128**	$ 2,943

Canada

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Base earnings	**$ 317**	$ 312	$ 348	**$ 1,220**	$ 1,206
Items excluded from base earnings					
Actuarial assumption changes and other management actions (pre-tax)	**$ (18)**	$ (15)	$ (199)	**$ (58)**	$ (265)
Income tax (expense) benefit	**5**	4	52	**15**	71
Market-related impacts on liabilities (pre-tax)	**4**	6	(14)	**13**	(71)
Income tax (expense) benefit	**(1)**	(2)	4	**(3)**	20
Net gain/charge on business dispositions (pre-tax)	**–**	–	137	**–**	137
Income tax (expense) benefit	**–**	–	6	**–**	6
Restructuring costs (pre-tax)	**–**	–	(46)	**–**	(46)
Income tax (expense) benefit	**–**	–	12	**–**	12
Net earnings – common shareholders	**$ 307**	$ 305	$ 300	**$ 1,187**	$ 1,070

United States

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Base earnings	**$ 156**	$ 221	$ 90	**$ 671**	$ 273
Items excluded from base earnings					
Actuarial assumption changes and other management actions (pre-tax)	**$ 2**	$ 5	$ 3	**$ 7**	$ 52
Income tax (expense) benefit	**–**	(1)	–	**(1)**	(11)
Market-related impact on liabilities (pre-tax)	**(1)**	(1)	(2)	**(5)**	(26)
Income tax (expense) benefit	**–**	–	1	**–**	7
Transaction costs related to acquisitions (pre-tax)	**(52)**	(36)	(59)	**(115)**	(95)
Income tax (expense) benefit	**2**	4	12	**8**	17
Revaluation of a deferred tax asset	**–**	–	196	**–**	196
Restructuring and integration costs (pre-tax)	**(21)**	(32)	(42)	**(90)**	(42)
Income tax (expense) benefit	**6**	8	9	**24**	9
Net earnings – common shareholders	**$ 92**	$ 168	$ 208	**$ 499**	$ 380

Europe

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Base earnings	**$ 213**	$ 232	$ 195	**$ 830**	$ 688
Items excluded from base earnings					
Actuarial assumption changes and other management actions (pre-tax)	**$ 59**	$ 90	$ 83	**$ 219**	$ 209
Income tax (expense) benefit	**(13)**	(9)	(5)	**(33)**	(21)
Market-related impact on liabilities (pre-tax)	**19**	47	(5)	**27**	(81)
Income tax (expense) benefit	**(1)**	(3)	(15)	**(8)**	24
Transaction costs related to acquisitions (pre-tax)	**(24)**	–	–	**(24)**	–
Income tax (expense) benefit	**–**	–	–	**–**	–
Tax legislative changes impact on liabilities	**–**	–	–	**(21)**	–
Net gain/charge on business dispositions (pre-tax)	**(14)**	–	–	**(14)**	95
Income tax (expense) benefit	**–**	–	–	**–**	(1)
Net earnings – common shareholders	**$ 239**	$ 357	$ 253	**$ 976**	$ 913

Capital and Risk Solutions

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Base earnings	**$ 145**	$ 107	$ 124	**$ 547**	$ 536
Items excluded from base earnings					
Actuarial assumption changes and other management actions (pre-tax)	**$ (15)**	$ (6)	$ 42	**$ (20)**	$ 65
Income tax (expense) benefit	**3**	1	1	**5**	13
Net earnings – common shareholder	**$ 133**	$ 102	$ 167	**$ 532**	$ 614

Lifeco Corporate

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Base earnings (loss)	**$ (6)**	$ (2)	$ (16)	**$ (8)**	$ (34)
Items excluded from base earnings (loss)					
Transaction costs related to acquisitions (pre-tax)	**$ –**	$ (68)	$ –	**$ (68)**	$ –
Income tax (expense) benefit	**–**	10	–	**10**	–
Net earnings (loss) – common shareholder	**$ (6)**	$ (60)	$ (16)	**$ (66)**	$ (34)

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.

Total assets under administration includes total assets per financial statements, proprietary mutual funds and institutional assets and other assets under administration. Please refer to the "Glossary" section for additional information regarding proprietary mutual funds and institutional assets and other assets under administration.

Assets under management and assets under administration

	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020
Total assets per financial statements	**$ 630,488**	$ 614,962	$ 600,490
Proprietary mutual funds and institutional assets	**377,155**	365,764	350,943
Assets under management	**$ 1,007,643**	$ 980,726	$ 951,433
Other assets under administration	**1,271,931**	1,213,074	1,024,414
Assets under administration	**$ 2,279,574**	$ 2,193,800	$ 1,975,847

Canada

	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020
Canada wealth fee business assets under administration			
Segregated fund assets	**$ 101,537**	$ 97,769	$ 90,680
Mutual funds and institutional assets	**5,742**	5,534	7,311
Wealth fee business other assets under administration	**15,322**	14,132	12,078
Total Canada wealth fee business assets under administration	**$ 122,601**	$ 117,435	$ 110,069
Add: Other balance sheet assets	**$ 102,445**	$ 99,475	$ 97,018
Add: Other assets under administration	**2,275**	7,030	6,476
Consolidated Canada balance sheet assets	**$ 203,982**	$ 197,244	$ 187,698
Consolidated Canada proprietary mutual funds and institutional assets	**5,742**	5,534	7,311
Consolidated Canada other assets under administration	**17,597**	21,162	18,554
Total Canada assets under administration	**$ 227,321**	$ 223,940	$ 213,563

United States

	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020
Financial Services			
Personal Capital mutual funds and institutional assets	**$ 29,231**	$ 26,355	$ 20,665
Empower assets under administration			
General account	**47,408**	46,098	46,469
Segregated funds	**109,450**	109,395	111,223
Proprietary mutual funds	**53,413**	49,862	43,130
Other assets under administration	**1,241,974**	1,179,882	994,989
Empower assets under administration	**$1,452,245**	$1,385,237	$ 1,195,811
Putnam proprietary mutual funds and institutional assets	**$ 257,216**	$ 250,046	$ 243,273
Subtotal	**$1,738,692**	$1,661,638	$ 1,459,749
Less: Mutual fund and institutional asset consolidation adjustment	**$ (28,927)**	$ (27,728)	$ (22,817)
Add: Other balance sheet assets	**51,353**	52,632	50,888
Consolidated United States balance sheet assets	**$ 208,211**	$ 208,125	$ 208,580
Consolidated United States proprietary mutual funds and institutional assets	**310,933**	298,535	284,251
Consolidated United States other assets under administration	**1,241,974**	1,179,882	994,989
Total United States assets under administration	**$1,761,118**	$1,686,542	$ 1,487,820

Europe

	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020
Europe wealth and investment only assets under administration			
Segregated fund assets	**$ 138,963**	$ 131,284	$ 125,370
Mutual funds and institutional assets	**60,480**	61,695	59,381
Wealth fee business other assets under administration	**12,360**	12,030	10,871
Total Europe wealth and investment only assets under administration	**$ 211,803**	$ 205,009	$ 195,622
Add: Other balance sheet assets	**$ 61,936**	$ 60,594	$ 63,981
Consolidated Europe balance sheet assets	**$ 200,899**	$ 191,878	$ 189,351
Consolidated Europe proprietary mutual funds and institutional assets	**60,480**	61,695	59,381
Consolidated Europe other assets under administration	**12,360**	12,030	10,871
Total Europe assets under administration	**$ 273,739**	$ 265,603	$ 259,603

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. Total premiums and deposits exclude the initial ceded premium related to the sale, via indemnity reinsurance, of the U.S. individual life insurance and annuity business. This measure provides an indicator of top-line growth.

Premiums and deposits

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	Dec. 31 2021	Dec. 31 2020
Total net premiums	**$ 12,989**	$ 14,921	$ 11,747	**$ 52,813**	$ 43,019
Policyholder deposits (segregated funds) (1)	**8,337**	6,733	5,641	**29,657**	21,916
Self-funded premium equivalents (ASO contracts) and other	**4,556**	2,828	1,687	**11,108**	6,123
Proprietary mutual funds and institutional deposits	**21,772**	14,800	21,756	**75,225**	100,287
Total premiums and deposits	**$ 47,654**	$ 39,282	$ 40,831	**$ 168,803**	$ 171,345

(1) For additional details, refer to note 14(b) to the Company's consolidated financial statements for the period ended December 31, 2021.

Core net earnings (loss)

For its Asset Management 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 (1)

	For the three months ended			For the twelve months ended	
	Dec. 31 2021	Sept. 30 2021	Dec. 31 2020	**Dec. 31 2021**	Dec. 31 2020
Fee and net investment income (US$)	**$ 254**	$ 250	$ 271	**$ 990**	$ 926
Less: Expenses (US$)	**225**	219	215	**890**	846
Core earnings (US$)	**$ 29**	$ 31	$ 56	**$ 100**	$ 80
Less: Income taxes (US$)	**9**	7	19	**26**	29
Core net earnings (loss) (US$)	**$ 20**	$ 24	$ 37	**$ 74**	$ 51
Non-core net earnings (loss) (US$)	**15**	3	(11)	**2**	(37)
Net earnings (loss) (US$)	**$ 35**	$ 27	$ 26	**$ 76**	$ 14
Net earnings (loss) (C$)	**$ 43**	$ 34	$ 35	**$ 95**	$ 18

(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 rates for common shareholders.
- **Effective income tax rate – base earnings – total Lifeco** – Calculated by adjusting the Company's reported income taxes and net earnings before income taxes to remove the impact of items excluded from base earnings, to calculate the effective tax rates for total Lifeco.

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 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 – 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.

	December 31	
Period ended	**2021**	2020
United States dollar	**1.26**	1.30
British pound	**1.70**	1.72
Euro	**1.44**	1.55

- **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.
- **Proprietary mutual funds and institutional assets** – 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

	Years ended December 31		
(in $ millions, except per share amounts)	**2021**	2020	2019
Total revenue	**$ 64,417**	$ 60,583	$ 44,698
Earnings – common shareholders			
Net earnings	**3,128**	2,943	2,359
Base earnings (1)	**3,260**	2,669	2,704
Net earnings per common share			
Basic – net earnings	**3.365**	3.173	2.494
Diluted – net earnings	**3.360**	3.172	2.493
Basic – base earnings (2)	**3.507**	2.878	2.859
Diluted – base earnings (2)	**3.502**	2.877	2.857
Total assets under administration			
Total assets	**$ 630,488**	$ 600,490	$ 451,167
Proprietary mutual funds and institutional assets (3)	**377,155**	350,943	320,548
Total assets under management (1)	**1,007,643**	951,433	771,715
Other assets under administration (3)	**1,271,931**	1,024,414	857,966
Total assets under administration (1)	**$ 2,279,574**	$ 1,975,847	$ 1,629,681
Total liabilities	**$ 600,005**	$ 573,475	$ 425,624
Dividends paid per share			
Series F First Preferred	**1.4750**	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 (4)	**0.437252**	0.544000	0.544000
Series O First Preferred (5)	**–**	0.556412	0.744956
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 (6)	**0.2589**	–	–
Common (7)	**1.804**	1.752	1.652

(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) 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.

(5) 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 Series O Shares were automatically converted into Series N Shares on an on-for-one basis.

(6) 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.

(7) In 2021, Lifeco made dividend payments to common shareholders on each of March 31, June 30 and September 30 in the amount of $0.438 per share. On November 15, 2021, Lifeco announced an increase to the quarterly dividend of $0.052 per share. On December 31, 2021, Lifeco made a dividend payment to common shareholders in the amount of $0.490 per share.

QUARTERLY FINANCIAL INFORMATION

(in $ millions, except per share amounts)	2021 Q4	2021 Q3	2021 Q2	2021 Q1	2020 Q4	2020 Q3	2020 Q2	2020 Q1
Total revenue	**$ 18,122**	$ 17,432	$ 17,955	$ 10,908	$ 16,860	$ 13,740	$ 19,710	$ 10,273
Common shareholders								
Base earnings								
Total (2)	**$ 825**	$ 870	$ 826	$ 739	$ 741	$ 679	$ 706	$ 543
Basic – per share (1)	**0.887**	0.934	0.889	0.796	0.799	0.732	0.761	0.585
Diluted – per share (1)	**0.885**	0.932	0.888	0.796	0.799	0.732	0.761	0.585
Net earnings								
Total	**$ 765**	$ 872	$ 784	$ 707	$ 912	$ 826	$ 863	$ 342
Basic – per share	**0.822**	0.938	0.844	0.762	0.983	0.891	0.930	0.369
Diluted – per share	**0.820**	0.936	0.842	0.761	0.983	0.891	0.930	0.369

(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

	2021 Q4	2021 Q3	2021 Q2	2021 Q1	2020 Q4	2020 Q3	2020 Q2	2020 Q1
Actuarial assumption changes and other management actions (pre-tax)	$ 28	$ 74	$ 42	$ 4	$ (71)	$ 73	$ 140	$ (81)
Income tax (expense) benefit	(5)	(5)	(5)	1	48	(7)	(18)	29
Market-related impact on liabilities (pre-tax)	22	52	(14)	(25)	(21)	13	43	(213)
Income tax (expense) benefit	(2)	(5)	(5)	1	(10)	5	(8)	64
Transaction costs related to acquisitions (pre-tax)	(76)	(105)	(25)	(2)	(59)	(36)	–	–
Income tax (expense) benefit	2	15	1	1	12	5	–	–
Restructuring and integration costs (pre-tax)	(21)	(32)	(21)	(16)	(88)	–	–	–
Income tax (expense) benefit	6	8	6	4	21	–	–	–
Net gain/charge on business dispositions (pre-tax)	(14)	–	–	–	137	95	–	–
Income tax (expense) benefit	–	–	–	–	6	(1)	–	–
Tax legislative changes impact on liabilities	–	–	–	–	–	–	–	–
Income tax (expense) benefit	–	–	(21)	–	–	–	–	–
Revaluation of deferred tax asset	–	–	–	–	–	–	–	–
Income tax (expense) benefit	–	–	–	–	196	–	–	–
Total post-tax items excluded from base earnings	$ (60)	$ 2	$ (42)	$ (32)	$ 171	$ 147	$ 157	$ (201)

Lifeco's consolidated net earnings attributable to common shareholders were $765 million for the fourth quarter of 2021 compared to $912 million reported a year ago. On a per share basis, this represents $0.822 per common share ($0.820 diluted) for the fourth quarter of 2021 compared to $0.983 per common share ($0.983 diluted) a year ago.

Total revenue for the fourth quarter of 2021 was $18,122 million and comprises premium income of $12,989 million, regular net investment income of $1,637 million, a positive change in fair value through profit or loss on investment assets of $1,611 million and fee and other income of $1,885 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, 2021 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, 2021, 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, 2021 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.

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. Power Corporation also controls IGM Financial Inc. and its subsidiaries (IGM), Sagard Holdings Inc. (Sagard), a multi-strategy alternative asset manager, as well as Portag3 Ventures II Limited Partnership (Portag3), which invests in the FinTech sector and in which both Lifeco and IGM are investors. 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, IGM, Sagard, Portag3 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 Financial group of companies enabling each organization to take advantage of economies of scale and areas of expertise. 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 Financial group of companies, certain administrative and information technology services. During the year, 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.

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 managed by related parties of the Company and the Company receives management fees related to these services. All transactions were provided at market terms and conditions.

During the fourth quarter of 2021, the Company completed an agreement for a long-term strategic relationship with Sagard, which included the sale of its United States-based subsidiaries, EverWest Real Estate Investors, LLC and EverWest Advisors, LLC (EverWest) to Sagard, in exchange for a minority shareholding in Sagard's subsidiary, Sagard Holdings Management Inc. EverWest was a wholly-owned subsidiary of Canada Life and Sagard is a wholly-owned subsidiary of Power Corporation. As part of the strategic relationship with Sagard, the Company has made a capital commitment of up to approximately US$500 million into certain Sagard strategies. The Company has also committed to investing a further approximately US$2.0 billion in real estate investments to support EverWest's future growth within Sagard. The related party transaction was reviewed and approved by the Company's Conduct Review Committee and certain aspects involving Canada Life were reviewed and approved by its Conduct Review Committee. The carrying value and proceeds from sale of EverWest are immaterial to the Company.

During the year ended December 31, 2020, the Company completed the sale of GLC to Mackenzie Financial Corporation. The Company recorded a gain on disposal of $143 million after-tax, net of restructuring and other one-time costs of $16 million after-tax ($22 million pre-tax) in 2020.

During the year ended December 31, 2020, GWL&A completed the acquisition of 100% of the equity of Personal Capital. Prior to the completion of the acquisition, IGM held a 24.8% interest in Personal Capital (approximately 21.7% after giving effect to dilution). The transaction resulted from an auction process conducted by Personal Capital and shareholders other than IGM.

At December 31, 2021, the Company held $105 million ($110 million in 2020) of debentures issued by IGM.

During the normal course of business in 2021, the Company purchased residential mortgages of $12 million from IGM ($21 million in 2020).

The Company owns 9,200,448 shares representing 3.85% ownership interest, held through Canada Life, 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 2021, the Company earned equity income of $33 million and received dividends of $21 million from the investment in IGM.

The Company holds investments in Portag3 Ventures Limited Partnership, Portag3 Ventures II Limited Partnership, Sagard Holdings Management Inc., Northleaf Capital Partners Ltd., and other entities which invest in the FinTech sector. These investments were made in partnership with Power Corporation, IGM and, in certain cases, outside investors.

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 2021. There were no significant outstanding loans or guarantees with related parties at December 31, 2021. There were no provisions for uncollectible amounts with related parties at December 31, 2021.

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

	2021				2020			
Period ended	**Dec. 31**	Sept. 30	June 30	Mar. 31	Dec. 31	Sept. 30	June 30	Mar. 31
United States dollar								
Balance sheet	**$ 1.27**	$ 1.27	$ 1.24	$ 1.26	$ 1.27	$ 1.33	$ 1.36	$ 1.40
Income and expenses	**$ 1.26**	$ 1.26	$ 1.23	$ 1.27	$ 1.30	$ 1.33	$ 1.39	$ 1.34
British pound								
Balance sheet	**$ 1.71**	$ 1.71	$ 1.71	$ 1.73	$ 1.74	$ 1.72	$ 1.68	$ 1.74
Income and expenses	**$ 1.70**	$ 1.74	$ 1.72	$ 1.75	$ 1.72	$ 1.72	$ 1.72	$ 1.72
Euro								
Balance sheet	**$ 1.44**	$ 1.47	$ 1.47	$ 1.47	$ 1.55	$ 1.56	$ 1.52	$ 1.55
Income and expenses	**$ 1.44**	$ 1.48	$ 1.48	$ 1.53	$ 1.55	$ 1.56	$ 1.53	$ 1.48

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.

Financial Reporting Responsibility

The consolidated financial statements are the responsibility of management and are prepared in accordance with International Financial Reporting Standards (IFRS). The financial information contained elsewhere in the annual report is consistent with that in the consolidated financial statements. The consolidated financial statements necessarily include amounts that are based on management's best estimates. These estimates are based on careful judgments and have been properly reflected in the consolidated financial statements. In the opinion of management, the accounting practices utilized are appropriate in the circumstances and the consolidated financial statements present fairly, in all material respects, the financial position of the Company and the results of its operations and its cash flows in accordance with IFRS.

In carrying out its responsibilities, management maintains appropriate internal control over financial reporting designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with IFRS.

The consolidated financial statements were approved by the Board of Directors, which has oversight responsibilities with respect to financial reporting. The Board of Directors carries out this responsibility principally through the Audit Committee, which comprises independent directors. The Audit Committee is charged with, among other things, the responsibility to:

- Review the interim and annual consolidated financial statements and report thereon to the Board of Directors.
- Review internal control procedures.
- Review the independence of the external auditors and the terms of their engagement and recommend the appointment and compensation of the external auditors to the Board of Directors.
- Review other audit, accounting and financial reporting matters as required.

In carrying out the above responsibilities, this Committee meets regularly with management, and with both the Company's external and internal auditors to review their respective audit plans and to review their audit findings. The Committee is readily accessible to the external and internal auditors.

The Board of Directors of each of The Canada Life Assurance Company and Great-West Life & Annuity Insurance Company appoints an Actuary who is either a Fellow of the Canadian Institute of Actuaries or a Fellow of the Society of Actuaries. The Actuary:

- Ensures that the assumptions and methods used in the valuation of policy liabilities are in accordance with accepted actuarial practice, applicable legislation and associated regulations and directives.
- Provides an opinion regarding the appropriateness of the policy liabilities at the balance sheet date to meet all policyholder obligations. Examination of supporting data for accuracy and completeness and analysis of assets for their ability to support the policy liabilities are important elements of the work required to form this opinion.

Deloitte LLP Chartered Professional Accountants, as the Company's external auditors, have audited the consolidated financial statements. The Independent Auditor's Report to the Shareholders is presented following the consolidated financial statements. Their opinion is based upon an examination conducted in accordance with Canadian generally accepted auditing standards, performing such tests and other procedures as they consider necessary in order to obtain reasonable assurance that the consolidated financial statements present fairly, in all material respects, the financial position of the Company and the results of its operations and its cash flows in accordance with IFRS.

Paul Mahon
President and
Chief Executive Officer

Garry MacNicholas
Executive Vice-President and
Chief Financial Officer

February 9, 2022

Consolidated Statements of Earnings

(in Canadian $ millions except per share amounts)

For the years ended December 31	2021	2020
Income		
Premium income		
Gross premiums written	**$ 57,397**	$ 47,754
Ceded premiums	**(4,584)**	(4,735)
Total net premiums	**52,813**	43,019
Net investment income (note 6)		
Regular net investment income	**6,393**	5,963
Changes in fair value through profit or loss	**(2,083)**	5,699
Total net investment income	**4,310**	11,662
Fee and other income	**7,294**	5,902
	64,417	60,583
Benefits and expenses		
Policyholder benefits		
Gross	**49,355**	39,605
Ceded	**(3,544)**	(2,946)
Total net policyholder benefits	**45,811**	36,659
Changes in insurance and investment contract liabilities		
Gross	**1,152**	12,079
Ceded	**1,891**	(1,751)
Total net changes in insurance and investment contract liabilities	**3,043**	10,328
Policyholder dividends and experience refunds	**1,441**	1,500
Total paid or credited to policyholders	**50,295**	48,487
Commissions	**2,664**	2,396
Operating and administrative expenses (note 27)	**6,337**	5,492
Premium taxes	**500**	480
Financing charges (note 16)	**328**	284
Amortization of finite life intangible assets (note 10)	**336**	238
Restructuring and integration expenses (note 4)	**90**	134
Earnings before income taxes	**3,867**	3,072
Income taxes (note 26)	**304**	(82)
Net earnings before non-controlling interests	**3,563**	3,154
Attributable to non-controlling interests (note 18)	**301**	78
Net earnings	**3,262**	3,076
Preferred share dividends (note 20)	**134**	133
Net earnings – common shareholders	**$ 3,128**	$ 2,943
Earnings per common share (note 20)		
Basic	**$ 3.365**	$ 3.173
Diluted	**$ 3.360**	$ 3.172

Consolidated Statements of Comprehensive Income

(in Canadian $ millions)

For the years ended December 31	2021	2020
Net earnings	**$ 3,262**	$ 3,076
Other comprehensive income (loss)		
Items that may be reclassified subsequently to Consolidated Statements of Earnings		
Unrealized foreign exchange gains (losses) on translation of foreign operations	**(391)**	105
Income tax (expense) benefit	**–**	(2)
Unrealized gains (losses) on hedges of the net investment in foreign operations	**117**	(90)
Income tax (expense) benefit	**(12)**	12
Unrealized gains (losses) on available-for-sale assets	**(131)**	287
Income tax (expense) benefit	**35**	(49)
Realized (gains) losses on available-for-sale assets	**(28)**	(141)
Income tax expense (benefit)	**3**	15
Unrealized gains (losses) on cash flow hedges	**60**	36
Income tax (expense) benefit	**(16)**	(10)
Realized (gains) losses on cash flow hedges	**(48)**	(21)
Income tax expense (benefit)	**13**	6
Non-controlling interests	**107**	(69)
Income tax (expense) benefit	**(30)**	21
Total items that may be reclassified	**(321)**	100
Items that will not be reclassified to Consolidated Statements of Earnings		
Re-measurements on defined benefit pension and other post-employment benefit plans (note 23)	**705**	(169)
Income tax (expense) benefit	**(190)**	40
Revaluation surplus on transfer to investment properties (note 9)	**–**	11
Income tax (expense) benefit	**–**	(1)
Non-controlling interests	**(67)**	15
Income tax (expense) benefit	**18**	(4)
Total items that will not be reclassified	**466**	(108)
Total other comprehensive income (loss)	**145**	(8)
Comprehensive income	**$ 3,407**	$ 3,068

Consolidated Balance Sheets

(in Canadian $ millions)

December 31	2021	2020
Assets		
Cash and cash equivalents (note 5)	**$ 6,075**	$ 7,946
Bonds (note 6)	**140,612**	137,592
Mortgage loans (note 6)	**28,852**	27,803
Stocks (note 6)	**14,183**	11,000
Investment properties (note 6)	**7,763**	6,270
Loans to policyholders	**8,319**	8,387
	205,804	198,998
Funds held by ceding insurers (note 7)	**17,194**	18,383
Reinsurance assets (note 13)	**21,138**	22,121
Goodwill (note 10)	**9,081**	10,106
Intangible assets (note 10)	**5,514**	4,285
Derivative financial instruments (note 28)	**967**	829
Owner occupied properties (note 11)	**736**	741
Fixed assets (note 11)	**422**	426
Other assets (note 12)	**4,522**	3,347
Premiums in course of collection, accounts and interest receivable	**6,366**	6,102
Current income taxes	**268**	145
Deferred tax assets (note 26)	**1,057**	975
Investments on account of segregated fund policyholders (note 14)	**357,419**	334,032
Total assets	**$ 630,488**	$ 600,490
Liabilities		
Insurance contract liabilities (note 13)	**$ 208,378**	$ 208,902
Investment contract liabilities (note 13)	**12,455**	9,145
Debentures and other debt instruments (note 15)	**8,804**	9,693
Funds held under reinsurance contracts	**1,542**	1,648
Derivative financial instruments (note 28)	**1,030**	1,221
Accounts payable	**3,032**	2,698
Other liabilities (note 17)	**6,063**	5,147
Current income taxes	**193**	343
Deferred tax liabilities (note 26)	**1,089**	646
Investment and insurance contracts on account of segregated fund policyholders (note 14)	**357,419**	334,032
Total liabilities	**600,005**	573,475
Equity		
Non-controlling interests (note 18)		
Participating account surplus in subsidiaries	**3,138**	2,871
Non-controlling interests in subsidiaries	**129**	116
Shareholders' equity		
Share capital (note 19)		
Limited recourse capital notes	**1,500**	–
Preferred shares	**2,720**	2,714
Common shares	**5,748**	5,651
Accumulated surplus	**16,424**	14,990
Accumulated other comprehensive income (note 24)	**632**	487
Contributed surplus	**192**	186
Total equity	**30,483**	27,015
Total liabilities and equity	**$ 630,488**	$ 600,490

Approved by the Board of Directors:

Jeffrey Orr
Chair of the Board

Paul Mahon
President and Chief Executive Officer

Consolidated Statements of Changes in Equity

(in Canadian $ millions)

	December 31, 2021					
	Share capital	**Contributed surplus**	**Accumulated surplus**	**Accumulated other comprehensive income**	**Non-controlling interests**	**Total equity**
Balance, beginning of year	**$ 8,365**	**$ 186**	**$ 14,990**	**$ 487**	**$ 2,987**	**$ 27,015**
Net earnings	**–**	**–**	**3,262**	**–**	**301**	**3,563**
Other comprehensive income (loss)	**–**	**–**	**–**	**145**	**(28)**	**117**
	8,365	**186**	**18,252**	**632**	**3,260**	**30,695**
Dividends to shareholders						
Preferred shareholders (note 20)	**–**	**–**	**(134)**	**–**	**–**	**(134)**
Common shareholders	**–**	**–**	**(1,677)**	**–**	**–**	**(1,677)**
Shares exercised and issued under share-based payment plans (note 19)	**97**	**(59)**	**–**	**–**	**46**	**84**
Share-based payment plans expense	**–**	**63**	**–**	**–**	**–**	**63**
Equity settlement of Putnam share-based plans	**–**	**–**	**–**	**–**	**(38)**	**(38)**
Shares cancelled under Putnam share-based plans	**–**	**2**	**–**	**–**	**(2)**	**–**
Issuance of limited recourse capital notes (note 19)	**1,500**	**–**	**–**	**–**	**–**	**1,500**
Limited recourse capital notes issue costs (note 19)	**–**	**–**	**(13)**	**–**	**–**	**(13)**
Issuance of preferred shares (note 19)	**200**	**–**	**–**	**–**	**–**	**200**
Redemption of preferred shares (note 19)	**(194)**	**–**	**–**	**–**	**–**	**(194)**
Share issue costs (note 19)	**–**	**–**	**(3)**	**–**	**–**	**(3)**
Dilution loss on non-controlling interests	**–**	**–**	**(1)**	**–**	**1**	**–**
Balance, end of year	**$ 9,968**	**$ 192**	**$ 16,424**	**$ 632**	**$ 3,267**	**$ 30,483**

	December 31, 2020					
	Share capital	Contributed surplus	Accumulated surplus	Accumulated other comprehensive income	Non-controlling interests	Total equity
Balance, beginning of year	$ 8,347	$ 175	$ 13,660	$ 495	$ 2,866	$ 25,543
Net earnings	–	–	3,076	–	78	3,154
Other comprehensive income (loss)	–	–	–	(8)	37	29
	8,347	175	16,736	487	2,981	28,726
Dividends to shareholders						
Preferred shareholders (note 20)	–	–	(133)	–	–	(133)
Common shareholders	–	–	(1,626)	–	–	(1,626)
Shares exercised and issued under share-based payment plans (note 19)	18	(50)	–	–	49	17
Share-based payment plans expense	–	54	–	–	–	54
Equity settlement of Putnam share-based plans	–	–	–	–	(15)	(15)
Shares cancelled under Putnam share-based plans	–	7	–	–	(15)	(8)
Dilution gain on non-controlling interests	–	–	13	–	(13)	–
Balance, end of year	$ 8,365	$ 186	$ 14,990	$ 487	$ 2,987	$ 27,015

Consolidated Statements of Cash Flows

(in Canadian $ millions)

For the years ended December 31	2021	2020
Operations		
Earnings before income taxes	$ **3,867**	$ 3,072
Income taxes paid, net of refunds received	**(351)**	(367)
Adjustments:		
Change in insurance and investment contract liabilities	**1,819**	14,476
Change in funds held by ceding insurers	**845**	467
Change in funds held under reinsurance contracts	**(84)**	201
Change in reinsurance assets	**1,915**	(1,629)
Changes in fair value through profit or loss	**2,083**	(5,699)
Other	**279**	(911)
	10,373	9,610
Financing Activities		
Issue of common shares (note 19)	**97**	18
Issue of preferred shares (note 19)	**200**	–
Redemption of preferred shares (note 19)	**(194)**	–
Issue of limited recourse capital notes (note 19)	**1,500**	–
Limited recourse capital notes issue costs (note 19)	**(13)**	–
Issue of debentures and senior notes (note 15)	**–**	3,713
Repayment of debentures	**–**	(500)
Increase (decrease) in line of credit of subsidiaries	**(764)**	539
Decrease in debentures and other debt instruments	**(4)**	(1)
Share issue costs (note 19)	**(3)**	–
Dividends paid on common shares	**(1,677)**	(1,626)
Dividends paid on preferred shares (note 20)	**(134)**	(133)
	(992)	2,010
Investment Activities		
Bond sales and maturities	**27,288**	22,650
Mortgage loan repayments	**3,276**	2,339
Stock sales	**6,286**	3,859
Investment property sales	**40**	73
Change in loans to policyholders	**64**	84
Business acquisitions, net of cash and cash equivalents acquired (note 3)	**(380)**	(1,403)
Sale of businesses, net of cash and cash equivalents in subsidiaries	**–**	281
Investment in bonds	**(35,169)**	(27,942)
Investment in mortgage loans	**(4,574)**	(3,377)
Investment in stocks	**(7,073)**	(4,285)
Investment in investment properties	**(970)**	(481)
	(11,212)	(8,202)
Effect of changes in exchange rates on cash and cash equivalents	**(40)**	(100)
Increase (decrease) in cash and cash equivalents	**(1,871)**	3,318
Cash and cash equivalents, beginning of year	**7,946**	4,628
Cash and cash equivalents, end of year	$ **6,075**	$ 7,946
Supplementary cash flow information		
Interest income received	$ **4,965**	$ 4,589
Interest paid	**348**	286
Dividend income received	**382**	333

(in Canadian $ millions except per share amounts)

1. Corporate Information

Great-West Lifeco Inc. (Lifeco or the Company) is a publicly listed company (Toronto Stock Exchange: GWO), incorporated and domiciled in Canada. The registered address of the Company is 100 Osborne Street North, Winnipeg, Manitoba, Canada, R3C 1V3. Lifeco is a member of the Power Corporation of Canada (Power Corporation) group of companies and is a subsidiary of Power Corporation.

Lifeco is a financial services holding company with interests in the life insurance, health insurance, retirement savings, investment management and reinsurance businesses, primarily in Canada, the United States and Europe through its operating subsidiaries including The Canada Life Assurance Company (Canada Life), Great-West Life & Annuity Insurance Company (GWL&A) and Putnam Investments, LLC (Putnam).

The consolidated financial statements (financial statements) of the Company as at and for the year ended December 31, 2021 were approved by the Board of Directors on February 9, 2022.

2. Basis of Presentation and Summary of Accounting Policies

The consolidated financial statements of the Company have been prepared in compliance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB). Consistent accounting policies were applied in the preparation of the consolidated financial statements of the subsidiaries of the Company.

Changes in Accounting Policies

The Company adopted the *Interest Rate Benchmark Reform – Phase 2* amendments to IFRS for IAS 39, *Financial Instruments: Recognition and Measurement*, IFRS 7, *Financial Instruments: Disclosures*, IFRS 4, *Insurance Contracts* and IFRS 16, *Leases*, effective January 1, 2021. The adoption of these amendments did not have a significant impact on the Company's consolidated financial statements.

Basis of Consolidation

The consolidated financial statements of the Company were prepared as at and for the year ended December 31, 2021 with comparative information as at and for the year ended December 31, 2020. Subsidiaries are fully consolidated from the date of acquisition, being the date on which the Company obtains control, and continue to be consolidated until the date that such control ceases. The Company has control when it has the power to direct the relevant activities, has significant exposure to variable returns from these activities and has the ability to use its power to affect the variable returns. All intercompany balances and transactions, including income and expenses, profits or losses and dividends, are eliminated on consolidation.

Impact of COVID-19 on Significant Judgments, Estimates and Assumptions

The COVID-19 pandemic has continued to result in uncertainty in global financial markets and the economic environment in which the Company operates. The duration and impact of the COVID-19 pandemic continues to be unknown at this time, as is the efficacy of the associated fiscal and monetary interventions by governments and central banks.

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, as well as prevailing health and mortality experience.

The provision for future credit losses within the Company's insurance contract liabilities relies upon investment credit ratings. In addition to its own credit assessments, the Company's practice is to use third party independent credit ratings where available. Management judgment is required when setting credit ratings for instruments that do not have a third party credit rating. Given rapid market changes, third party credit rating changes may lag developments in the current environment.

The fair value of portfolio investments (note 6), the valuation of goodwill and other intangible assets (note 10), the valuation of insurance contract liabilities (note 13) and the recoverability of deferred tax asset carrying values (note 26) reflect management's judgment.

Given the uncertainty surrounding the current environment, the actual financial results could differ from the estimates made in preparation of these financial statements.

Use of Significant Judgments, Estimates and Assumptions

In preparation of these consolidated financial statements, management is required to make significant judgments, estimates and assumptions that affect the reported amounts of assets, liabilities, net earnings and related disclosures. Although some uncertainty is inherent in these judgments and estimates, management believes that the amounts recorded are reasonable. Key sources of estimation uncertainty and areas where significant judgments have been made are listed below and discussed throughout the notes to these consolidated financial statements including:

- Management uses judgment to determine the fair value of assets acquired and liabilities assumed in a business combination.
- Management uses independent qualified appraisal services to determine the fair value of investment properties, which utilize judgments and estimates. These appraisals are adjusted by applying management judgments and estimates for material changes in property cash flows, capital expenditures or general market conditions (note 6).

2. Basis of Presentation and Summary of Accounting Policies (cont'd)

- Management uses internal valuation models which utilize judgments and estimates to determine the fair value of equity release mortgages. These valuations are adjusted by applying management judgments and estimates for material changes in projected asset cash flows, and discount rates (note 6).
- In the determination of the fair value of financial instruments, the Company's management exercises judgment in the determination of fair value inputs, particularly those items categorized within level 3 of the fair value hierarchy (note 9).
- Cash generating units for indefinite life intangible assets and cash generating unit groupings for goodwill have been determined by management as the lowest level that the assets are monitored for internal reporting purposes, which requires management judgment in the determination of the lowest level of monitoring (note 10).
- Management evaluates the future benefit for initial recognition and measurement of goodwill and intangible assets as well as testing the recoverable amounts. The determination of the carrying value and recoverable amounts of the cash generating unit groupings for goodwill and cash generating units for intangible assets relies upon the determination of fair value or value-in-use using valuation methodologies (note 10).
- Judgments are used by management in determining whether deferred acquisition costs and deferred income reserves can be recognized on the Consolidated Balance Sheets. Deferred acquisition costs are recognized if management determines the costs meet the definition of an asset and are incremental and related to the issuance of the investment contract. Deferred income reserves are amortized on a straight-line basis over the term of the policy (notes 12 and 17).
- Management uses judgment to evaluate the classification of insurance and reinsurance contracts to determine whether these arrangements should be accounted for as insurance, investment or service contracts.
- The actuarial assumptions, such as interest rates, inflation, policyholder behaviour, mortality and morbidity of policyholders, used in the valuation of insurance and certain investment contract liabilities under the Canadian Asset Liability Method require significant judgment and estimation (note 13).
- The actuarial assumptions used in determining the expense and benefit obligations for the Company's defined benefit pension plans and other post-employment benefits requires significant judgment and estimation. Management reviews previous experience of its plan members and market conditions including interest rates and inflation rates in evaluating the assumptions used in determining the expense for the current year (note 23).
- The Company operates within various tax jurisdictions where significant management judgments and estimates are required when interpreting the relevant tax laws, regulations and legislation in the determination of the Company's tax provisions and the carrying amounts of its tax assets and liabilities (note 26).
- Management applies judgment in assessing the recoverability of the deferred income tax asset carrying values based on future years' taxable income projections (note 26).
- Legal and other provisions are recognized resulting from a past event which, in the judgment of management, has resulted in a probable outflow of economic resources which would be passed to a third-party to settle the obligation. Management uses judgment to evaluate the possible outcomes and risks in determining the best estimate of the provision at the balance sheet date (note 29).
- The operating segments of the Company are the segments reviewed by the Company's Chief Executive Officer to assess performance and allocate resources within the Company. Management applies judgment in the aggregation of the business units into the Company's operating segments (note 31).
- The Company consolidates all subsidiaries and entities which management determines that the Company controls. Control is evaluated on the ability of the Company to direct the activities of the subsidiary or entity to derive variable returns and management uses judgment in determining whether control exists. Judgment is exercised in the evaluation of the variable returns and in determining the extent to which the Company has the ability to exercise its power to generate variable returns.
- Management uses judgments, such as the determination of whether the Company retains the primary obligation with a client in sub-advisor arrangements. Where the Company retains the primary obligation to the client, revenue and expenses are recorded on a gross basis.
- Within the Consolidated Statements of Cash Flows, purchases and sales of portfolio investments are recorded within investment activities due to management's judgment that these investing activities are long-term in nature.
- The results of the Company reflect management's judgments regarding the impact of prevailing global credit, equity and foreign exchange market conditions. 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 third-party independent credit ratings where available. Management judgment is required when setting credit ratings for instruments that do not have a third-party rating.

The significant accounting policies are as follows:

(a) Portfolio Investments

Portfolio investments include bonds, mortgage loans, stocks and investment properties. Portfolio investments are classified as fair value through profit or loss, available-for-sale, held-to-maturity, loans and receivables, equity-method investments or as non-financial instruments based on management's intention relating to the purpose and nature of the instrument or characteristics of the investment. The Company has not classified any investments as held-to-maturity.

Investments in bonds and stocks normally actively traded on a public market or where fair value can be reliably measured are either designated or classified as fair value through profit or loss or classified as available-for-sale on a trade date basis. Equity release mortgages are designated as fair value through profit or loss. A financial asset is designated as fair value through profit or loss on initial recognition if it eliminates or significantly reduces an accounting mismatch. Changes in the fair value of financial assets designated as fair value through profit or loss are generally offset by changes in insurance contract liabilities, since the measurement of insurance contract liabilities is determined with reference to the assets supporting the liabilities. A financial asset is classified as fair value through profit or loss on initial recognition if it is part of a portfolio that is actively traded for the purpose of earning investment income. Fair value through profit or loss investments are recognized at fair value on the Consolidated Balance Sheets with realized and unrealized gains and losses reported in the Consolidated Statements of Earnings. Available-for-sale investments are recognized at fair value on the Consolidated Balance Sheets with unrealized gains and losses recorded in other comprehensive income. Realized gains and losses on available-for-sale investments are reclassified from other comprehensive income and recorded in the Consolidated Statements of Earnings when the investment is sold. Interest income earned on both fair value through profit or loss and available-for-sale bonds is calculated using the effective interest method and is recorded as net investment income in the Consolidated Statements of Earnings.

Investments in stocks where a fair value cannot be measured reliably are classified as available-for-sale and carried at cost. Investments in stocks for which the Company exerts significant influence over but does not control are accounted for using the equity method of accounting. Investments in stocks over which the Company exerts significant influence but does not control include the Company's investment in an affiliated company, IGM Financial Inc. (IGM), a member of the Power Corporation group of companies.

Investments in mortgages and bonds not normally actively traded on a public market are classified as loans and receivables and are carried at amortized cost net of any allowance for credit losses. Interest income earned and realized gains and losses on the sale of investments classified as loans and receivables are recorded in the Consolidated Statements of Earnings and included in net investment income.

Investment properties are real estate held to earn rental income or for capital appreciation. Investment properties are initially measured at cost and subsequently carried at fair value on the Consolidated Balance Sheets. All changes in fair value are recorded as net investment income in the Consolidated Statements of Earnings. Properties held to earn rental income or for capital appreciation that have an insignificant portion that is owner occupied or where there is no intent to occupy on a long-term basis are classified as investment properties. Properties that do not meet these criteria are classified as owner occupied properties. Property that is leased that would otherwise be classified as investment property if owned by the Company is also included within investment properties.

Fair Value Measurement

Financial instrument carrying values necessarily reflect the prevailing market liquidity and the liquidity premiums embedded within the market pricing methods that the Company relies upon.

Fair value movement on the assets supporting insurance contract liabilities is a major factor in the movement of insurance contract liabilities. Changes in the fair value of bonds designated or classified as fair value through profit or loss that support insurance and investment contract liabilities are largely offset by corresponding changes in the fair value of liabilities except when the bond has been deemed impaired.

The following is a description of the methodologies used to value instruments carried at fair value:

Bonds – Fair Value Through Profit or Loss and Available-for-Sale

Fair values for bonds classified and designated as fair value through profit or loss or available-for-sale are determined with reference to quoted market bid prices primarily provided by third-party independent pricing sources. Where prices are not quoted in an active market, fair values are determined by valuation models. The Company maximizes the use of observable inputs when measuring fair value. The Company obtains quoted prices in active markets, when available, for identical assets at the balance sheet date to measure bonds at fair value in its fair value through profit or loss and available-for-sale portfolios.

The Company estimates the fair value of bonds not traded in active markets by referring to actively traded securities with similar attributes, dealer quotations, matrix pricing methodology, discounted cash flow analyses and/or internal valuation models. This methodology considers such factors as the issuer's industry, the security's rating, term, coupon rate and position in the capital structure of the issuer, as well as, yield curves, credit curves, prepayment rates and other relevant factors. For bonds that are not traded in active markets, valuations are adjusted to reflect illiquidity, and such adjustments generally are based on available market evidence. In the absence of such evidence, management's best estimate is used.

Bonds and Mortgages – Loans and Receivables

For disclosure purposes only, fair values for bonds and mortgages classified as loans and receivables are determined by discounting expected future cash flows using current market rates for similar instruments. Valuation inputs typically include benchmark yields and risk-adjusted spreads based on current lending activities and market activity.

Equity Release Mortgages – Fair Value Through Profit or Loss

There are no market observable prices for equity release mortgages; therefore an internal valuation model is used discounting expected future cash flows and includes consideration of the embedded no negative equity guarantee. Inputs to the model include market observable inputs such as benchmark yields and risk-adjusted spreads. Non market observable inputs include property growth and volatility rates, expected rates of voluntary redemptions, death, moving to long term care and interest cessation assumptions and the value of the no negative equity guarantee.

Stocks – Fair Value Through Profit or Loss and Available-for-Sale

Fair values for stocks traded on an active market 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 is typically based upon alternative valuation techniques such as discounted cash flow analysis, review of price movement relative to the market and utilization of information provided by the underlying investment manager. The Company maximizes the use of observable inputs when measuring fair value. The Company obtains quoted prices in active markets, when available, for identical assets at the balance sheet date to measure stocks at fair value in its fair value through profit or loss and available-for-sale portfolios.

Investment Properties

Fair values for investment properties are determined using independent qualified 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. The determination of the fair value of investment property requires the use of estimates including future cash flows (such as future leasing assumptions, rental rates, capital and operating expenditures) and discount, reversionary and overall capitalization rates applicable to the asset based on current market conditions. Investment property under construction is valued at fair value if such values can be reliably determined; otherwise they are recorded at cost.

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 objective evidence that timely collection of future cash flows can no longer be reliably estimated. 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 net realizable value. For impaired available-for-sale bonds recorded at fair value, the accumulated loss recorded in accumulated other comprehensive income 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 recorded in net investment income, therefore, in the event of an impairment, the reduction will be recorded in net investment income.

Securities Lending

The Company engages in securities lending through its securities custodians as lending agents. Loaned securities are not derecognized, and continue to be reported within invested assets, as the Company retains substantial risks and rewards and economic benefits related to the loaned securities.

(b) Transaction Costs

Transaction costs are expensed as incurred for financial instruments classified as fair value through profit or loss. Transaction costs for financial assets classified as available-for-sale or loans and receivables are added to the value of the instrument at acquisition and taken into net earnings using the effective interest method. Transaction costs for financial liabilities classified as other than fair value through profit or loss are included in the value of the instrument issued and taken into net earnings using the effective interest method.

(c) Cash and Cash Equivalents

Cash and cash equivalents comprise cash, current operating accounts, overnight bank and term deposits with maturities of three months or less held for the purpose of meeting short-term cash requirements. Net payments in transit and overdraft bank balances are included in other liabilities.

(d) Trading Account Assets

Trading account assets consist of investments in sponsored funds, open ended investment companies and sponsored unit-trusts, which are carried at fair value based on the net asset value of these funds. Investments in these assets are included in other assets on the Consolidated Balance Sheets with realized and unrealized gains and losses reported in the Consolidated Statements of Earnings.

(e) Debentures and Other Debt Instruments and Capital Trust Securities

Debentures and other debt instruments and capital trust securities are initially recorded on the Consolidated Balance Sheets at fair value and subsequently carried at amortized cost using the effective interest method with amortization expense recorded in financing charges in the Consolidated Statements of Earnings. These liabilities are derecognized when the obligation is cancelled or redeemed.

(f) Other Assets and Other Liabilities

Other assets, which include prepaid expenses, deferred acquisition costs, finance leases receivable, right-of-use assets and miscellaneous other assets, are measured at cost or amortized cost. Other liabilities, which include deferred income reserves, bank overdraft, lease liabilities and other miscellaneous liabilities are measured at cost or amortized cost.

Provisions are recognized within other liabilities when the Company has a present obligation, either legal or constructive, resulting from a past event, and in management's judgment, it is probable that an outflow of economic resources will be required to settle the obligation and a reliable estimate can be made of the amount. The amount recognized for provisions are management's best estimate at the balance sheet date. The Company recognizes a provision for restructuring when a detailed formal plan for the restructuring has been established and that the plan has raised a valid expectation in those affected that the restructuring will occur.

Pension and other post-employment benefits also included within other assets and other liabilities are measured in accordance with note 2(x).

(g) Disposal Group Classified as Held For Sale

Disposal groups are classified as held for sale when the carrying amount will be recovered through a sale transaction rather than continuing use. The fair value of a disposal group is measured at the lower of its carrying amount and fair value less costs to sell. Individual assets and liabilities in a disposal group not subject to these measurement requirements include financial assets, investment properties and insurance contract liabilities. These assets and liabilities are measured in accordance with the relevant accounting policies described for those assets and liabilities included in this note before the disposal group as a whole is measured to the lower of its carrying amount and fair value less cost to sell. Any impairment loss for the disposal group is recognized as a reduction to the carrying amount for the portion of the disposal group under the measurement requirements for IFRS 5, *Non-Current Assets Held for Sale and Discontinued Operations*.

Disposal group assets and liabilities classified as held for sale are presented separately on the Company's Consolidated Balance Sheets. Gains and losses from disposal groups held for sale are presented separately in the Company's Consolidated Statements of Earnings.

(h) Derivative Financial Instruments

The Company uses derivative products as risk management instruments to hedge or manage asset, liability and capital positions, including fee and investment income. The Company's policy guidelines prohibit the use of derivative instruments for speculative trading purposes.

The Company includes disclosure of the maximum credit risk, future credit exposure, credit risk equivalent and risk weighted equivalent in note 28 as prescribed by the Office of the Superintendent of Financial Institutions (OSFI) in Canada.

All derivatives including those that are embedded in financial and non-financial contracts that are not closely related to the host contracts are recorded at fair value on the Consolidated Balance Sheets. The method of recognizing unrealized and realized fair value gains and losses depends on whether the derivatives are designated as hedging instruments. For derivatives that are not designated as hedging instruments, unrealized and realized gains and losses are recorded in net investment income in the Consolidated Statements of Earnings. For derivatives designated as hedging instruments, unrealized and realized gains and losses are recognized according to the nature of the hedged item.

Derivatives are valued using market transactions and other market evidence whenever possible, including market based inputs to models, broker or dealer quotations or alternative pricing sources with reasonable levels of price transparency. When models are used, the selection of a particular model to value a derivative depends on the contractual terms of, and specific risks inherent in, the instrument, as well as the availability of pricing information in the market. The Company generally uses similar models to value similar instruments. Valuation models require a variety of inputs, including contractual terms, market prices and rates, yield curves, credit curves, measures of volatility, prepayment rates and correlations of such inputs.

To qualify for hedge accounting, the relationship between the hedged item and the hedging instrument must meet several strict conditions on documentation, probability of occurrence, hedge effectiveness and reliability of measurement. If these conditions are not met, the relationship does not qualify for hedge accounting treatment and both the hedged item and the hedging instrument are reported independently as if there was no hedging relationship.

Where a hedging relationship exists, the Company documents all relationships between hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking various hedge transactions. This process includes linking derivatives that are used in hedging transactions to specific assets and liabilities on the Consolidated Balance Sheets or to specific firm commitments or forecasted transactions. The Company also assesses, both at the hedge's inception and on an ongoing basis, whether derivatives that are used in hedging transactions are effective in offsetting changes in fair values or cash flows of hedged items. Hedge effectiveness is reviewed quarterly through correlation testing. Hedge accounting is discontinued when the hedging no longer qualifies for hedge accounting.

Derivatives not designated as hedges for accounting purposes

For derivative investments not designated as accounting hedges, changes in fair value are recorded in net investment income.

Fair value hedges

For fair value hedges, changes in fair value of both the hedging instrument and the hedged risk are recorded in net investment income and consequently any ineffective portion of the hedge is recorded immediately in net investment income.

The Company currently uses foreign exchange forward contracts designated as fair value hedges.

Cash flow hedges

For cash flow hedges, the effective portion of the changes in fair value of the hedging instrument is recorded in the same manner as the hedged item while the ineffective portion is recognized immediately in net investment income. Gains and losses that accumulate in other comprehensive income are recorded in net investment income in the same period the hedged item affects net earnings. Gains and losses on cash flow hedges are immediately reclassified from other comprehensive income to net investment income if and when it is probable that a forecasted transaction is no longer expected to occur.

The Company currently uses interest rate swaps and equity total return swaps designated as cash flow hedges.

Net investment hedges

For net investment hedges, the effective portion of changes in the fair value of the hedging instrument are recorded in other comprehensive income while the ineffective portion is recognized immediately in net investment income. The unrealized foreign exchange gains (losses) on the instruments are recorded within accumulated other comprehensive income and will be reclassified into net earnings when the Company disposes of the foreign operation.

The Company currently uses cross-currency swaps, foreign exchange forward contracts, and debt instruments designated as net investment hedges.

(i) Embedded Derivatives

An embedded derivative is a component of a host contract that modifies the cash flows of the host contract in a manner similar to a derivative, according to a specified interest rate, financial instrument price, foreign exchange rate, underlying index or other variable. Embedded derivatives are treated as separate contracts and are recorded at fair value if their economic characteristics and risks are not closely related to those of the host contract and the host contract is not itself recorded at fair value through the Consolidated Statements of Earnings. Embedded derivatives that meet the definition of an insurance contract are accounted for and measured as an insurance contract.

(j) Foreign Currency Translation

The Company operates with multiple functional currencies. The Company's consolidated financial statements are presented in Canadian dollars as this presentation is most meaningful to financial statement users. For those subsidiaries with different functional currencies, exchange rate differences arising from the translation of monetary items that form part of the net investment in the foreign operation are recorded in unrealized foreign exchange gains (losses) on translation of foreign operations in other comprehensive income.

For the purpose of presenting consolidated financial statements, assets and liabilities are translated into Canadian dollars at the rate of exchange prevailing at the balance sheet dates and all income and expense items are translated at an average of daily rates. Unrealized foreign currency translation gains and losses on translation of the Company's net investment in its foreign operations are presented separately as a component of other comprehensive income. Unrealized gains and losses will be recognized proportionately in net investment income in the Consolidated Statements of Earnings when there has been a disposal of the investment in the foreign operations.

Foreign currency translation gains and losses on foreign currency transactions of the Company are included in net investment income.

(k) Loans to Policyholders

Loans to policyholders are classified as loans and receivables and measured at amortized cost. Loans to policyholders are shown at their unpaid principal balance and are fully secured by the cash surrender values of the policies. Carrying value of loans to policyholders approximates their fair value.

(l) Reinsurance Contracts

The Company, in the normal course of business, is a user of reinsurance in order to limit the potential for losses arising from certain exposures and a provider of reinsurance. Assumed reinsurance refers to the acceptance of certain insurance risks by the Company underwritten by another company. Ceded reinsurance refers to the transfer of insurance risk, along with the respective premiums, to one or more reinsurers who will share the risks. To the extent that assuming reinsurers are unable to meet their obligations, the Company remains liable to its policyholders for the portion reinsured. Consequently, allowances are made for reinsurance contracts which are deemed uncollectible.

Reinsurance contracts are insurance contracts and undergo the classification as described within the Insurance and Investment Contract Liabilities section of this note. Assumed reinsurance premiums, commissions and claim settlements, as well as the reinsurance assets associated with insurance and investment contracts, are accounted for in accordance with the terms and conditions of the underlying reinsurance contract. Reinsurance assets are reviewed for impairment on a regular basis for any events that may trigger impairment. The Company considers various factors in the impairment evaluation process, including but not limited to, collectability of amounts due under the terms of the contract. The carrying amount of a reinsurance asset is adjusted through an allowance account with any impairment loss being recorded in the Consolidated Statements of Earnings.

Any gains or losses on buying reinsurance are recognized in the Consolidated Statements of Earnings immediately at the date of purchase in accordance with the Canadian Asset Liability Method.

Assets and liabilities related to reinsurance are reported on a gross basis on the Consolidated Balance Sheets. The amount of liabilities ceded to reinsurers is estimated in a manner consistent with the claim liability associated with reinsured risks.

(m) Funds Held by Ceding Insurers/Funds Held Under Reinsurance Contracts

On the asset side, funds held by ceding insurers are assets that would normally be paid to the Company but are withheld by the cedant to reduce potential credit risk. Under certain forms of reinsurance contracts it is customary for the cedant to retain amounts on a funds withheld basis supporting the insurance or investment contract liabilities ceded. For the funds withheld assets where the underlying asset portfolio is managed by the Company, the credit risk is retained by the Company. The funds withheld balance where the Company assumes the credit risk is measured at the fair value of the underlying asset portfolio with the change in fair value recorded in net investment income. See note 7 for funds held by ceding insurers that are managed by the Company. Other funds held by ceding insurers are general obligations of the cedant and serve as collateral for insurance contract liabilities assumed from cedants. Funds withheld assets on these contracts do not have fixed maturity dates, their release generally being dependent on the run-off of the corresponding insurance contract liabilities.

On the liability side, funds held under reinsurance contracts consist mainly of amounts retained by the Company from ceded business written on a funds withheld basis. The Company withholds assets related to ceded insurance contract liabilities in order to reduce credit risk.

(n) Business Combinations, Goodwill and Intangible Assets

Business combinations are accounted for using the acquisition method. The Company identifies and classifies, in accordance with the Company's accounting policies, all assets acquired and liabilities assumed as at the acquisition date. Goodwill represents the excess of purchase consideration over the fair value of net assets of the acquired subsidiaries of the Company. Following initial recognition, goodwill is measured at cost less accumulated impairment losses.

Intangible assets represent finite life and indefinite life intangible assets of acquired subsidiaries of the Company and software acquired or internally developed by the Company. Finite life intangible assets include the value of technology/software, certain customer contracts and distribution channels. These finite life intangible assets are amortized over their estimated useful lives, typically ranging between 3 and 30 years.

Indefinite life intangible assets include brands and trademarks, certain customer contracts and the shareholders' portion of acquired future participating account profits. Amounts are classified as indefinite life intangible assets when based on an analysis of all the relevant factors, there is no foreseeable limit to the period over which the asset is expected to generate net cash inflows for the Company. The identification of indefinite life intangible assets is made by reference to relevant factors such as product life cycles, potential obsolescence, industry stability and competitive position. Following initial recognition, indefinite life intangible assets are measured at cost less accumulated impairment losses.

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 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 cash generating unit 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 cash generating units, 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.

(o) Revenue Recognition

Premiums for all types of insurance contracts, and contracts with limited mortality or morbidity risk, are generally recognized as revenue when due and collection is reasonably assured.

Interest income on bonds and mortgages is recognized and accrued using the effective interest method.

Dividend income is recognized when the right to receive payment is established. This is the ex-dividend date for listed stocks, and usually the notification date or date when the shareholders have approved the dividend for private equity instruments.

Investment property income includes rents earned from tenants under lease agreements and property tax and operating cost recoveries. Rental income leases with contractual rent increases and rent-free periods are recognized on a straight-line basis over the term of the lease.

Fee income includes fees earned from management of segregated fund assets, proprietary mutual fund assets, record-keeping, fees earned on administrative services only Group health contracts, commissions and fees earned from management services. Fee and other income is recognized on the transfer of services to customers for the amount that reflects the consideration expected to be received in exchange for those services promised.

The Company has sub-advisor arrangements where the Company retains the primary obligation with the client; as a result, fee income earned is reported on a gross basis with the corresponding sub-advisor expense recorded in operating and administrative expenses.

(p) Owner Occupied Properties and Fixed Assets

Property held for own use and fixed assets are carried at cost less accumulated depreciation, disposals and impairments. Depreciation is expensed to write-off the cost of assets, over their estimated useful lives, using the straight-line method, on the following bases:

Owner occupied properties	15 – 20 years
Furniture and fixtures	5 – 10 years
Other fixed assets	3 – 10 years

Depreciation methods, useful lives and residual values are reviewed at least annually and adjusted if necessary.

(q) Deferred Acquisition Costs

Included in other assets are deferred acquisition costs related to investment contracts and service contracts. These are recognized as assets if the costs are incremental and incurred due to the contract being issued and are primarily amortized on a straight-line basis over the term of the contract, not to exceed 20 years.

(r) Segregated Funds

Segregated fund assets and liabilities arise from contracts where all financial risks associated with the related assets are borne by policyholders and are presented separately on the Consolidated Balance Sheets. The assets and liabilities are set equal to the fair value of the underlying asset portfolio. Investment income and changes in fair value of the segregated fund assets are offset by a corresponding change in the segregated fund liabilities.

(s) Insurance and Investment Contract Liabilities

Contract Classification

When significant insurance risk exists, the Company's products are classified at contract inception as insurance contracts, in accordance with IFRS 4, *Insurance Contracts* (IFRS 4). Significant insurance risk exists when the Company agrees to compensate policyholders or beneficiaries of the contract for specified uncertain future events that adversely affect the policyholder and whose amount and timing is unknown. Refer to note 13 for discussion of insurance risk.

In the absence of significant insurance risk, the contract is classified as an investment contract or service contract. Investment contracts with discretionary participating features are accounted for in accordance with IFRS 4 and investment contracts without discretionary participating features are accounted for in accordance with IAS 39, *Financial Instruments: Recognition & Measurement*. The Company has not classified any contracts as investment contracts with discretionary participating features.

Investment contracts may be reclassified as insurance contracts after inception if insurance risk becomes significant. A contract that is classified as an insurance contract at contract inception remains as such until all rights and obligations under the contract are extinguished or expire.

Investment contracts are contracts that carry financial risk, which is the risk of a possible future change in one or more of the following: interest rate, commodity price, foreign exchange rate, or credit rating. Refer to note 8 for discussion of Financial Instruments Risk Management.

Measurement

Insurance 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 subsidiary companies 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. 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.

(t) Deferred Income Reserves

Included in other liabilities are deferred income reserves relating to investment contracts. These are amortized on a straight-line basis to recognize the initial policy fees over the policy term, not to exceed 20 years.

(u) Income Taxes

The income tax expense for the period represents the sum of current income tax and deferred income tax. Income tax is recognized as an expense or income in profit or loss except to the extent that it relates to items that are recognized outside profit or loss (whether in other comprehensive income or directly in equity), in which case the income tax is also recognized outside profit or loss.

Current Income Tax

Current income tax is based on taxable income for the year. Current income tax liabilities (assets) for the current and prior periods are measured at the amount expected to be paid to (recovered from) the taxation authorities using the tax rates that have been enacted or substantively enacted at the balance sheet date in each respective jurisdiction. Current income tax assets and current income tax liabilities are offset if a legally enforceable right exists to offset the recognized amounts and the entity intends either to settle on a net basis, or to realize the assets and settle the liabilities simultaneously.

A provision for tax treatment uncertainties which meet the probable threshold for recognition is measured using either the most likely amount or the expected value, depending upon which method provides the better prediction of the resolution of the uncertainty. The provision for tax uncertainties will be classified as current or deferred based on how a disallowance of the underlying uncertain tax treatment would impact the tax provision accrual as of the balance sheet date.

Deferred Income Tax

Deferred income tax is the tax expected to be payable or recoverable on differences arising between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable income and is accounted for using the balance sheet liability method. Deferred income tax liabilities are generally recognized for all taxable temporary differences and deferred income tax assets are recognized to the extent that it is probable that taxable profits will be available against which deductible temporary differences, unused tax losses and carryforwards can be utilized.

Recognition is based on the fact that it is probable that the entity will have taxable profits and/or tax planning opportunities available to allow the deferred income tax asset to be utilized. Changes in circumstances in future periods may adversely impact the assessment of the recoverability. The uncertainty of the recoverability is taken into account in establishing the deferred income tax assets. The Company's annual financial planning process provides a significant basis for the measurement of deferred income tax assets.

Deferred income tax assets and liabilities are measured at the tax rates expected to apply in the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the balance sheet date. Deferred income tax assets and deferred income tax liabilities are offset if a legally enforceable right exists to net current income tax assets against current income tax liabilities and the deferred income taxes relate to the same taxable entity and the same taxation authority.

The carrying amount of deferred income tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred income tax asset to be utilized. Unrecognized deferred income tax assets are reassessed at each balance sheet date and are recognized to the extent that it has become probable that future taxable profit will allow the deferred income tax asset to be recovered.

Deferred income tax liabilities are recognized for taxable temporary differences arising on investments in subsidiaries and associates, except where the group controls the timing of the reversal of the temporary difference and it is probable that the temporary differences will not reverse in the foreseeable future.

(v) Policyholder Benefits

Policyholder benefits include benefits and claims on life insurance contracts, maturity payments, annuity payments and surrenders. Gross benefits and claims for life insurance contracts include the cost of all claims arising during the year and settlement of claims. Death claims and surrenders are recorded on the basis of notifications received. Maturities and annuity payments are recorded when due.

(w) Repurchase Agreements

The Company accounts for certain forward settling to be announced security transactions as derivatives as the Company does not regularly accept delivery of such securities when issued.

(x) Pension Plans and Other Post-Employment Benefits

The Company's subsidiaries maintain contributory and non-contributory defined benefit pension plans for eligible employees and advisors. The Company's subsidiaries also provide post-employment health, dental and life insurance benefits to eligible employees, advisors and their dependents.

The present value of the defined benefit obligations and the related current service cost is determined using the projected unit credit method (note 23). Pension plan assets are recorded at fair value.

For the defined benefit plans of the Company's subsidiaries, 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. To determine the net interest costs (income) recognized in the Consolidated Statements of Earnings, the Company's subsidiaries apply a discount rate to the net benefit liability (asset), where the discount rate is determined by reference to market yields at the beginning of the year on high quality corporate bonds.

For the defined benefit plans of the Company's subsidiaries, re-measurements of the net defined benefit liability (asset) due to asset returns less (greater) than interest income, actuarial losses (gains) and changes in the asset ceiling are recognized in the Consolidated Statements of Comprehensive Income.

The Company's subsidiaries also maintain defined contribution pension plans for eligible employees and advisors. For the defined contribution plans of the Company's subsidiaries, the current service costs are recognized in the Consolidated Statements of Earnings.

(y) Equity

Financial instruments issued by the Company are classified as share capital if they represent a residual interest in the assets of the Company. Preferred share capital is classified as equity if it is non-redeemable, or retractable only at the Company's option and any dividends are discretionary.

Limited recourse capital notes are classified as share capital as the Company has the sole discretion to settle the obligation to noteholders through the issuance of a fixed number of the Company's own equity instruments. Interest incurred on these instruments is expensed within financing charges in the Consolidated Statements of Earnings.

Incremental costs that are directly attributable to the issue of share capital are recognized as a deduction from equity, net of income tax.

Contributed surplus represents the vesting expense on unexercised equity instruments under share-based payment plans.

Accumulated other comprehensive income (loss) represents the total of the unrealized foreign exchange gains (losses) on translation of foreign operations, the unrealized gains (losses) on hedges of the net investment in foreign operations, the unrealized gains (losses) on available-for-sale assets, the unrealized gains (losses) on cash flow hedges, the re-measurements on defined benefit pension and other post-employment benefit plans net of tax and the revaluation surplus on transfer to investment properties, where applicable.

Non-controlling interests in subsidiaries represents the proportion of equity that is attributable to minority shareholders.

Participating account surplus in subsidiaries represents the proportion of equity attributable to the participating account of the Company's subsidiaries.

(z) Share-Based Payments

The Company provides share-based compensation to certain employees and Directors of the Company and its subsidiaries.

The Company follows the fair value based method of accounting for the valuation of compensation expense for shares and share options granted to employees under its stock option plans (note 22). This share-based payment expense is recognized in operating and administrative expenses in the Consolidated Statements of Earnings and as an increase to contributed surplus over the vesting period of the granted options. When options are exercised, the proceeds received, along with the amount in contributed surplus, are transferred to share capital.

The Company and certain of its subsidiaries have Deferred Share Unit Plans (DSU Plans) in which the Directors and certain employees of the Company participate. Units issued to Directors under the DSU Plans vest when granted. Units issued to certain employees under the DSU Plans primarily vest over a three year period. The Company recognizes an increase in operating and administrative expenses for the units granted under the DSU Plans. The Company recognizes a liability for units granted under the DSU Plans which is remeasured at each reporting period based on the market value of the Company's common shares.

Certain employees of the Company are entitled to participate in the Performance Share Unit Plan (PSU Plan). Units issued under the PSU Plan vest over a three year period. The Company uses the fair value method to recognize compensation expense for the units granted under the plan over the vesting period, net of related hedges. The liability is remeasured at fair value at each reporting period.

The Company has an Employee Share Ownership Program (ESOP) where, subject to certain conditions being met, the Company will match contributions up to a maximum amount. The Company's contributions are expensed within operating and administrative expenses as incurred.

(aa) Earnings Per Common Share

Earnings per common share is calculated using net earnings after preferred share dividends and the weighted average number of common shares outstanding. Diluted earnings per share is calculated by adjusting common shareholders' net earnings and the weighted average number of common shares outstanding for the effects of all potential dilutive common shares assuming that all convertible instruments are converted and outstanding options are exercised.

(ab) Leases

Where the Company is the lessee, a right-of-use asset and a lease liability are recognized on the Consolidated Balance Sheets as at the lease commencement date.

Right-of-use assets are initially measured based on the initial amount of lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentive received. Right-of-use assets are included within other assets with the exception of right-of-use assets which meet the definition of investment property which are presented within investment properties and subject to the Company's associated accounting policy. Right-of-use assets presented within other assets are depreciated to the earlier of the useful life of the right-of-use asset or the lease term using the straight-line method. Depreciation expense on right-of-use assets is included within operating and administrative expenses.

Lease liabilities are initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Company shall use the lessee's incremental borrowing rate. Generally, the Company uses the lessee's incremental borrowing rate as its discount rate. The lease liability is measured at amortized cost using the effective interest method and is included within other liabilities. Interest expense on lease liabilities is included within operating and administrative expenses.

The Company has elected to apply a practical expedient not to recognize right-of-use assets and lease liabilities for short-term leases that have a lease term of 12 months or less and leases of low-value assets.

Where the Company is the lessor under an operating lease for its investment property, the assets subject to the lease arrangement are presented within the Consolidated Balance Sheets. Income from these leases is recognized in the Consolidated Statements of Earnings on a straight-line basis over the lease term.

Investments in a lease that transfers substantially all the risks and rewards of ownership to the lessee are classified as a finance lease. The Company is the lessor under a finance lease and the investment is recognized as a receivable at an amount equal to the net investment in the lease, which is represented as the present value of the minimum lease payments due from the lessee and is presented within the Consolidated Balance Sheets. Payments received from the lessee are apportioned between the recognition of finance lease income and the reduction of the finance lease receivable. Income from the finance leases is recognized in the Consolidated Statements of Earnings at a constant periodic rate of return on the Company's net investment in the finance lease.

(ac) Operating Segments

Operating segments have been identified based on internal reports that are regularly reviewed by the Company's Chief Executive Officer to allocate resources and assess performance of segments and for which discrete financial information is available. The Company's operating segments include Canada, United States, Europe, Capital and Risk Solutions, and Lifeco Corporate. The Canada segment comprises the Individual Customer and Group Customer business units. GWL&A (financial services) and Putnam (asset management) are included in the United States segment. The Europe segment comprises United Kingdom, Ireland, and Germany. Reinsurance is reported in the Capital and Risk Solutions segment. The Lifeco Corporate segment represents activities and transactions that are not directly attributable to the measurement of the operating segments of the Company.

2. Basis of Presentation and Summary of Accounting Policies (cont'd)

(ad) Future Accounting Policies

Standard	Summary of Future Changes
IFRS 17 – *Insurance Contracts*	In May 2017, the IASB issued IFRS 17, *Insurance Contracts* (IFRS 17), which will replace IFRS 4, *Insurance Contracts*. In June 2020, the IASB issued amendments to IFRS 17. The amended confirmed effective date for the standard is January 1, 2023. In addition, the IASB confirmed the extension to January 1, 2023 of the exemption for insurers to apply the financial instruments standard, IFRS 9, *Financial Instruments* (IFRS 9), keeping the alignment of the effective dates for IFRS 9 and IFRS 17. The adoption of IFRS 17 is a significant initiative for the Company supported by a formal governance framework and project plan, for which substantial resources are being dedicated. The Company has assembled a project team that is working on implementation which involves preparing the financial reporting systems and processes for reporting under IFRS 17, policy development and operational and change management. The project team is also monitoring developments from the IASB and various industry groups that the Company has representation on. The Company continues to make progress in implementing its project plan, with key policy decisions near final as well as significant progression on the technology solution. IFRS 17 sets out the requirements for the recognition, measurement, presentation and disclosures of insurance contracts a company issues and reinsurance contracts it holds. IFRS 17 introduces three new measurement models depending on the nature of the insurance contracts: the General Measurement Model, the Premium Allocation Approach and the Variable Fee Approach. IFRS 17 requires entities to measure insurance contract liabilities on the balance sheet as the total of: (a) the fulfilment cash flows – the current estimates of amounts that a company expects to collect from premiums and pay out for claims, benefits and expenses, including an adjustment for the timing and risk of those amounts; and (b) the contractual service margin – the future profit for providing insurance coverage. Under IFRS 17, the discount rate used to reflect the time value of money in the fulfillment cash flows must be based on the characteristics of the liability. This is a significant change from IFRS 4 and the Canadian Asset Liability Method, where the discount rate was based on the yield curves of the assets supporting those liabilities (refer to the Company's significant accounting policies in note 2 of these financial statements). The future profit for providing insurance coverage (including impacts of new business) is reflected in the initial recognition of insurance contract liabilities and then recognized into profit or loss over time as the insurance services are provided. IFRS 17 also requires the Company to distinguish between groups of contracts expected to be profit making and groups of contracts expected to be onerous. The Company is required to update the fulfilment cash flows at each reporting date, using current estimates of the amount, timing and uncertainty of cash flows and discount rates. As a result of the new valuation methodologies required under IFRS 17, the Company expects its insurance contract liabilities to increase upon adoption. Specifically, the recognition of the contractual service margin liabilities will also have the effect of reducing accumulated surplus. IFRS 17 will affect how the Company accounts for its insurance contracts and how it reports financial performance in the Consolidated Statements of Earnings, in particular the timing of earnings recognition for insurance contracts. The adoption of IFRS 17 will also have a significant impact on how insurance contract results are presented and disclosed in the consolidated financial statements and on regulatory and tax regimes that are dependent upon IFRS accounting values. The Company is also actively monitoring potential impacts on regulatory capital and the associated ratios and disclosures. OSFI has stated that it intends to maintain capital frameworks consistent with current capital policies and minimizing potential industry-wide capital impacts. The Company continues to assess all these impacts through its global implementation plan, however the change will not impact the economics of the affected businesses or our business model.
IFRS 9 – *Financial Instruments*	In July 2014, the IASB issued a final version of IFRS 9, *Financial Instruments* (IFRS 9) to replace IAS 39, *Financial Instruments: Recognition and Measurement*. 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; • impairment based on an expected loss model; and • hedge accounting that incorporates the risk management practices of an entity. In September 2016, the IASB issued an amendment to IFRS 4, *Insurance Contracts* (IFRS 4). The amendment "Applying IFRS 9, *Financial Instruments* with IFRS 4, *Insurance Contracts*" provides qualifying insurance companies with two options to address the potential volatility associated with implementing the IFRS 9 standard before the new proposed insurance contract standard is effective. The two options are as follows: • *Deferral Approach* – provides the option to defer implementation of IFRS 9 until the effective date of the new insurance contract standard; or • *Overlay Approach* – provides the option to recognize the volatility that could arise when IFRS 9 is applied within other comprehensive income, rather than profit or loss. The Company qualifies for the amendment and is applying the deferral approach to allow adoption of both IFRS 9 and IFRS 17 simultaneously. The disclosure for the measurement and classification of the Company's portfolio investments provides most of the information required by IFRS 9. Upon adoption, the Company does not expect a material change in the level of invested assets, nor a material increase in earnings volatility, however the Company continues to evaluate the impact of the adoption of this standard with the adoption of IFRS 17. In December 2021, the IASB issued a narrow-scope amendment to the transition requirements of IFRS 17. The Amendment, *Initial Application of IFRS 17 and IFRS 9 – Comparative Information (Amendment to IFRS 17)*, provides entities that first apply IFRS 17 and IFRS 9 at the same time with the option to present comparative information about a financial asset as if the classification and measurement requirements of IFRS 9 had been applied to that financial asset before. The option is available on an instrument-by-instrument basis. In applying this option, an entity is not required to apply the impairment requirements of IFRS 9.
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 is evaluating the impact of the adoption of these amendments.

Standard	Summary of Future Changes
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 is evaluating the impact of the adoption 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 is evaluating the impact of the adoption of these amendments.
IAS 37 – *Provisions, Contingent Liabilities, and Contingent Assets*	In May 2020, the IASB issued amendments to IAS 37, *Provisions, Contingent Liabilities, and Contingent Assets*. The amendments specify which costs should be included when assessing whether a contract will be loss-making. These amendments are effective for annual reporting periods beginning on or after January 1, 2022, with early adoption permitted. The Company does not anticipate a significant impact on its consolidated financial statements as a result of this amendment.
Annual Improvements 2018-2020 Cycle	In May 2020, the IASB issued *Annual Improvements 2018-2020 Cycle* as part of its ongoing process to efficiently deal with non-urgent narrow scope amendments to IFRS. Two amendments were included in this issue that are applicable for the Company relating to IFRS 9, *Financial Instruments* and IFRS 16, *Leases*. The amendments are effective January 1, 2022. The Company does not anticipate a significant impact on its consolidated financial statements as a result of the amendment to IFRS 16, *Leases*. The Company continues to evaluate the impact of the adoption of the amendment to IFRS 9, *Financial Instruments* along with the adoption of IFRS 17 on January 1, 2023.

3. Business Acquisitions and Other Transactions

(a) Acquisition of MassMutual Retirement Services Business

On December 31, 2020, GWL&A completed the purchase, via indemnity reinsurance, of the retirement services business of Massachusetts Mutual Life Insurance Company (MassMutual) and assumed the economics and risks associated with the reinsured business. The acquisition strengthens the Company's position as a leader in the U.S. retirement market. The Company anticipates realizing cost synergies through the migration of MassMutual's retirement services business onto the Company's recordkeeping platform. The Company paid a ceding commission of $2,937 (U.S. $2,312) net of working capital adjustments to MassMutual, and funded the transaction with existing cash, short-term debt and $1,973 (U.S. $1,500) in long-term debt issued on September 17, 2020.

During the fourth quarter of 2021, the Company completed its comprehensive valuation of the fair value of the net assets acquired from MassMutual, and the purchase price allocation.

The ceding commission net of working capital adjustments was adjusted from $2,937 to $2,738 (U.S. $2,312 to U.S. $2,156).

Initial goodwill presented in the Company's December 31, 2020 consolidated financial statements of $2,827 (U.S. $2,226), was adjusted to $1,807 (U.S. $1,423). Adjustments were made to the provisional amounts disclosed in the Company's December 31, 2020 consolidated financial statements for the recognition and measurement of intangible assets, assets acquired and liabilities assumed. Intangible assets recognized include customer contracts of $844 (U.S. $665) and proprietary mutual fund contracts of $337 (U.S. $265), which are net of $73 (U.S. $58) of amortization at December 31, 2021.

Comparative information in the Company's consolidated financial statements has not been restated.

The Company determined the fair value of the intangible assets and insurance contract liabilities acquired, using valuation techniques that incorporate projections of cashflows and discount rates. The valuation of intangible assets acquired is determined by applying judgments and estimates for forecasted revenues and earnings, and discount rates. Further, the valuation of the actuarial liabilities assumed are determined by applying judgments and assumptions to determine appropriate valuation models, and projections of cash inflows and outflows using the best estimate of future experience, specifically policyholder behaviour, together with the discount rates.

3. Business Acquisitions and Other Transactions (cont'd)

The amounts assigned to the assets acquired, goodwill, and liabilities assumed on December 31, 2020, and reported as at December 31, 2021 are as follows:

Assets acquired and goodwill	
Cash and cash equivalents	**$ 2,669**
Bonds	**12,084**
Mortgage Loans	**2,287**
Funds held by ceding insurers	**9,981**
Goodwill	**1,807**
Intangible assets	**1,181**
Other assets	**124**
Deferred tax assets	**300**
Investments on account of segregated fund policyholders	**84,785**
Total assets acquired and goodwill	**$ 115,218**
Liabilities assumed	
Insurance contract liabilities	**$ 22,317**
Investment contract liabilities	**5,001**
Accounts payable	**31**
Other liabilities	**346**
Investment and insurance contracts on account of segregated fund policyholders	**84,785**
Total liabilities assumed	**$ 112,480**

The following provides the change in the carrying value from December 31, 2020 to December 31, 2021 of the goodwill on acquisition:

Goodwill previously reported at December 31, 2020	**$ 2,827**
Recognition and measurement of intangible assets	**(1,181)**
Other measurement period adjustments	**161**
Goodwill reported at December 31, 2021	**$ 1,807**

The goodwill represents the excess of the purchase price over the fair value of the net assets, representing the synergies or future economic benefits arising from other assets acquired that are not individually identified and separately recognized in the acquisition of the MassMutual retirement services business. These synergies represent meaningful expense and revenue opportunities which are expected to be accretive to earnings. $533 (U.S. $420) of the goodwill is deductible for tax purposes.

During the year ended December 31, 2021, MassMutual contributed revenue of $2,861 (U.S. $2,262) and net earnings of $199 (U.S. $158). These amounts are included in the Consolidated Statements of Earnings and Comprehensive Income for the year ended December 31, 2021.

(b) Acquisition of Personal Capital Corporation

On August 17, 2020, GWL&A completed the acquisition of 100% of the equity of Personal Capital Corporation. Upon completion of the purchase price allocation in the fourth quarter of 2020, a contingent consideration earn-out provision of $26 (U.S. $20) was recognized, representing management's best estimate of growth in assets under management metrics defined in the Merger Agreement. The contingent consideration provision was increased by $101 (U.S. $80) in 2021 for a total contingent consideration provision of $127 (U.S. $100) at December 31, 2021. The increases in 2021 were due to growth in net new assets above the amount assumed at the date of acquisition.

The Merger Agreement allows for contingent consideration of up to $222 (U.S. $175) based on the achievement of growth in assets under management metrics, payable following measurements through December 31, 2021 and December 31, 2022. Changes in the fair value of the contingent consideration measured in accordance with the Merger Agreement subsequent to the completion of the purchase price allocation are recognized in operating and administrative expenses in the Consolidated Statements of Earnings.

(c) Acquisition of Prudential Retirement Services Business

On July 21, 2021, GWL&A announced that it had entered into an agreement to purchase, through a share purchase and a reinsurance transaction, the full-service retirement business of Prudential Financial, Inc. (Prudential). The acquisition further solidifies the Company's position as a leader in the U.S. retirement market. The Company will assume the economics and risks associated with the business, while Prudential will continue to retain the obligation to the contract holders of the reinsured portion. The Company will pay a total transaction value of approximately U.S. $3,550, and will fund the transaction with $1,500 (U.S. $1,193) of limited recourse capital notes (note 19) and up to U.S. $1,000 of short-term debt, in addition to existing resources. The transaction is expected to close in the first half of 2022, subject to regulatory and customary closing conditions. During the year ended December 31, 2021, the Company incurred transaction expenses of $9 (U.S. $7) which are included within operating and administrative expenses in the Consolidated Statements of Earnings.

(d) Acquisition of Ark Life Assurance Company

On November 1, 2021, Irish Life Group Limited (Irish Life), an indirect wholly-owned subsidiary of the Company, completed the acquisition of Ark Life Assurance Company dac (Ark Life) from Phoenix Group Holdings plc for total cash consideration of $332 (€230). Ark Life is closed to new business and manages a range of pensions, savings and protection policies for its customers in the Irish market.

The initial amounts assigned to the assets acquired, goodwill and liabilities assumed on November 1, 2021, reported as at December 31, 2021 are as follows:

Assets acquired and goodwill	
Cash and cash equivalents	$ 17
Bonds	333
Goodwill	21
Reinsurance assets	1,238
Premiums in the course of collection, accounts and interest receivable	89
Investments on account of segregated fund policyholders	2,844
Total assets acquired and goodwill	$ 4,542
Liabilities assumed	
Insurance contract liabilities	$ 1,257
Investment contract liabilities	43
Other liabilities	66
Investment and insurance contracts on account of segregated fund policyholders	2,844
Total liabilities assumed	$ 4,210

As at December 31, 2021, the accounting for the acquisition is not finalized pending completion of a comprehensive valuation of the net assets acquired. The financial statements at December 31, 2021 reflect management's current best estimate of the purchase price allocation. Final valuation of the assets acquired and liabilities assumed and the completion of the purchase price allocation are expected to occur during the second half of 2022. As at December 31, 2021, provisional amounts for intangible assets have not been separately identified and valued within the assets of the purchase price allocation pending completion of the valuation exercise.

As a result, the excess of the purchase price over the fair value of net assets acquired, representing goodwill of $21 (€15) on the date of acquisition, will be adjusted in future periods.

The goodwill represents the excess of the purchase price over the fair value of the net assets, representing the synergies or future economic benefits arising from other assets acquired that are not individually identified and separately recognized in the acquisition. These synergies represent meaningful expense and revenue opportunities which are expected to be accretive to earnings.

Revenue and net earnings of Ark Life were not significant to the 2021 results of the Company.

(e) Acquisition of ClaimSecure Inc.

On September 1, 2021, Canada Life completed the acquisition of 100% of the equity of ClaimSecure Inc., a healthcare management firm that provides health and dental claim management services to private and public businesses in Canada.

During the fourth quarter of 2021, the comprehensive valuation of the fair value of the net assets acquired including intangible assets and the final purchase price allocation was substantially completed. As a result, initial goodwill presented in the September 30, 2021 interim unaudited financial statements of $93 recognized upon the acquisition was adjusted to $52, due to the recognition and measurement of intangible assets. Revenue and net earnings of ClaimSecure Inc. were not significant to the 2021 results of the Company.

(f) Strategic Relationship with Sagard Holdings

During the fourth quarter of 2021, the Company completed an agreement for a long-term strategic relationship with Sagard Holdings Inc. (Sagard), a wholly-owned subsidiary of Power Corporation, which includes the sale of its United States-based subsidiaries, EverWest Real Estate Investors, LLC and EverWest Advisors, LLC (EverWest) to Sagard, in exchange for a minority shareholding in Sagard's subsidiary, Sagard Holdings Management Inc. EverWest was a wholly-owned subsidiary of Canada Life and its principal activity is real estate investment management. Sagard is a related party. Therefore, the transaction was reviewed and approved by the Company's Conduct Review Committee and certain aspects involving Canada Life were reviewed and approved by its Conduct Review Committee. The carrying value, earnings and proceeds from sale of EverWest are immaterial to the Company.

As part of the strategic relationship with Sagard, the Company has made a capital commitment of up to approximately U.S. $500 into certain Sagard strategies. The Company has also committed to investing a further approximately U.S. $2,000 in real estate investments to support EverWest's future growth within Sagard. The strategic relationship with Sagard is intended to advance the Company's strategy to further broaden its access to alternative investment options.

4. Restructuring and Integration Expenses

(a) Canada Restructuring

In 2020, the Company recorded a restructuring provision of $92 pre-tax ($68 in the shareholder account and $24 in the participating account) within restructuring and integration expenses in the Consolidated Statements of Earnings. The after-tax impact of the restructuring provision was $68 ($50 in the shareholder account and $18 in the participating account). The restructuring is associated with the 2020 sale of GLC Asset Management Group Ltd. (GLC) (formerly a wholly-owned subsidiary of Canada Life) to Mackenzie Financial Corporation, changes to the Company's distribution strategy and vision for advisor-based distribution, and termination of the long-term technology infrastructure related sharing agreement with IGM.

At December 31, 2021, the Company has a restructuring provision of $56 ($86 at December 31, 2020) remaining in other liabilities. The Company expects to pay out substantially all of these amounts by December 31, 2022. The change in the restructuring provision for the Canada restructuring is set out below:

	2021	2020
Balance, beginning of year	**$ 86**	$ –
Restructuring expenses	**–**	92
Amounts used	**(30)**	(6)
Balance, end of year	**$ 56**	$ 86

(b) GWL&A Restructuring

The Company recorded integration expenses of $74 ($5 in 2020) and restructuring expenses of $10 ($37 in 2020) in the Consolidated Statements of Earnings during year ended December 31, 2021. The restructuring is primarily attributable to additional staff reductions and other exit costs related to the Company's acquisition of the MassMutual retirement services business (note 3).

At December 31, 2021, the Company has a restructuring provision of $19 ($37 at December 31, 2020) remaining in other liabilities. The change in the restructuring provision for the GWL&A restructuring is set out below:

	2021	2020
Balance, beginning of year	**$ 37**	$ –
Restructuring expenses	**10**	37
Amounts used	**(28)**	–
Balance, end of year	**$ 19**	$ 37

The Company expects to pay out a significant portion of these amounts during 2022. The Company expects to incur further restructuring and integration expenses associated with the MassMutual acquisition (note 3) in 2022.

5. Cash and Cash Equivalents

Cash and cash equivalents include amounts held at the Lifeco holding company level and amounts held in Lifeco's consolidated subsidiary companies.

	2021	2020
Cash	$ 3,202	$ 2,978
Short-term deposits	2,873	4,968
Total	$ 6,075	$ 7,946

At December 31, 2021, cash and short-term deposits of $1,303 were restricted for use by the Company ($2,886 at December 31, 2020) in respect of cash held in trust for reinsurance agreements or with regulatory authorities, cash held under certain indemnity arrangements, client monies held by brokers and cash held in escrow.

6. Portfolio Investments

(a) Carrying values and estimated fair values of portfolio investments are as follows:

	2021		2020	
	Carrying value	Fair value	Carrying value	Fair value
Bonds				
Designated fair value through profit or loss (1)	$ 103,645	$ 103,645	$ 100,839	$ 100,839
Classified fair value through profit or loss (1)	168	168	2,053	2,053
Available-for-sale	12,123	12,123	11,352	11,352
Loans and receivables	24,676	26,717	23,348	26,545
	140,612	142,653	137,592	140,789
Mortgage loans				
Residential				
Designated fair value through profit or loss (1)	2,609	2,609	2,020	2,020
Loans and receivables	9,580	9,860	9,416	10,024
	12,189	12,469	11,436	12,044
Commercial	16,663	17,189	16,367	17,589
	28,852	29,658	27,803	29,633
Stocks				
Designated fair value through profit or loss (1)	13,269	13,269	10,335	10,335
Available-for-sale (2)	209	209	20	20
Available-for-sale, at cost (2)(3)	124	124	163	163
Equity method	581	633	482	445
	14,183	14,235	11,000	10,963
Investment properties	7,763	7,763	6,270	6,270
Total	$ 191,410	$ 194,309	$ 182,665	$ 187,655

(1) A financial asset is designated as fair value through profit or loss on initial recognition if it eliminates or significantly reduces an accounting mismatch. Changes in the fair value of financial assets designated as fair value through profit or loss are generally offset by changes in insurance contract liabilities, since the measurement of insurance contract liabilities is determined with reference to the assets supporting the liabilities.

A financial asset is classified as fair value through profit or loss on initial recognition if it is part of a portfolio that is actively traded for the purpose of earning investment income.

(2) During 2021, reliable measure of fair value was identified for certain stocks previously classified as available-for-sale, at cost. These stocks had a carrying value of $40 and were remeasured at a fair value of $147. The difference between the carrying value and fair value of $107 was recognized as an unrealized gain on available-for-sale assets in the Consolidated Statements of Comprehensive Income. These stocks are now classified as available-for-sale.

(3) Fair value cannot be reliably measured, therefore the investments are held at cost.

6. Portfolio Investments (cont'd)

(b) Carrying value of bonds and mortgages by term to maturity are as follows:

	2021			
	Term to maturity			
	1 year or less	**Over 1 year to 5 years**	**Over 5 years**	**Total**
Bonds [1]	**$ 11,118**	**$ 28,207**	**$ 101,269**	**$ 140,594**
Mortgage loans [2]	**1,698**	**11,281**	**15,802**	**28,781**
Total	**$ 12,816**	**$ 39,488**	**$ 117,071**	**$ 169,375**

	2020			
	Term to maturity			
	1 year or less	Over 1 year to 5 years	Over 5 years	Total
Bonds [1]	$ 10,690	$ 28,312	$ 98,555	$ 137,557
Mortgage loans [2]	1,727	9,523	16,530	27,780
Total	$ 12,417	$ 37,835	$ 115,085	$ 165,337

(1) Excludes the carrying value of impaired bonds as the ultimate timing of collectability is uncertain.

(2) Excludes the carrying value of impaired mortgage loans as the ultimate timing of collectability is uncertain. Mortgage loans include equity release mortgages which do not have a fixed redemption date. The maturity profile of the portfolio has therefore been estimated based on previous redemption experience.

(c) Certain stocks where equity method earnings are computed are discussed below:

A significant amount of the Company's equity method investments relate to the Company's investment, held through Canada Life, in an affiliated company, IGM, a member of the Power Corporation group of companies, over which it exerts significant influence but does not control. The Company's proportionate share of IGM's earnings is recorded in net investment income in the Consolidated Statements of Earnings. The Company owns 9,200,448 shares of IGM at December 31, 2021 (9,200,518 at December 31, 2020) representing a 3.85% ownership interest (3.86% at December 31, 2020). The Company uses the equity method to account for its investment in IGM as it exercises significant influence. Significant influence arises from several factors, including, but not limited to the following: common control of the Company and IGM by Power Corporation, shared representation on the Boards of Directors of the Company and IGM, interchange of managerial personnel, and certain shared strategic alliances, significant intercompany transactions and service agreements that influence the financial and operating policies of both companies.

	2021	2020
Carrying value, beginning of year	**$ 354**	$ 350
Equity method share of IGM net earnings	**33**	25
Dividends received	**(21)**	(21)
Carrying value, end of year	**$ 366**	$ 354
Share of equity, end of year	**$ 243**	$ 190
Fair value, end of year	**$ 418**	$ 317

The Company and IGM both have a year-end date of December 31. The Company's year-end results are approved and reported before IGM publicly reports its financial result; therefore, the Company reports IGM's financial information by estimating the amount of earnings attributable to the Company, based on prior quarter information as well as other market expectations, to complete equity method accounting. The difference between actual and estimated results is reflected in the subsequent quarter and is not material to the Company's consolidated financial statements.

IGM's financial information as at December 31, 2021 can be obtained in its publicly available information.

At December 31, 2021, IGM owned 37,337,133 (37,337,133 at December 31, 2020) common shares of the Company.

(d) Included in portfolio investments are the following:

(i) Carrying amount of impaired investments

		2021		2020
Impaired amounts by classification				
Fair value through profit or loss	$	14	$	20
Available-for-sale		7		17
Loans and receivables		71		23
Total	$	92	$	60

The carrying amount of impaired investments includes $18 bonds, $71 mortgage loans and $3 stocks at December 31, 2021 ($35 bonds, $23 mortgage loans and $2 stocks at December 31, 2020). The above carrying values for loans and receivables are net of allowances of $28 at December 31, 2021 and $57 at December 31, 2020.

(ii) The allowance for credit losses and changes in the allowance for credit losses related to investments classified as loans and receivables are as follows:

	2021			2020		
	Bonds	Mortgage loans	Total	Bonds	Mortgage loans	Total
Balance, beginning of year	$ –	$ 57	$ 57	$ –	$ 51	$ 51
Net provision for credit losses – in year	–	30	30	–	16	16
Write-offs, net of recoveries	–	(59)	(59)	–	(10)	(10)
Balance, end of year	$ –	$ 28	$ 28	$ –	$ 57	$ 57

The allowance for credit losses is supplemented by the provision for future credit losses included in insurance contract liabilities.

(e) Net investment income comprises the following:

	2021					
	Bonds	Mortgage loans	Stocks	Investment properties	Other	Total
Regular net investment income:						
Investment income earned	$ 4,262	$ 916	$ 391	$ 422	$ 636	$ 6,627
Net realized gains						
Available-for-sale	13	–	14	–	–	27
Other classifications	12	59	7	–	34	112
Net allowances for credit losses on loans and receivables	–	(30)	–	–	–	(30)
Other income (expenses)	–	–	–	(146)	(197)	(343)
	4,287	945	412	276	473	6,393
Changes in fair value through profit or loss assets:						
Classified fair value through profit or loss	(104)	–	–	–	–	(104)
Designated fair value through profit or loss	(4,693)	(121)	2,150	–	70	(2,594)
Recorded at fair value through profit or loss	–	–	–	615	–	615
	(4,797)	(121)	2,150	615	70	(2,083)
Total	$ (510)	$ 824	$ 2,562	$ 891	$ 543	$ 4,310

6. Portfolio Investments (cont'd)

	2020					
	Bonds	Mortgage loans	Stocks	Investment properties	Other	Total
Regular net investment income:						
Investment income earned	$ 3,589	$ 877	$ 357	$ 397	$ 571	$ 5,791
Net realized gains (losses)						
Available-for-sale	146	–	(5)	–	–	141
Other classifications	33	47	245	–	–	325
Net allowances for credit losses on loans and receivables	–	(16)	–	–	–	(16)
Other income (expenses)	–	–	–	(127)	(151)	(278)
	3,768	908	597	270	420	5,963
Changes in fair value through profit or loss assets:						
Classified fair value through profit or loss	78	–	–	–	–	78
Designated fair value through profit or loss	5,154	157	77	–	307	5,695
Recorded at fair value through profit or loss	–	–	–	(74)	–	(74)
	5,232	157	77	(74)	307	5,699
Total	$ 9,000	$ 1,065	$ 674	$ 196	$ 727	$ 11,662

Investment income earned comprises income from investments that are classified as available-for-sale, loans and receivables and investments classified or designated as fair value through profit or loss. Investment income from bonds and mortgages includes interest income and premium and discount amortization. Income from stocks includes dividends, distributions from private equity and equity income from the investment in IGM. Investment properties income includes rental income earned on investment properties, ground rent income earned on leased and sub-leased land, fee recoveries, lease cancellation income, and interest and other investment income earned on investment properties. Other income includes policyholder loan income, foreign exchange gains and losses, income earned from derivative financial instruments and other miscellaneous income.

(f) Transferred Financial Assets

The Company engages in securities lending to generate additional income. The Company's securities custodians are used as lending agents. Collateral, which exceeds the fair value of the loaned securities, is deposited by the borrower with the Company's lending agent and maintained by the lending agent until the underlying security has been returned. The fair value of the loaned securities is monitored on a daily basis by the lending agent who obtains or refunds additional collateral as the fair value of the loaned securities fluctuates. Included in the collateral deposited with the Company's lending agent is cash collateral of $169 at December 31, 2021 ($267 at December 31, 2020). In addition, the securities lending agent indemnifies the Company against borrower risk, meaning that the lending agent agrees contractually to replace securities not returned due to a borrower default. As at December 31, 2021, the Company had loaned securities (which are included in invested assets) with a fair value of $10,525 ($8,921 at December 31, 2020).

7. Funds Held by Ceding Insurers

At December 31, 2021, the Company had amounts on deposit of $17,194 ($18,383 at December 31, 2020) for funds held by ceding insurers on the Consolidated Balance Sheets. Income and expenses arising from the agreements are included in net investment income in the Consolidated Statements of Earnings.

The details of the funds on deposit for certain agreements where the Company has credit risk are as follows:

(a) Carrying values and estimated fair values:

	2021		2020	
	Carrying value	**Fair value**	Carrying value	Fair value
Cash and cash equivalents	**$ 336**	**$ 336**	$ 245	$ 245
Bonds	**14,105**	**14,105**	15,365	15,365
Mortgages	**558**	**558**	578	578
Other assets	**126**	**126**	137	137
Total	**$ 15,125**	**$ 15,125**	$ 16,325	$ 16,325
Supporting:				
Reinsurance liabilities	**$ 14,907**	**$ 14,907**	$ 16,094	$ 16,094
Surplus	**218**	**218**	231	231
Total	**$ 15,125**	**$ 15,125**	$ 16,325	$ 16,325

(b) The following provides details of the carrying value of bonds included in the funds on deposit by issuer and industry sector:

	2021	2020
Bonds issued or guaranteed by:		
Treasuries	**$ 1,032**	$ 843
Government related	**1,463**	1,760
Agency securitized	**183**	287
Non-agency securitized	**1,660**	1,870
Financials	**2,628**	2,989
Communications	**427**	503
Consumer products	**2,031**	2,141
Energy	**644**	589
Industrials	**1,243**	1,420
Technology	**498**	344
Transportation	**404**	466
Utilities	**1,892**	2,101
Total long-term bonds	**14,105**	15,313
Short-term bonds	**–**	52
Total	**$ 14,105**	$ 15,365

(c) The following provides details of the carrying value of mortgages included in the funds on deposit by property type:

	2021	2020
Multi-family residential	**$ 126**	$ 122
Commercial	**432**	456
Total	**$ 558**	$ 578

(d) Asset quality

Bond Portfolio by Credit Rating

	2021	2020
AAA	**$ 1,251**	$ 1,508
AA	**3,721**	3,848
A	**5,222**	5,597
BBB	**3,749**	4,165
BB and lower	**162**	247
Total	**$ 14,105**	$ 15,365

8. Financial Instruments Risk Management

The Company has policies relating to the identification, measurement, management, monitoring and reporting of risks associated with financial instruments. The key risks related to financial instruments are credit risk, liquidity risk and market risk (currency, interest rate and equity). The Risk Committee of the Board of Directors is responsible for the oversight of the Company's key risks.

The following sections describe how the Company manages each of these risks.

(a) Credit Risk

Credit risk is the risk of loss resulting from an obligor's potential inability or unwillingness to fully meet its contractual obligations.

The following policies and procedures are in place to manage this risk:

- Investment and risk policies aim to minimize undue concentration within issuers, connected companies, industries or individual geographies.
- Investment and risk limits specify minimum and maximum limits for each asset class.
- Identification of credit risk through an internal credit risk rating system which includes a detailed assessment of an obligor's creditworthiness. Internal credit risk ratings cannot be higher than the highest rating provided by certain independent ratings companies.
- Portfolios are monitored continuously, and reviewed regularly with the Risk Committee and the Investment Committee of the Board of Directors.
- Credit risk associated with derivative instruments is evaluated quarterly based on conditions that existed at the balance sheet date, using practices that are at least as conservative as those recommended by regulators. The Company manages derivative credit risk by including derivative exposure to aggregate credit exposures measured against rating based obligor limits and through collateral arrangements where possible.
- 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 by setting rating based limits on net ceded exposure by counterparty as well as seeking protection in the form of collateral or funds withheld arrangements where possible.
- Investment guidelines also specify collateral requirements.

(i) Maximum Exposure to Credit Risk

The following summarizes the Company's maximum exposure to credit risk related to financial instruments. The maximum credit exposure is the carrying value of the asset net of any allowances for losses.

	2021	2020
Cash and cash equivalents	**$ 6,075**	$ 7,946
Bonds		
Fair value through profit or loss	**103,813**	102,892
Available-for-sale	**12,123**	11,352
Loans and receivables	**24,676**	23,348
Mortgage loans	**28,852**	27,803
Loans to policyholders	**8,319**	8,387
Funds held by ceding insurers (1)	**17,194**	18,383
Reinsurance assets	**21,138**	22,121
Interest due and accrued	**1,239**	1,320
Accounts receivable	**3,183**	3,080
Premiums in course of collection	**1,944**	1,702
Trading account assets	**1,671**	713
Finance leases receivable	**433**	404
Other assets (2)	**1,196**	965
Derivative assets	**967**	829
Total	**$ 232,823**	$ 231,245

(1) Includes $15,125 ($16,325 at December 31, 2020) of funds held by ceding insurers where the Company retains the credit risk of the assets supporting the liabilities ceded (note 7).

(2) Includes items such as current income taxes receivable and miscellaneous other assets of the Company (note 12).

Credit risk is also mitigated by entering into collateral agreements. The amount and type of collateral required depends on an assessment of the credit risk of the counterparty. Guidelines are implemented regarding the acceptability of types of collateral and the valuation parameters. Management monitors the value of the collateral, requests additional collateral when needed and performs an impairment valuation when applicable. The Company has $318 of collateral received from counterparties as at December 31, 2021 ($211 at December 31, 2020) relating to derivative assets.

As at December 31, 2021, $14,512 of the $21,138 of reinsurance assets are ceded to Protective ($15,690 of $22,121 at December 31, 2020). This concentration risk is mitigated by funds held in trust and other arrangements of $15,963 as at December 31, 2021 ($16,389 at December 31, 2020).

(ii) Concentration of Credit Risk

Concentrations of credit risk arise from exposures to a single obligor, a group of related obligors or groups of obligors that have similar credit risk characteristics and operate in the same geographic region or in similar industries. The characteristics are similar in that changes in economic or political environments may impact their ability to meet obligations as they come due.

The following provides details of the carrying value of bonds by issuer, industry sector and operating segment:

	2021				
	Canada	**United States**	**Europe**	**Capital and Risk Solutions**	**Total**
Bonds issued or guaranteed by:					
Treasuries	**$ 529**	**$ 109**	**$ 10,334**	**$ 4,735**	**$ 15,707**
Government related	**19,501**	**2,183**	**8,694**	**349**	**30,727**
Agency securitized	**178**	**497**	**–**	**17**	**692**
Non-agency securitized	**2,215**	**7,788**	**1,149**	**165**	**11,317**
Financials	**3,794**	**6,251**	**5,748**	**886**	**16,679**
Communications	**1,104**	**1,235**	**1,032**	**113**	**3,484**
Consumer products	**4,029**	**5,461**	**2,412**	**736**	**12,638**
Energy	**2,602**	**2,634**	**482**	**330**	**6,048**
Industrials	**2,092**	**4,707**	**1,393**	**348**	**8,540**
Technology	**729**	**1,732**	**411**	**319**	**3,191**
Transportation	**3,674**	**1,227**	**897**	**135**	**5,933**
Utilities	**9,971**	**5,028**	**4,480**	**506**	**19,985**
Total long-term bonds	**50,418**	**38,852**	**37,032**	**8,639**	**134,941**
Short-term bonds	**2,854**	**1,976**	**644**	**197**	**5,671**
Total	**$ 53,272**	**$ 40,828**	**$ 37,676**	**$ 8,836**	**$ 140,612**

	2020				
	Canada	United States	Europe	Capital and Risk Solutions	Total
Bonds issued or guaranteed by:					
Treasuries	$ 586	$ 272	$ 10,282	$ 1,372	$ 12,512
Government related	20,555	2,308	9,287	316	32,466
Agency securitized	178	926	–	17	1,121
Non-agency securitized	2,057	6,550	1,402	136	10,145
Financials	4,361	6,022	5,880	572	16,835
Communications	1,142	1,338	1,124	98	3,702
Consumer products	4,197	6,127	2,816	762	13,902
Energy	2,453	2,450	675	270	5,848
Industrials	2,022	4,585	1,329	406	8,342
Technology	557	1,324	299	263	2,443
Transportation	3,409	1,394	977	154	5,934
Utilities	10,091	4,485	4,811	553	19,940
Total long-term bonds	51,608	37,781	38,882	4,919	133,190
Short-term bonds	2,332	557	1,066	447	4,402
Total	$ 53,940	$ 38,338	$ 39,948	$ 5,366	$ 137,592

8. Financial Instruments Risk Management (cont'd)

The following provides details of the carrying value of mortgage loans by operating segment:

	2021				
	Canada	United States	Europe	Capital and Risk Solutions	Total
Single family residential	$ 1,979	$ –	$ –	$ –	$ 1,979
Multi-family residential	4,297	2,474	792	38	7,601
Equity release	1,063	–	1,546	–	2,609
Commercial	9,364	3,696	3,553	50	16,663
Total	**$ 16,703**	**$ 6,170**	**$ 5,891**	**$ 88**	**$ 28,852**

	2020				
	Canada	United States	Europe	Capital and Risk Solutions	Total
Single family residential	$ 2,063	$ –	$ –	$ –	$ 2,063
Multi-family residential	4,331	2,297	684	41	7,353
Equity release	759	–	1,261	–	2,020
Commercial	8,883	3,660	3,801	23	16,367
Total	$ 16,036	$ 5,957	$ 5,746	$ 64	$ 27,803

(iii) Asset Quality

Bond Portfolio by Credit Rating

	2021	2020
AAA	$ 20,254	$ 21,820
AA	35,460	35,530
A	48,764	45,673
BBB	35,098	33,382
BB and lower	1,036	1,187
Total	**$ 140,612**	$ 137,592

Derivative Portfolio by Credit Rating

	2021	2020
Over-the-counter contracts (counterparty ratings):		
AA	$ 662	$ 424
A	304	369
BBB	–	35
Exchange-traded	1	1
Total	**$ 967**	$ 829

(iv) Loans Past Due, But Not Impaired

Loans that are past due but not considered impaired are loans for which scheduled payments have not been received, but management has reasonable assurance of collection of the full amount of principal and interest due. The following provides carrying values of the loans past due, but not impaired:

	2021	2020
Less than 30 days	$ 164	$ 17
30 – 90 days	34	28
Greater than 90 days	141	10
Total	**$ 339**	$ 55

(v) The following outlines the future asset credit losses provided for in insurance contract liabilities. These amounts are in addition to the allowance for asset losses included with assets:

	2021	2020
Participating	$ 1,376	$ 1,183
Non-participating	1,895	2,185
Total	**$ 3,271**	$ 3,368

(b) Liquidity Risk

Liquidity risk is the risk that the Company will not be able to meet all cash outflow obligations as they come due. The following policies and procedures are in place to manage this risk:

- The Company closely manages operating liquidity through cash flow matching of assets and liabilities and forecasting earned and required yields, to ensure consistency between policyholder requirements and the yield of assets. Approximately 48% (approximately 48% in 2020) of insurance and investment contract liabilities are non-cashable prior to maturity or claim, with a further 24% approximately (26% in 2020) of insurance and investment contract liabilities subject to fair value adjustments under certain conditions.
- Management closely monitors the solvency and capital positions of its principal subsidiaries opposite liquidity requirements at the holding company. Additional liquidity is available through established lines of credit or via capital market transactions. At December 31, 2021, the Company maintains $950 of liquidity at the Lifeco level through committed lines of credit with Canadian chartered banks. As well, the Company maintains a U.S. $500 revolving credit agreement at Great-West Lifeco U.S. LLC, a U.S. $300 revolving credit agreement with a syndicate of banks for use by Putnam, and a U.S. $50 line of credit at GWL&A.

In the normal course of business the Company enters into contracts that give rise to commitments of future minimum payments that impact short-term and long-term liquidity. The following summarizes the principal repayment schedule for certain of the Company's financial liabilities.

	Payments due by period						
	Total	1 year	2 years	3 years	4 years	5 years	Over 5 years
Debentures and other debt instruments	$ 8,529	$ –	$ 720	$ –	$ 635	$ 720	$ 6,454
Capital trust securities (1)	150	–	–	–	–	–	150
Purchase obligations	436	192	85	44	35	15	65
Pension contributions	306	306	–	–	–	–	–
Total	**$ 9,421**	**$ 498**	**$ 805**	**$ 44**	**$ 670**	**$ 735**	**$ 6,669**

(1) Payments due have not been reduced to reflect that the Company held capital trust securities of $37 principal amount ($53 carrying value).

(c) Market Risk

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate as a result of changes in market factors which include three types: currency risk, interest rate (including related inflation) risk and equity risk.

Caution Related to Risk Sensitivities

These consolidated financial statements include estimates of sensitivities and risk exposure measures for certain risks, such as the sensitivity due to specific changes in interest rate levels projected and market prices as at the valuation date. 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 based on the assumptions outlined above. Given the nature of these calculations, the Company cannot provide assurance that the actual impact on net earnings attributed to shareholders will be as indicated.

8. Financial Instruments Risk Management (cont'd)

(i) Currency Risk

Currency risk relates to the Company operating and holding financial instruments in different currencies. For the assets backing insurance and investment contract liabilities that are not matched by currency, changes in foreign exchange rates can expose the Company to the risk of foreign exchange losses not offset by liability decreases. The Company has net investments in foreign operations. The Company's debt obligations are denominated in Canadian dollars, euros, and U.S. dollars. 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. Strengthening or weakening of the Canadian dollar spot rate compared to the U.S. dollar, British pound and euro spot rates impacts the Company's total equity. Correspondingly, the Company's book value per share and capital ratios monitored by rating agencies are also impacted.

The following policies and procedures are in place to mitigate the Company's exposure to currency risk:

- The Company uses financial measures such as constant currency calculations to monitor the effect of currency translation fluctuations.
- Investments are normally made in the same currency as the liabilities supported by those investments. Segmented Investment Guidelines include maximum tolerances for unhedged currency mismatch exposures.
- For assets backing liabilities not matched by currency, the Company would normally convert the assets back to the currency of the liability using foreign exchange contracts.
- A 10% weakening of the Canadian dollar against foreign currencies would be expected to increase non-participating insurance and investment contract liabilities and their supporting assets by approximately the same amount resulting in an immaterial change to net earnings. A 10% strengthening of the Canadian dollar against foreign currencies would be expected to decrease non-participating insurance and investment contract liabilities and their supporting assets by approximately the same amount resulting in an immaterial change in net earnings.

(ii) Interest Rate Risk

Interest rate risk exists if asset and liability cash flows are not closely matched and interest rates change causing a difference in value between the asset and liability. The following policies and procedures are in place to mitigate the Company's exposure to interest rate risk:

- The Company utilizes a formal process for managing the matching of assets and liabilities. This involves grouping general fund assets and liabilities into segments. Assets in each segment are managed in relation to the liabilities in the segment.
- Interest rate risk is managed by investing in assets that are suitable for the products sold.
- Where these products have benefit or expense payments that are dependent on inflation (inflation-indexed annuities, pensions and disability claims) the Company generally invests in real return instruments to hedge its real dollar liability cash flows. Some protection against changes in the inflation index is 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.
- For products with fixed and highly predictable benefit payments, investments are made in fixed income assets or real estate whose cash flows closely match the liability product cash flows. Where assets are not available to match certain period cash flows, such as long-tail cash flows, a portion of these are invested in equities and the rest are duration matched. Hedging instruments are employed where necessary when there is a lack of suitable permanent investments to minimize loss exposure to interest rate changes. To the extent these cash flows are matched, protection against interest rate change is achieved and any change in the fair value of the assets will be offset by a similar change in the fair value of the liabilities.
- For products with less predictable timing of benefit payments, investments are made in fixed income assets with cash flows of a shorter duration than the anticipated timing of benefit payments, or equities as described below.
- The risk associated with the mismatch in portfolio duration and cash flow, asset prepayment exposure and the pace of asset acquisition are quantified and reviewed regularly.

Projected cash flows from the current assets and liabilities are used in the Canadian Asset Liability Method to determine insurance contract liabilities. Valuation assumptions have been made regarding rates of returns on supporting assets, fixed income, equity and inflation. The valuation assumptions use best estimates of future reinvestment rates and inflation assumptions with an assumed correlation together with margins for adverse deviation set in accordance with professional standards. These margins are necessary to provide for possibilities of misestimation 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.

Projected cash flows from fixed income assets used in actuarial calculations are reduced to provide for potential asset default losses. The net effective yield rate reduction averaged 0.11% in 2021 (0.11% in 2020). The calculation for future credit losses on assets is based on the credit quality of the underlying asset portfolio.

Testing under a number of interest rate scenarios (including increasing, decreasing and fluctuating rates) is done to assess reinvestment risk because the Company's sensitivity to interest rate movements varies at different terms.

The total provision for interest rates 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 provisions 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.

The following table provides information on 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.

	2021		2020	
	1% increase	**1% decrease [1]**	1% increase	1% decrease [1]
Change in interest rates				
Increase (decrease) in non-participating insurance and investment contract liabilities	**$ (219)**	**$ 678**	$ (289)	$ 1,185
Increase (decrease) in net earnings	**$ 197**	**$ (555)**	$ 224	$ (920)

(1) For the 1% decrease, initial risk-free yields are floored at zero, wherever risk-free yields are not currently negative.

(iii) Equity Risk

Equity risk is the uncertainty associated with the valuation of assets and liabilities arising from changes in equity markets and other pricing risk. To mitigate pricing risk, the Company has investment policy guidelines in place that provide for prudent investment in equity markets within clearly defined limits. The risks associated with segregated fund guarantees on lifetime Guaranteed Minimum Withdrawal Benefits have been mitigated through a hedging program using equity futures, currency forwards, and interest rate derivatives.

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 falls in equity values, relative to the change in equity values. Falls in equity values beyond those shown in the table below would have a greater impact on net earnings, relative to the change in equity values.

8. Financial Instruments Risk Management (cont'd)

The following table provides information on the expected impacts 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.

	2021				2020			
	20% increase	**10% increase**	**10% decrease**	**20% decrease**	20% increase	10% increase	10% decrease	20% decrease
Change in publicly traded common stock values								
Increase (decrease) in non-participating insurance and investment contract liabilities	**$ (26)**	**$ (16)**	**$ 22**	**$ 76**	$ (34)	$ (18)	$ 62	$ 264
Increase (decrease) in net earnings	**$ 21**	**$ 13**	**$ (19)**	**$ (66)**	$ 28	$ 15	$ (51)	$ (208)

The following table 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.

	2021				2020			
	10% increase	**5% increase**	**5% decrease**	**10% decrease**	10% increase	5% increase	5% decrease	10% decrease
Change in other non-fixed income asset values								
Increase (decrease) in non-participating insurance and investment contract liabilities	**$ (92)**	**$ (46)**	**$ 38**	**$ 144**	$ (41)	$ (8)	$ 88	$ 138
Increase (decrease) in net earnings	**$ 79**	**$ 39**	**$ (30)**	**$ (112)**	$ 34	$ 6	$ (69)	$ (108)

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 falls.

The best estimate return assumptions for publicly traded common stocks and other non-fixed income assets are primarily based on long-term historical averages. The following provides information on the expected impacts of a 1% increase or 1% decrease in the best estimate assumptions:

	2021		2020	
	1% increase	**1% decrease**	1% increase	1% decrease
Change in best estimate return assumptions				
Increase (decrease) in non-participating insurance contract liabilities	**$ (715)**	**$ 829**	$ (691)	$ 861
Increase (decrease) in net earnings	**$ 567**	**$ (649)**	$ 556	$ (682)

The Company sponsors a number of deferred compensation arrangements for employees where payments to participants are deferred and linked to the performance of the common shares of Lifeco. The Company hedges its exposure to the equity risk associated with its PSU Plan through the use of total return swaps.

(d) Enforceable Master Netting Arrangements or Similar Agreements

The Company enters into International Swaps and Derivative Association's (ISDA's) master agreements for transacting over-the-counter derivatives. The Company receives and pledges collateral according to the related ISDA's Credit Support Annexes. The ISDA's master agreements do not meet the criteria for offsetting on the Consolidated Balance Sheets because they create a right of set-off that is enforceable only in the event of default, insolvency, or bankruptcy.

For exchange-traded derivatives subject to derivative clearing agreements with the exchanges and clearinghouses, there is no provision for set-off at default. Initial margin is excluded from the table within this disclosure as it would become part of a pooled settlement process.

The Company's reverse repurchase agreements are also subject to right of set-off in the event of default. These transactions and agreements include master netting arrangements which provide for the netting of payment obligations between the Company and its counterparties in the event of default.

The table sets out the potential effect on the Company's Consolidated Balance Sheets on financial instruments that have been shown in a gross position where right of set-off exists under certain circumstances that do not qualify for netting on the Consolidated Balance Sheets.

	2021			
		Related amounts not set-off in the Balance Sheet		
	Gross amount of financial instruments presented in the Balance Sheet	Offsetting counterparty position (1)	Financial collateral received/ pledged (2)	Net exposure
Financial instruments – assets				
Derivative financial instruments	$ 967	$ (527)	$ (293)	$ 147
Reverse repurchase agreements (3)	–	–	–	–
Total financial instruments – assets	$ 967	$ (527)	$ (293)	$ 147
Financial instruments – liabilities				
Derivative financial instruments	$ 1,030	$ (527)	$ (279)	$ 224
Total financial instruments – liabilities	$ 1,030	$ (527)	$ (279)	$ 224

	2020			
		Related amounts not set-off in the Balance Sheet		
	Gross amount of financial instruments presented in the Balance Sheet	Offsetting counterparty position (1)	Financial collateral received/ pledged (2)	Net exposure
Financial instruments – assets				
Derivative financial instruments	$ 829	$ (596)	$ (154)	$ 79
Reverse repurchase agreements (3)	4	–	(4)	–
Total financial instruments – assets	$ 833	$ (596)	$ (158)	$ 79
Financial instruments – liabilities				
Derivative financial instruments	$ 1,221	$ (596)	$ (361)	$ 264
Total financial instruments – liabilities	$ 1,221	$ (596)	$ (361)	$ 264

(1) Includes counterparty amounts recognized on the Consolidated Balance Sheets where the Company has a potential offsetting position (as described above) but does not meet the criteria for offsetting on the balance sheet, excluding collateral.

(2) Financial collateral presented above excludes overcollateralization and, for exchange-traded derivatives, initial margin. Financial collateral received on reverse repurchase agreements is held by a third party. At December 31, 2021, total financial collateral, including initial margin and overcollateralization, received on derivative assets was $318 ($211 at December 31, 2020), received on reverse repurchase agreements was nil ($4 at December 31, 2020), and pledged on derivative liabilities was $480 ($560 at December 31, 2020).

(3) Assets related to reverse repurchase agreements are included in bonds, on the Consolidated Balance Sheets.

9. Fair Value Measurement

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

Level 1: Fair value measurements utilize observable, quoted prices (unadjusted) in active markets for identical assets or liabilities that the Company has the ability to access. Assets and liabilities utilizing Level 1 inputs include actively exchange-traded equity securities, exchange-traded futures, and mutual and segregated funds which have available prices in an active market with no redemption restrictions.

Level 2: Fair value measurements utilize inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. Level 2 inputs include quoted prices for similar assets and liabilities in active markets, and inputs other than quoted prices that are observable for the asset or liability, such as interest rates and yield curves that are observable at commonly quoted intervals. The fair values for some Level 2 securities were obtained from a pricing service. The pricing service inputs include, but are not limited to, benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, offers and reference data. Level 2 assets and liabilities include those priced using a matrix which is based on credit quality and average life, government and agency securities, restricted stock, some private bonds and investment funds, most investment-grade and high-yield corporate bonds, most asset-backed securities, most over-the-counter derivatives, and mortgage loans. Investment contracts that are measured at fair value through profit or loss are mostly included in the Level 2 category.

Level 3: Fair value measurements 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. The values of the majority of Level 3 securities were obtained from single broker quotes, internal pricing models, or external appraisers. Assets and liabilities utilizing Level 3 inputs generally include certain bonds, certain asset-backed securities, some private equities, investments in mutual and segregated funds where there are redemption restrictions, certain over-the-counter derivatives, investment properties and equity release mortgages.

The following presents the Company's assets and liabilities measured at fair value on a recurring basis by hierarchy level:

	2021			
	Level 1	Level 2	Level 3	Total
Assets measured at fair value				
Cash and cash equivalents	$ 6,075	$ –	$ –	$ 6,075
Financial assets at fair value through profit or loss				
Bonds	–	103,713	100	103,813
Mortgage loans	–	–	2,609	2,609
Stocks	11,577	12	1,680	13,269
Total financial assets at fair value through profit or loss	11,577	103,725	4,389	119,691
Available-for-sale financial assets				
Bonds	–	12,123	–	12,123
Stocks	4	1	204	209
Total available-for-sale financial assets	4	12,124	204	12,332
Investment properties	–	–	7,763	7,763
Funds held by ceding insurers	336	14,663	–	14,999
Derivatives (1)	1	966	–	967
Reinsurance assets	–	106	–	106
Other assets:				
Trading account assets	307	833	531	1,671
Other (2)	76	93	–	169
Total assets measured at fair value	**$ 18,376**	**$ 132,510**	**$ 12,887**	**$ 163,773**
Liabilities measured at fair value				
Derivatives (3)	$ 3	$ 1,027	$ –	$ 1,030
Investment contract liabilities	–	12,455	–	12,455
Other liabilities	76	93	–	169
Total liabilities measured at fair value	**$ 79**	**$ 13,575**	**$ –**	**$ 13,654**

(1) Excludes collateral received from counterparties of $317.

(2) Includes collateral received under securities lending arrangements.

(3) Excludes collateral pledged to counterparties of $370.

There were no transfers of the Company's assets and liabilities between Level 1 and Level 2 in the year.

	2020			
	Level 1	Level 2	Level 3	Total
Assets measured at fair value				
Cash and cash equivalents	$ 7,946	$ –	$ –	$ 7,946
Financial assets at fair value through profit or loss				
Bonds	–	102,819	73	102,892
Mortgage loans	–	–	2,020	2,020
Stocks	8,773	188	1,374	10,335
Total financial assets at fair value through profit or loss	8,773	103,007	3,467	115,247
Available-for-sale financial assets				
Bonds	–	11,352	–	11,352
Stocks	3	1	16	20
Total available-for-sale financial assets	3	11,353	16	11,372
Investment properties	–	–	6,270	6,270
Funds held by ceding insurers	245	15,943	–	16,188
Derivatives (1)	1	828	–	829
Reinsurance assets	–	130	–	130
Other assets:				
Trading account assets	302	353	58	713
Other (2)	79	188	–	267
Total assets measured at fair value	$ 17,349	$ 131,802	$ 9,811	$ 158,962
Liabilities measured at fair value				
Derivatives (3)	$ 5	$ 1,216	$ –	$ 1,221
Investment contract liabilities	–	9,145	–	9,145
Other liabilities	79	188	–	267
Total liabilities measured at fair value	$ 84	$ 10,549	$ –	$ 10,633

(1) Excludes collateral received from counterparties of $210.
(2) Includes collateral received under securities lending arrangements.
(3) Excludes collateral pledged to counterparties of $442.

There were no transfers of the Company's assets and liabilities between Level 1 and Level 2 in the year.

9. Fair Value Measurement (cont'd)

The following presents additional information about assets and liabilities measured at fair value on a recurring basis which the Company classifies as Level 3 in the fair value hierarchy:

	2021						
	Fair value through profit or loss bonds	Fair value through profit or loss mortgage loans	Fair value through profit or loss stocks [4]	Available for-sale stocks	Investment properties	Trading accounts assets	Total Level 3 assets
Balance, beginning of year	**$ 73**	**$ 2,020**	**$ 1,374**	**$ 16**	**$ 6,270**	**$ 58**	**$ 9,811**
Total gains (losses)							
Included in net earnings	**4**	**(121)**	**164**	**7**	**615**	**16**	**685**
Included in other comprehensive income [1] [2]	**(5)**	**(21)**	**–**	**117**	**(52)**	**–**	**39**
Purchases	**28**	**–**	**798**	**31**	**970**	**597**	**2,424**
Issues	**–**	**896**	**–**	**–**	**–**	**–**	**896**
Sales	**–**	**–**	**(199)**	**(7)**	**(40)**	**(140)**	**(386)**
Settlements	**–**	**(165)**	**–**	**–**	**–**	**–**	**(165)**
Transfers into Level 3 [2] [3]	**–**	**–**	**–**	**40**	**–**	**–**	**40**
Transfers out of Level 3 [3]	**–**	**–**	**(457)**	**–**	**–**	**–**	**(457)**
Balance, end of year	**$ 100**	**$ 2,609**	**$ 1,680**	**$ 204**	**$ 7,763**	**$ 531**	**$ 12,887**
Total gains (losses) for the year included in net investment income	**$ 4**	**$ (121)**	**$ 164**	**$ 7**	**$ 615**	**$ 16**	**$ 685**
Change in unrealized gains (losses) for the year included in earnings for assets held at December 31, 2021	**$ 4**	**$ (115)**	**$ 161**	**$ –**	**$ 621**	**$ 16**	**$ 687**

(1) Amount of other comprehensive income for fair value through profit or loss bonds, mortgage loans and investment properties represents the unrealized gains (losses) on foreign exchange.

(2) During 2021, certain stocks previously classified as available-for-sale, at cost were remeasured at a fair value of $147, are now classified as available-for-sale, and have been transferred into Level 3 as reliable measure of fair value was identified during the period. The carrying value of $40 was transferred into Level 3 and the difference between the carrying value and fair value of $107 was recognized as an unrealized gain on available-for-sale assets with an income tax expense of $15 in the Consolidated Statements of Comprehensive Income.

(3) Transfers into Level 3 are due primarily to decreased observability of inputs in valuation methodologies or the placement of redemption restrictions on investments in mutual and segregated funds. Transfers out of Level 3 are due primarily to increased observability of inputs in valuation methodologies as evidenced by corroboration of market prices with multiple pricing vendors or the lifting of redemption restrictions on investments in mutual and segregated funds.

(4) Includes investments in mutual and segregated funds where there are redemption restrictions. The fair value is based on observable, quoted prices.

	2020						
	Fair value through profit or loss bonds	Fair value through profit or loss mortgage loans	Fair value through profit or loss stocks [4]	Available for-sale stocks	Investment properties	Trading accounts assets	Total Level 3 assets
Balance, beginning of year	$ 67	$ 1,314	$ 678	$ 4	$ 5,887	$ –	$ 7,950
Total gains (losses)							
Included in net earnings	2	156	16	–	(74)	–	100
Included in other comprehensive income [1]	4	15	–	1	21	–	41
Purchases	–	–	406	11	481	–	898
Issues	–	622	–	–	–	–	622
Sales	–	–	(83)	–	(73)	–	(156)
Settlements	–	(87)	–	–	–	–	(87)
Transferred from owner occupied properties [2]	–	–	–	–	28	–	28
Transfers into Level 3 [3]	–	–	357	–	–	58	415
Transfers out of Level 3 [3]	–	–	–	–	–	–	–
Balance, end of year	$ 73	$ 2,020	$ 1,374	$ 16	$ 6,270	$ 58	$ 9,811
Total gains (losses) for the year included in net investment income	$ 2	$ 156	$ 16	$ –	$ (74)	$ –	$ 100
Change in unrealized gains (losses) for the year included in earnings for assets held at December 31, 2020	$ 2	$ 145	$ 17	$ –	$ (73)	$ –	$ 91

(1) Amount of other comprehensive income for fair value through profit or loss bonds, mortgage loans and investment properties represents the unrealized gains (losses) on foreign exchange.

(2) As a result of the sale of Irish Progressive Services International Limited (IPSI), a property with a fair value of $28 was reclassified from owner occupied properties to investment properties. The reclassification resulted in the recognition of revaluation surplus on the transfer to investment properties of $11 and income tax expense of $(1) in the Consolidated Statements of Comprehensive Income.

(3) Transfers into Level 3 are due primarily to decreased observability of inputs in valuation methodologies or the placement of redemption restrictions on investments in mutual and segregated funds. Transfers out of Level 3 are due primarily to increased observability of inputs in valuation methodologies as evidenced by corroboration of market prices with multiple pricing vendors or the lifting of redemption restrictions on investment in mutual and segregated funds.

(4) Includes investments in mutual and segregated funds where there are redemption restrictions. The fair value is based on observable, quoted prices.

On March 20, 2020, Canada Life temporarily suspended contributions to and transfers into, as well as redemptions and transfers out of, its Canadian real estate investment funds as the COVID-19 pandemic impacted the global property market and made it difficult to value the properties with the same degree of certainty as usual. As a result of these restrictions, the Company's investment in these funds with a fair value of $357 was transferred on March 20, 2020 from Level 1 to Level 3.

On January 11, 2021, Canada Life lifted the temporary suspension on contributions to and transfers into its Canadian real estate investment funds, and on April 19, 2021, the temporary suspension on redemptions and transfers out was fully lifted, as confidence over the valuation of the underlying properties returned as a result of increased market activity. As a result of the lifting of these temporary suspensions, the Company's investment in these funds with a fair value of $457 was transferred on April 19, 2021 from Level 3 to Level 1.

9. Fair Value Measurement (cont'd)

The following sets out information about significant unobservable inputs used at year-end in measuring assets categorized as Level 3 in the fair value hierarchy:

Type of asset	Valuation approach	Significant unobservable input	Input value	Inter-relationship between key unobservable inputs and fair value measurement
Investment properties	Investment property valuations are generally determined using property valuation models based on expected capitalization rates and models that discount expected future net cash flows. The determination of the fair value of investment property requires the use of estimates such as future cash flows (such as future leasing assumptions, rental rates, capital and operating expenditures) and discount, reversionary and overall capitalization rates applicable to the asset based on current market rates.	Discount rate	Range of 3.3% – 12.4%	A decrease in the discount rate would result in an increase in fair value. An increase in the discount rate would result in a decrease in fair value.
		Reversionary rate	Range of 3.5% – 7.0%	A decrease in the reversionary rate would result in an increase in fair value. An increase in the reversionary rate would result in a decrease in fair value.
		Vacancy rate	Weighted average of 2.5%	A decrease in the expected vacancy rate would generally result in an increase in fair value. An increase in the expected vacancy rate would generally result in a decrease in fair value.
Mortgage loans – equity release mortgages (fair value through profit or loss)	The valuation approach for equity release mortgages is to use an internal valuation model to determine the projected asset cash flows, including the stochastically calculated cost of the no negative equity guarantee for each individual loan, to aggregate these across all loans and to discount those cash flows back to the valuation date. The projection is done monthly until expected redemption of the loan either voluntarily or on the death/entering into long term care of the loanholders.	Discount rate	Range of 3.5% – 4.7%	A decrease in the discount rate would result in an increase in fair value. An increase in the discount rate would result in a decrease in fair value.

The following presents the Company's assets and liabilities disclosed at fair value on a recurring basis by hierarchy level:

	2021				
	Level 1	Level 2	Level 3	Other assets/ liabilities not held at fair value	Total
Assets disclosed at fair value					
Loans and receivables financial assets					
Bonds	$ –	$ 26,668	$ 49	$ –	$ 26,717
Mortgage loans	–	27,049	–	–	27,049
Loans to policyholders	–	8,319	–	–	8,319
Total loans and receivables financial assets	–	62,036	49	–	62,085
Available-for-sale financial assets					
Stocks (1)	–	–	–	124	124
Other stocks (2)	418	–	–	215	633
Funds held by ceding insurers	–	–	–	126	126
Total assets disclosed at fair value	$ 418	$ 62,036	$ 49	$ 465	$ 62,968
Liabilities and equity disclosed at fair value					
Debentures and other debt instruments	$ 186	$ 9,569	$ –	$ –	$ 9,755
Limited recourse capital notes	–	1,475	–	–	1,475
Total liabilities and equity disclosed at fair value	$ 186	$ 11,044	$ –	$ –	$ 11,230

(1) Fair value of certain stocks available for sale cannot be reliably measured, therefore, these investments are recorded at cost.

(2) Other stocks include the Company's investment in IGM.

	2020				
	Level 1	Level 2	Level 3	Other assets/ liabilities not held at fair value	Total
Assets disclosed at fair value					
Loans and receivables financial assets					
Bonds	$ –	$ 26,488	$ 57	$ –	$ 26,545
Mortgage loans	–	27,613	–	–	27,613
Loans to policyholders	–	8,387	–	–	8,387
Total loans and receivables financial assets	–	62,488	57	–	62,545
Available-for-sale financial assets					
Stocks (1)	–	–	–	163	163
Other stocks (2)	317	–	–	128	445
Funds held by ceding insurers	–	–	–	137	137
Total assets disclosed at fair value	$ 317	$ 62,488	$ 57	$ 428	$ 63,290
Liabilities disclosed at fair value					
Debentures and other debt instruments	$ 970	$ 10,207	$ –	$ –	$ 11,177
Total liabilities disclosed at fair value	$ 970	$ 10,207	$ –	$ –	$ 11,177

(1) Fair value of certain stocks available for sale cannot be reliably measured, therefore, these investments are recorded at cost.

(2) Other stocks include the Company's investment in IGM.

10. Goodwill and Intangible Assets

(a) Goodwill

(i) The carrying value and changes in the carrying value of goodwill are as follows:

	2021	2020
Cost		
Balance, beginning of year	**$ 11,283**	$ 7,693
Business acquisitions and dispositions	**46**	3,621
Purchase price allocation adjustments	**161**	–
Allocated to intangible assets	**(1,181)**	(12)
Changes in foreign exchange rates	**(51)**	(19)
Balance, end of year	**$ 10,258**	$ 11,283
Accumulated impairment		
Balance, beginning of year	**$ (1,177)**	$ (1,188)
Impairment	**–**	(16)
Changes in foreign exchange rates	**–**	27
Balance, end of year	**$ (1,177)**	$ (1,177)
Net carrying amount	**$ 9,081**	$ 10,106

(ii) Within each of the three operating segments, goodwill has been assigned to cash generating unit groupings, representing the lowest level in which goodwill is monitored for internal reporting purposes. Lifeco does not allocate insignificant amounts of goodwill across multiple cash generating unit groupings. Goodwill is tested for impairment by comparing the carrying value of each cash generating unit grouping to which goodwill has been assigned to its recoverable amount as follows:

	2021	2020
Canada		
Group Customer	**$ 1,479**	$ 1,464
Individual Customer	**2,549**	2,553
Europe	**2,379**	2,395
United States		
Financial Services	**2,674**	3,694
Total	**$ 9,081**	$ 10,106

10. Goodwill and Intangible Assets (cont'd)

(b) Intangible Assets

Intangible assets of $5,514 ($4,285 as at December 31, 2020) include indefinite life and finite life intangible assets. The carrying value and changes in the carrying value of these intangible assets are as follows:

(i) Indefinite life intangible assets:

	2021			
	Brands and trademarks	**Customer contract related**	**Shareholders' portion of acquired future participating account profit**	**Total**
Cost				
Balance, beginning of year	**$ 1,063**	**$ 2,542**	**$ 354**	**$ 3,959**
Changes in foreign exchange rates	**(15)**	**–**	**–**	**(15)**
Balance, end of year	**$ 1,048**	**$ 2,542**	**$ 354**	**$ 3,944**
Accumulated impairment				
Balance, beginning of year	**$ (133)**	**$ (1,028)**	**$ –**	**$ (1,161)**
Changes in foreign exchange rates	**3**	**–**	**–**	**3**
Balance, end of year	**$ (130)**	**$ (1,028)**	**$ –**	**$ (1,158)**
Net carrying amount	**$ 918**	**$ 1,514**	**$ 354**	**$ 2,786**

	2020			
	Brands and trademarks	Customer contract related	Shareholders' portion of acquired future participating account profit	Total
Cost				
Balance, beginning of year	$ 972	$ 2,562	$ 354	$ 3,888
Additions	92	30	–	122
Changes in foreign exchange rates	(1)	(50)	–	(51)
Balance, end of year	$ 1,063	$ 2,542	$ 354	$ 3,959
Accumulated impairment				
Balance, beginning of year	$ (133)	$ (1,051)	$ –	$ (1,184)
Changes in foreign exchange rates	–	23	–	23
Balance, end of year	$ (133)	$ (1,028)	$ –	$ (1,161)
Net carrying amount	$ 930	$ 1,514	$ 354	$ 2,798

(ii) Indefinite life intangible assets have been assigned to cash generating unit groupings as follows:

	2021	2020
Canada		
Group Customer	**$ 354**	$ 354
Individual Customer	**649**	649
Europe	**221**	233
United States		
Asset Management	**1,473**	1,473
Financial Services	**89**	89
Total	**$ 2,786**	$ 2,798

(iii) Finite life intangible assets:

	2021			
	Customer contract related	**Distribution channels**	**Technology/ Software**	**Total**
Amortization period range	**7 – 30 years**	**30 years**	**3 – 10 years**	
Amortization method	**Straight-line**	**Straight-line**	**Straight-line**	
Cost				
Balance, beginning of year	**$ 1,248**	**$ 111**	**$ 2,185**	**$ 3,544**
Additions	**1,261**	**–**	**340**	**1,601**
Changes in foreign exchange rates	**(15)**	**(4)**	**(21)**	**(40)**
Disposals	**–**	**–**	**(16)**	**(16)**
Balance, end of year	**$ 2,494**	**$ 107**	**$ 2,488**	**$ 5,089**
Accumulated amortization and impairment				
Balance, beginning of year	**$ (688)**	**$ (65)**	**$ (1,304)**	**$ (2,057)**
Changes in foreign exchange rates	**4**	**3**	**11**	**18**
Disposals	**–**	**–**	**14**	**14**
Amortization	**(137)**	**(4)**	**(195)**	**(336)**
Balance, end of year	**$ (821)**	**$ (66)**	**$ (1,474)**	**$ (2,361)**
Net carrying amount	**$ 1,673**	**$ 41**	**$ 1,014**	**$ 2,728**

	2020			
	Customer contract related	Distribution channels	Technology/ Software	Total
Amortization period range	7 – 30 years	30 years	3 – 10 years	
Amortization method	Straight-line	Straight-line	Straight-line	
Cost				
Balance, beginning of year	$ 1,031	$ 108	$ 1,885	$ 3,024
Additions	214	–	341	555
Changes in foreign exchange rates	3	3	(6)	–
Disposals	–	–	(35)	(35)
Balance, end of year	$ 1,248	$ 111	$ 2,185	$ 3,544
Accumulated amortization and impairment				
Balance, beginning of year	$ (630)	$ (60)	$ (1,159)	$ (1,849)
Changes in foreign exchange rates	(3)	(1)	5	1
Disposals	–	–	29	29
Amortization	(55)	(4)	(179)	(238)
Balance, end of year	$ (688)	$ (65)	$ (1,304)	$ (2,057)
Net carrying amount	$ 560	$ 46	$ 881	$ 1,487

The weighted average remaining amortization period of the customer contract related and distribution channels are 15 and 12 years respectively (14 and 13 years respectively at December 31, 2020).

10. Goodwill and Intangible Assets (cont'd)

(c) Recoverable Amount

For the purposes of annual impairment testing, the Company allocates indefinite life intangibles to cash generating units and goodwill to cash generating unit groupings. Any potential impairment of indefinite life intangible assets is identified by comparing the recoverable amount of a cash generating unit to its carrying value. Any potential impairment of goodwill is identified by comparing the recoverable amount of a cash generating unit grouping to its carrying value.

Fair value is initially assessed with reference to valuation multiples of comparable publicly-traded financial institutions and precedent business acquisition transactions. The calculations utilize earnings and cash flow projections based on financial budgets approved by management. These valuation multiples may include price-to-earnings or price-to-book measures for life insurers and asset managers. This assessment may give regard to a variety of relevant considerations, including expected growth, risk and capital market conditions, among other factors. The valuation multiples used in assessing fair value represent Level 2 inputs.

In the fourth quarter of 2021, the Company conducted its annual impairment testing of intangible assets and goodwill based on September 30, 2021 asset balances. It was determined that the recoverable amounts of cash generating units for intangible assets and cash generating unit groupings for goodwill were in excess of their carrying values and there was no evidence of impairment.

Any reasonable changes in assumptions and estimates used in determining recoverable amounts of cash generating units or cash generating unit groupings is unlikely to cause carrying values to exceed recoverable amounts.

11. Owner Occupied Properties and Fixed Assets

The carrying value of owner occupied properties and the changes in the carrying value of owner occupied properties are as follows:

	2021	2020
Carrying value, beginning of year	**$ 871**	$ 842
Less: accumulated depreciation/impairments	**(130)**	(115)
Net carrying value, beginning of year	**741**	727
Additions	**21**	42
Disposals	**(1)**	–
Transferred to investment properties (1)	**–**	(17)
Depreciation	**(16)**	(15)
Foreign exchange	**(9)**	4
Net carrying value, end of year	**$ 736**	$ 741

(1) As a result of the sale of IPSI in 2020, a property with a carrying value of $17 was reclassified from owner occupied properties to investment properties.

The net carrying value of fixed assets is $422 at December 31, 2021 ($426 at December 31, 2020).

The following provides details of the net carrying value of owner occupied properties and fixed assets by operating segment:

	2021	2020
Canada	**$ 652**	$ 640
United States	**317**	321
Europe	**188**	205
Capital and Risk Solutions	**1**	1
Total	**$ 1,158**	$ 1,167

There are no restrictions on the title of the owner occupied properties and fixed assets, nor are they pledged as security for debt.

12. Other Assets

	2021	2020
Deferred acquisition costs	**$ 615**	$ 618
Right-of-use assets	**389**	437
Trading account assets [1]	**1,671**	713
Finance leases receivable	**433**	404
Defined benefit pension plan assets (note 23)	**363**	240
Prepaid expenses	**123**	115
Miscellaneous other assets	**928**	820
Total	**$ 4,522**	$ 3,347

(1) Includes bonds of $1,322 and stocks of $349 at December 31, 2021 (bonds of $386 and stocks of $327 at December 31, 2020).

Total other assets of $2,752 ($1,678 at December 31, 2020) are expected to be realized within 12 months from the reporting date. This amount excludes deferred acquisition costs, the changes in which are noted below.

Deferred acquisition costs	2021	2020
Balance, beginning of year	**$ 618**	$ 595
Additions	**113**	93
Amortization	**(55)**	(55)
Changes in foreign exchange rates	**(34)**	26
Disposals	**(27)**	(41)
Balance, end of year	**$ 615**	$ 618

	2021		
Right-of-use assets	Property	Equipment	Total
Cost, beginning of year	**$ 568**	**$ 8**	**$ 576**
Additions	**21**	**5**	**26**
Modifications	**(10)**	**(1)**	**(11)**
Changes in foreign exchange rates	**(1)**	**–**	**(1)**
Cost, end of year	**$ 578**	**$ 12**	**$ 590**
Accumulated amortization, beginning of year	**$ (134)**	**$ (5)**	**$ (139)**
Amortization	**(66)**	**(2)**	**(68)**
Modifications	**7**	**–**	**7**
Changes in foreign exchange rates	**(1)**	**–**	**(1)**
Accumulated amortization, end of year	**$ (194)**	**$ (7)**	**$ (201)**
Carrying amount, end of year	**$ 384**	**$ 5**	**$ 389**

	2020		
	Property	Equipment	Total
Cost, beginning of year	$ 530	$ 7	$ 537
Additions	47	1	48
Modifications	(5)	–	(5)
Changes in foreign exchange rates	(4)	–	(4)
Cost, end of year	$ 568	$ 8	$ 576
Accumulated amortization, beginning of year	$ (69)	$ (2)	$ (71)
Amortization	(68)	(3)	(71)
Changes in foreign exchange rates	3	–	3
Accumulated amortization, end of year	$ (134)	$ (5)	$ (139)
Carrying amount, end of year	$ 434	$ 3	$ 437

12. Other Assets (cont'd)

Finance leases receivable

The Company has a finance lease on one property in Canada which has been leased for a 25-year term. The Company has six finance leases on properties in Europe. These properties have been leased for terms ranging between 27 and 40 years.

The terms to maturity of the lease payments receivable are as follows:

	2021	2020
One year or less	$ 30	$ 30
Over one year to two years	31	30
Over two years to three years	32	30
Over three years to four years	33	30
Over four years to five years	33	30
Over five years	717	662
Total undiscounted lease payments	876	812
Less: unearned finance lease income	443	408
Total finance leases receivable	$ 433	$ 404
Finance income on the net investment in the leases	$ 27	$ 26

13. Insurance and Investment Contract Liabilities

(a) Insurance and investment contract liabilities

	2021		
	Gross liability	**Reinsurance assets**	**Net**
Insurance contract liabilities	**$ 208,378**	**$ 21,032**	**$ 187,346**
Investment contract liabilities	**12,455**	**106**	**12,349**
Total	**$ 220,833**	**$ 21,138**	**$ 199,695**

	2020		
	Gross liability	Reinsurance assets	Net
Insurance contract liabilities	$ 208,902	$ 21,991	$ 186,911
Investment contract liabilities	9,145	130	9,015
Total	$ 218,047	$ 22,121	$ 195,926

(b) Composition of insurance and investment contract liabilities and related supporting assets

(i) The composition of insurance and investment contract liabilities is as follows:

	2021		
	Gross liability	**Reinsurance assets**	**Net**
Participating			
Canada	**$ 50,049**	**$ (115)**	**$ 50,164**
United States	**10,694**	**13**	**10,681**
Europe	**141**	**–**	**141**
Capital and Risk Solutions	**886**	**–**	**886**
Non-Participating			
Canada	**34,780**	**207**	**34,573**
United States	**63,938**	**14,708**	**49,230**
Europe	**47,215**	**6,197**	**41,018**
Capital and Risk Solutions	**13,130**	**128**	**13,002**
Total	**$ 220,833**	**$ 21,138**	**$ 199,695**

	2020		
	Gross liability	Reinsurance assets	Net
Participating			
Canada	$ 46,107	$ (199)	$ 46,306
United States	11,090	13	11,077
Europe	155	–	155
Capital and Risk Solutions	912	–	912
Non-Participating			
Canada	35,449	638	34,811
United States	65,703	15,908	49,795
Europe	48,088	5,622	42,466
Capital and Risk Solutions	10,543	139	10,404
Total	$ 218,047	$ 22,121	$ 195,926

13. Insurance and Investment Contract Liabilities (cont'd)

(ii) The composition of the assets supporting liabilities and equity is as follows:

2021	Bonds	Mortgage loans	Stocks	Investment properties	Other	Total
Carrying value						
Participating liabilities						
Canada	**$ 21,370**	**$ 11,166**	**$ 8,522**	**$ 4,013**	**$ 4,978**	**$ 50,049**
United States	**4,876**	**607**	**76**	**–**	**5,135**	**10,694**
Europe	**66**	**–**	**67**	**8**	**–**	**141**
Capital and Risk Solutions	**666**	**8**	**–**	**–**	**212**	**886**
Non-participating liabilities						
Canada	**23,620**	**4,661**	**3,116**	**579**	**2,804**	**34,780**
United States	**32,302**	**4,641**	**211**	**–**	**26,784**	**63,938**
Europe	**33,208**	**5,891**	**391**	**2,743**	**4,982**	**47,215**
Capital and Risk Solutions	**6,394**	**80**	**–**	**–**	**6,656**	**13,130**
Other	**7,257**	**1,202**	**873**	**157**	**369,683**	**379,172**
Total equity	**10,853**	**596**	**927**	**263**	**17,844**	**30,483**
Total carrying value	**$ 140,612**	**$ 28,852**	**$ 14,183**	**$ 7,763**	**$ 439,078**	**$ 630,488**
Fair value	**$ 142,653**	**$ 29,658**	**$ 14,235**	**$ 7,763**	**$ 439,078**	**$ 633,387**

2020	Bonds	Mortgage loans	Stocks	Investment properties	Other	Total
Carrying value						
Participating liabilities						
Canada	$ 21,803	$ 10,545	$ 6,152	$ 2,983	$ 4,624	$ 46,107
United States	5,193	593	13	–	5,291	11,090
Europe	84	–	62	9	–	155
Capital and Risk Solutions	688	12	–	–	212	912
Non-participating liabilities						
Canada	23,898	4,498	2,789	360	3,904	35,449
United States	31,631	4,586	46	–	29,440	65,703
Europe	34,941	5,746	332	2,536	4,533	48,088
Capital and Risk Solutions	2,365	52	–	–	8,126	10,543
Other	5,367	1,135	754	141	348,031	355,428
Total equity	11,622	636	852	241	13,664	27,015
Total carrying value	$ 137,592	$ 27,803	$ 11,000	$ 6,270	$ 417,825	$ 600,490
Fair value	$ 140,789	$ 29,633	$ 10,963	$ 6,270	$ 417,825	$ 605,480

Cash flows of assets supporting insurance and investment contract liabilities are matched within reasonable limits. Changes in the fair values of these assets are largely offset by changes in the fair value of insurance and investment contract liabilities.

Changes in the fair values of assets backing capital and surplus, less related income taxes, would result in a corresponding change in surplus over time in accordance with investment accounting policies.

(c) Change in insurance contract liabilities

The change in insurance contract liabilities during the year was the result of the following business activities and changes in actuarial estimates:

	2021			
	Participating			
	Gross liability	Reinsurance assets	Net	
Balance, beginning of year	**$ 58,264**	**$ (186)**	**$ 58,450**	
Impact of new business	**(78)**	**–**	**(78)**	
Normal change in force	**3,819**	**27**	**3,792**	
Management action and changes in assumptions	**(223)**	**57**	**(280)**	
Impact of foreign exchange rate changes	**(12)**	**–**	**(12)**	
Balance, end of year	**$ 61,770**	**$ (102)**	**$ 61,872**	
	Non-participating			
	Gross liability	Reinsurance assets	Net	Total Net
Balance, beginning of year	**$ 150,638**	**$ 22,177**	**$ 128,461**	**$ 186,911**
Impact of new business	**10,559**	**84**	**10,475**	**10,397**
Normal change in force	**(12,920)**	**(1,472)**	**(11,448)**	**(7,656)**
Management action and changes in assumptions	**(673)**	**(540)**	**(133)**	**(413)**
Business movement from/to external parties	**(613)**	**(37)**	**(576)**	**(576)**
Ark Life acquisition (note 3)	**1,257**	**1,238**	**19**	**19**
Impact of foreign exchange rate changes	**(1,640)**	**(316)**	**(1,324)**	**(1,336)**
Balance, end of year	**$ 146,608**	**$ 21,134**	**$ 125,474**	**$ 187,346**

	2020			
	Participating			
	Gross liability	Reinsurance assets	Net	
Balance, beginning of year	$ 54,619	$ (235)	$ 54,854	
Impact of new business	(7)	32	(39)	
Normal change in force	3,883	9	3,874	
Management action and changes in assumptions	55	8	47	
Impact of foreign exchange rate changes	(286)	–	(286)	
Balance, end of year	$ 58,264	$ (186)	$ 58,450	
	Non-participating			
	Gross liability	Reinsurance assets	Net	Total Net
Balance, beginning of year	$ 119,902	$ 20,815	$ 99,087	$ 153,941
Impact of new business	7,028	706	6,322	6,283
Normal change in force	1,296	750	546	4,420
Management action and changes in assumptions	161	109	52	99
Business movement from/to external parties	(48)	–	(48)	(48)
MassMutual acquisition (note 3)	22,316	–	22,316	22,316
Impact of foreign exchange rate changes	(17)	(203)	186	(100)
Balance, end of year	$ 150,638	$ 22,177	$ 128,461	$ 186,911

13. Insurance and Investment Contract Liabilities (cont'd)

Under IFRS, movement in the fair value of the supporting assets is a major factor in the movement of insurance contract liabilities. Changes in the fair value of assets are largely offset by corresponding changes in the fair value of liabilities. The change in the value of the insurance contract liabilities associated with the change in the value of the supporting assets is included in the normal change in force above.

Effective October 15, 2021, the Canadian Actuarial Standards Board published revised standards for the valuation of insurance contract liabilities. The revised standards include decreases to ultimate reinvestment rates, revised calibration criteria for stochastic risk-free interest rates and an increase to the maximum net credit spread on reinvestment over the long term.

In 2021, the major contributor to the increase in net insurance contract liabilities was the impact of new business of $10,397. This was partially offset by decreases due to normal change in the in force business of $7,656 and foreign exchange rate changes of $1,336.

Net non-participating insurance contract liabilities decreased by $133 due to management actions and changes in assumptions including a $219 decrease in Europe and $7 decrease in the U.S., partially offset by increases of $75 in Canada and $18 in Capital and Risk Solutions.

The decrease in Europe was primarily due to updated economic and asset related assumptions of $165, updated longevity assumptions of $29, and updated policyholder behaviour assumptions of $22.

The decrease in the U.S. was primarily due to updated economic assumptions, which includes the net impact of the new standards, of $5.

The increase in Canada was primarily due to updated policyholder behaviour assumptions of $172, mortality updates of $44, and updated morbidity assumptions of $37. This was partially offset by decreases due to updated economic and asset related assumptions, which includes the net impact of the new standards, of $146, and modeling refinements of $29.

The increase in Capital and Risk Solutions was primarily due to updated expense assumptions of $11, and updated life mortality and longevity assumptions of $6.

Net participating insurance contract liabilities decreased by $280 in 2021 due to management actions and changes in assumptions.

In 2020, the major contributors to the increase in net insurance contract liabilities was the MassMutual acquisition of $22,316, the impact of new business of $6,283, and the normal change in the in force business of $4,420.

Net non-participating insurance contract liabilities increased by $52 due to management actions and changes in assumptions including a $377 increase in Canada, partially offset by decreases of $212 in Europe, $59 in Capital & Risk Solutions, and $54 in the United States.

The increase in Canada was primarily due to updated policyholder behaviour assumptions of $269, updated morbidity assumptions of $140, of which $114 is offset by an increase in other assets, and updated economic and asset related assumptions of $98. This was partially offset by decreases due to updated life mortality assumptions of $129.

The decrease in Europe was primarily due to updated longevity assumptions of $138, modeling refinements of $28, updated morbidity assumptions of $24, updated policyholder behaviour assumptions of $19, and updated economic and asset related assumptions of $10. This was partially offset by an increase due to updated expense and tax assumptions of $6.

The decrease in Capital and Risk Solutions was primarily due to updated longevity assumptions of $135, updated economic assumptions of $41, and modeling refinements of $37. This was partially offset by increases due to updated life mortality assumptions of $107, updated expense and tax assumptions of $28, and updated policyholder behaviour assumptions of $14.

The decrease in the United States was primarily due to updated economic assumptions of $50.

Net participating insurance contract liabilities increased by $47 in 2020 due to management actions and changes in assumptions. The increase was primarily due to updated economic assumptions of $2,358, and updated policyholder behaviour assumptions of $34. This was partially offset by decreases due to provisions for future policyholder dividends of $1,899, updated expense and tax assumptions of $446, and modeling refinements of $5.

(d) Change in investment contract liabilities measured at fair value

	2021			2020		
	Gross liability	Reinsurance assets	Net	Gross liability	Reinsurance assets	Net
Balance, beginning of year	**$ 9,145**	**$ 130**	**$ 9,015**	$ 1,656	$ 127	$ 1,529
Normal change in force business	**3,497**	**38**	**3,459**	2,489	(20)	2,509
Investment experience	**(242)**	**(62)**	**(180)**	147	26	121
Management action and changes in assumptions	**–**	**–**	**–**	(4)	–	(4)
MassMutual acquisition (note 3)	**–**	**–**	**–**	4,984	–	4,984
Ark Life acquisition (note 3)	**43**	**–**	**43**	–	–	–
Impact of foreign exchange rate changes	**12**	**–**	**12**	(127)	(3)	(124)
Balance, end of year	**$ 12,455**	**$ 106**	**$ 12,349**	$ 9,145	$ 130	$ 9,015

The carrying value of investment contract liabilities approximates their fair value.

(e) Gross premiums written and gross policyholder benefits

(i) Premium Income

	2021	2020
Direct premiums	**$ 26,219**	$ 28,102
Assumed reinsurance premiums	**31,178**	19,652
Total	**$ 57,397**	$ 47,754

(ii) Policyholder Benefits

	2021	2020
Direct	**$ 20,903**	$ 19,538
Assumed reinsurance	**28,452**	20,067
Total	**$ 49,355**	$ 39,605

(f) Actuarial Assumptions

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 misestimation 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.

The methods for arriving at these valuation assumptions are outlined below:

Mortality

A life insurance mortality study is carried out annually 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. 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 have been made for future mortality deterioration on term insurance.

Annuitant mortality is also studied regularly and the results are used to modify established annuitant mortality tables.

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.

Property and casualty reinsurance

Insurance contract liabilities for property and casualty reinsurance written by entities within the Capital and Risk Solutions operating 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 earnings. Capital and Risk Solutions 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 the Canadian Asset Liability Method to determine insurance contract liabilities. Cash flows from assets are reduced to provide for asset default losses. Testing under several interest rate and equity scenarios (including increasing and decreasing rates) is done to provide for reinvestment risk (note 8(c)).

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 the Canadian Asset Liability Method as inflation is assumed to be correlated with new money interest rates.

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 term for renewable term policies in Canada and Capital and Risk Solutions. Industry experience has guided the Company's assumptions for these products as the Company's own experience is very limited.

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 when not on judgment 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 on shareholders' earnings is reflected in the changes in best estimate assumptions above.

(g) Risk Management

(i) Insurance risk

Insurance risk is the risk that the insured event occurs and that there are large deviations between expected and actual actuarial assumptions including mortality, persistency, longevity, morbidity, expense variations and investment returns.

The Company is in the business of accepting risk associated with insurance contract liabilities. The objective of the Company is to mitigate its exposure to risk arising from these contracts through product design, product and geographical diversification, the implementation of the Company's underwriting strategy guidelines, and through the use of reinsurance arrangements.

The following provides information about the Company's insurance contract liabilities sensitivities to management's best estimate of the approximate impact as a result of changes in assumptions used to determine the Company's liability associated with these contracts.

	Increase (decrease) in net earnings	
	2021	2020
Mortality – 2% increase	**$ (276)**	$ (288)
Annuitant mortality – 2% decrease	**$ (722)**	$ (756)
Morbidity – 5% adverse change	**$ (262)**	$ (279)
Investment returns		
Parallel shift in yield curve		
1% increase	**$ –**	$ –
1% decrease	**$ –**	$ –
Change in interest rates		
1% increase	**$ 197**	$ 224
1% decrease	**$ (555)**	$ (920)
Change in publicly traded common stock values		
20% increase	**$ 21**	$ 28
10% increase	**$ 13**	$ 15
10% decrease	**$ (19)**	$ (51)
20% decrease	**$ (66)**	$ (208)
Change in other non-fixed income asset values		
10% increase	**$ 79**	$ 34
5% increase	**$ 39**	$ 6
5% decrease	**$ (30)**	$ (69)
10% decrease	**$ (112)**	$ (108)
Change in best estimate return assumptions for equities		
1% increase	**$ 567**	$ 556
1% decrease	**$ (649)**	$ (682)
Expenses – 5% increase	**$ (207)**	$ (165)
Policy termination and renewal – 10% adverse change	**$ (1,002)**	$ (1,017)

Concentration risk may arise from geographic regions, accumulation of risks and market risk. The concentration of insurance risk before and after reinsurance by geographic region is described below.

	2021			2020		
	Gross liability	**Reinsurance assets**	**Net**	Gross liability	Reinsurance assets	Net
Canada	**$ 84,829**	**$ 92**	**$ 84,737**	$ 81,556	$ 439	$ 81,117
United States	**74,632**	**14,721**	**59,911**	76,793	15,921	60,872
Europe	**47,356**	**6,197**	**41,159**	48,243	5,622	42,621
Capital and Risk Solutions	**14,016**	**128**	**13,888**	11,455	139	11,316
Total	**$ 220,833**	**$ 21,138**	**$ 199,695**	$ 218,047	$ 22,121	$ 195,926

13. Insurance and Investment Contract Liabilities (cont'd)

(ii) Reinsurance risk

Maximum limits per insured life benefit amount (which vary by line of business) are established for life and health insurance, and reinsurance is purchased for amounts in excess of those limits.

Reinsurance costs and recoveries as defined by the reinsurance agreement are reflected in the valuation with these costs and recoveries being appropriately calibrated to the direct assumptions.

Reinsurance contracts do not relieve the Company from its obligations to policyholders. Failure of reinsurers to honour their obligations could result in losses to the Company. The Company evaluates the financial condition of its reinsurers to minimize its exposure to significant losses from reinsurer insolvencies.

Certain of the reinsurance contracts are on a funds withheld basis where the Company retains the assets supporting the reinsured insurance contract liabilities, thus minimizing the exposure to significant losses from reinsurer insolvency on those contracts.

14. Segregated Funds and Other Structured Entities

The Company offers segregated fund products in Canada, the U.S. and Europe that are referred to as segregated funds, separate accounts and unit-linked funds in the respective region. These funds are contracts issued by insurers to segregated fund policyholders where the benefit is directly linked to the performance of the investments, the risks or rewards of the fair value movements and net investment income is realized by the segregated fund policyholders. The segregated fund policyholders are required to select the segregated funds that hold a range of underlying investments. While the Company has legal title to the investments, there is a contractual obligation to pass along the investment results to the segregated fund policyholder and the Company segregates these investments from those of the Company.

In Canada and the U.S., the segregated fund and separate account assets are legally separated from the general assets of the Company under the terms of the policyholder agreement and cannot be used to settle obligations of the Company. In Europe, the assets of the funds are functionally and constructively segregated from those of the Company. As a result of the legal and constructive arrangements of these funds, the assets and liabilities of these funds are presented as line items within the Consolidated Balance Sheets titled investments on account of segregated fund policyholders and with an equal liability titled investment and insurance contracts on account of segregated fund policyholders.

In circumstances where the segregated funds are invested in structured entities and are deemed to control the entity, the Company has presented the non-controlling ownership interest within the segregated funds for the risk of policyholders as equal and offsetting amounts in the assets and liabilities. The amounts presented within are $3,125 at December 31, 2021 ($1,490 at December 31, 2020).

Within the Consolidated Statements of Earnings, all segregated fund policyholders' income, including fair value changes and net investment income, is credited to the segregated fund policyholders and reflected in the assets and liabilities on account of segregated fund policyholders within the Consolidated Balance Sheets. As these amounts do not directly impact the revenues and expenses of the Company, these amounts are not included separately in the Consolidated Statements of Earnings.

Segregated Funds Guarantee Exposure

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. While these products are similar to mutual funds, there is a key difference from mutual funds as the segregated funds have certain guarantee features that protect the segregated fund policyholder from market declines in the underlying investments. These guarantees are the Company's primary exposure on these funds. The Company accounts for these guarantees within insurance and investment contract liabilities within the consolidated financial statements. In addition to the Company's exposure on the guarantees, the fees earned by the Company on these products are impacted by the market value of these funds.

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

In the U.S., the Company offers group variable annuities with guaranteed minimum withdrawal benefits (GMWB) and group standalone GMDB products which mainly provide return of premium on death.

In Europe, the Company offers UWP products in Germany and unit-linked products with investment guarantees in Ireland. These products are similar to segregated fund products but include minimum credited interest rates and pooling of policyholders' funds.

The Company also offers a GMWB product in the U.S., and Germany, and previously offered GMWB product in Canada and Ireland. Certain GMWB products offered by the Company offer levels of death and maturity guarantees. At December 31, 2021, the amount of GMWB product in-force in Canada, the U.S., Ireland and Germany was $3,316 ($3,375 at December 31, 2020).

The following presents further details of the investments, determined in accordance with the relevant statutory reporting requirements of each region of the Company's operations, on account of segregated fund policyholders:

(a) Investments on account of segregated fund policyholders

	2021	2020
Cash and cash equivalents	**$ 12,500**	$ 15,558
Bonds	**60,647**	65,338
Mortgage loans	**2,377**	2,686
Stocks and units in unit trusts	**134,568**	112,675
Mutual funds	**133,916**	127,577
Investment properties	**12,776**	12,430
	356,784	336,264
Accrued income	**442**	463
Other liabilities	**(2,932)**	(4,185)
Non-controlling mutual funds interest	**3,125**	1,490
Total (1)	**$ 357,419**	$ 334,032

(1) At December 31, 2021, $83,754 of investments on account of segregated fund policyholders are reinsured by the Company on a modified coinsurance basis ($84,785 at December 31, 2020). Included in this amount are $301 of cash and cash equivalents, $13,557 of bonds, $26 of stocks and units in unit trusts, $69,852 of mutual funds, $78 of accrued income and $(60) of other liabilities.

(b) Investment and insurance contracts on account of segregated fund policyholders

	2021	2020
Balance, beginning of year	**$ 334,032**	$ 231,022
Additions (deductions):		
Policyholder deposits	**29,657**	21,916
Net investment income	**9,442**	2,695
Net realized capital gains on investments	**15,799**	8,954
Net unrealized capital gains on investments	**11,473**	474
Unrealized gains (losses) due to changes in foreign exchange rates	**(7,109)**	3,920
Policyholder withdrawals	**(40,324)**	(20,371)
Business acquisitions (1)	**2,844**	84,785
Change in Segregated Fund investment in General Fund	**(30)**	51
Change in General Fund investment in Segregated Fund	**(22)**	234
Net transfer from General Fund	**22**	9
Non-controlling mutual funds interest	**1,635**	343
Total	**23,387**	103,010
Balance, end of year	**$ 357,419**	$ 334,032

(1) Investment and insurance contracts on account of segregated fund policyholders acquired through the acquisition of Ark Life in 2021 and the MassMutual acquisition in 2020 (note 3).

(c) Investment income on account of segregated fund policyholders

	2021	2020
Net investment income	**$ 9,442**	$ 2,695
Net realized capital gains on investments	**15,799**	8,954
Net unrealized capital gains on investments	**11,473**	474
Unrealized gains (losses) due to changes in foreign exchange rates	**(7,109)**	3,920
Total	**29,605**	16,043
Change in investment and insurance contracts liability on account of segregated fund policyholders	**29,605**	16,043
Net	**$ –**	$ –

14. Segregated Funds and Other Structured Entities (cont'd)

(d) Investments on account of segregated fund policyholders by fair value hierarchy level (note 9)

	2021			
	Level 1	**Level 2**	**Level 3**	**Total**
Investments on account of segregated fund policyholders [1]	**$ 249,543**	**$ 96,575**	**$ 13,822**	**$ 359,940**

(1) Excludes other liabilities, net of other assets, of $2,521.

	2020			
	Level 1	Level 2	Level 3	Total
Investments on account of segregated fund policyholders [1]	$ 224,831	$ 98,424	$ 13,556	$ 336,811

(1) Excludes other liabilities, net of other assets, of $2,779.

During 2021, certain foreign stock holdings valued at $2,137 have been transferred from Level 2 to Level 1 ($3,190 were transferred from Level 1 to Level 2 at December 31, 2020) primarily based on the Company's change in use of inputs in addition to quoted prices in active markets for certain foreign stock holdings at year end. Level 2 assets include those assets where fair value is not available from normal market pricing sources, where inputs are utilized in addition to quoted prices in active markets and where the Company does not have access to the underlying asset details within an investment fund.

As at December 31, 2021, $5,394 ($9,770 at December 31, 2020) of the segregated funds were invested in funds managed by related parties IG Wealth Management and Mackenzie Investments, members of the Power Corporation group of companies (note 25).

The following presents additional information about the Company's investments on account of segregated fund policyholders for which the Company has utilized Level 3 inputs to determine fair value:

	2021	2020
Balance, beginning of year	**$ 13,556**	$ 13,988
Total gains included in segregated fund investment income	**415**	78
Purchases	**333**	167
Sales	**(482)**	(712)
Transfers into Level 3	**5**	35
Transfers out of Level 3	**(5)**	–
Balance, end of year	**$ 13,822**	$ 13,556

Transfers into Level 3 are due primarily to decreased observability of inputs in valuation methodologies. Transfers out of Level 3 are due primarily to increased observability of inputs in valuation methodologies as evidenced by corroboration of market prices with multiple pricing vendors.

In addition to the segregated funds, the Company has interests in a number of structured unconsolidated entities including mutual funds, open-ended investment companies, and unit trusts. These entities are created as investment strategies for its unit-holders based on the directive of each individual fund.

Some of these funds are managed by related parties of the Company and the Company receives management fees related to these services. Management fees can be variable due to performance of factors – such as markets or industries – in which the fund invests. Fee income derived in connection with the management of investment funds generally increases or decreases in direct relationship with changes of assets under management which is affected by prevailing market conditions, and the inflow and outflow of client assets.

Factors that could cause assets under management and fees to decrease include declines in equity markets, changes in fixed income markets, changes in interest rates and defaults, redemptions and other withdrawals, political and other economic risks, changing investment trends and relative investment performance. The risk is that fees may vary but expenses and recovery of initial expenses are relatively fixed, and market conditions may cause a shift in asset mix potentially resulting in a change in revenue.

During 2021, fee and other income earned by the Company resulting from the Company's interests in segregated funds and other structured entities was $6,194 ($5,034 during 2020).

Included within other assets (note 12) at December 31, 2021 is $1,525 ($557 at December 31, 2020) of investments by the Company in bonds and stocks of Putnam sponsored funds and $146 ($156 at December 31, 2020) of investments in stocks of sponsored unit trusts in Europe.

15. Debentures and Other Debt Instruments

	2021		2020	
	Carrying value	**Fair value**	Carrying value	Fair value
Short-term				
Commercial paper and other short-term debt instruments with interest rates from 0.172% to 0.203% (0.223% to 0.274% at December 31, 2020), unsecured	$ **122**	$ **122**	$ 125	$ 125
Revolving credit facility with interest equal to LIBOR plus 0.70% (U.S. $50; U.S. $165 at December 31, 2020), unsecured	**64**	**64**	210	210
Revolving credit facility with interest equal to LIBOR plus 1.00% (U.S. $0; U.S. $500 at December 31, 2020), unsecured	**–**	**–**	635	635
Total short-term	**186**	**186**	970	970
Capital:				
Long-term				
Lifeco				
6.74% Debentures due November 24, 2031, unsecured	**195**	**270**	195	287
6.67% Debentures due March 21, 2033, unsecured	**394**	**549**	394	575
5.998% Debentures due November 16, 2039, unsecured	**342**	**478**	342	504
3.337% Debentures due February 28, 2028, unsecured	**498**	**533**	498	566
2.981% Debentures due July 8, 2050, unsecured	**493**	**479**	493	514
2.50% Debentures due April 18, 2023, unsecured, (€500) [1]	**720**	**743**	774	825
2.379% Debentures due May 14, 2030, unsecured	**597**	**602**	597	637
1.75% Debentures due December 7, 2026, unsecured, (€500) [1]	**717**	**768**	771	857
	3,956	**4,422**	4,064	4,765
Canada Life				
6.40% Subordinated debentures due December 11, 2028, unsecured	**100**	**125**	100	135
Canada Life Capital Trust (CLCT)				
7.529% due June 30, 2052, unsecured, face value $150	**157**	**215**	158	222
Great-West Lifeco Finance 2018, LP				
4.581% Senior notes due May 17, 2048, unsecured, (U.S. $500)	**629**	**820**	628	867
4.047% Senior notes due May 17, 2028, unsecured, (U.S. $300)	**379**	**431**	379	446
	1,008	**1,251**	1,007	1,313
Great-West Lifeco Finance (Delaware) LP				
4.15% Senior notes due June 3, 2047, unsecured, (U.S. $700)	**874**	**1,057**	874	1,117
Great-West Lifeco U.S. Finance 2020, LP				
0.904% Senior notes due August 12, 2025, unsecured, (U.S. $500)	**632**	**617**	631	638
Empower Finance 2020, LP				
3.075% Senior notes due September 17, 2051, unsecured, (U.S. $700)	**879**	**899**	879	984
1.776% Senior notes due March 17, 2031, unsecured, (U.S. $400)	**506**	**490**	505	521
1.357% Senior notes due September 17, 2027, unsecured, (U.S. $400)	**506**	**493**	505	512
	1,891	**1,882**	1,889	2,017
Total long-term	**8,618**	**9,569**	8,723	10,207
Total	$ **8,804**	$ **9,755**	$ 9,693	$ 11,177

(1) Designated as hedges of the net investment in foreign operations.

The Company made payments of U.S. $400 on July 2, 2021 and U.S. $100 on September 29, 2021 on its committed line of credit related to GWL&A's acquisition of the retirement services business from MassMutual on December 31, 2020. As at December 31, 2021 the balance drawn on this line of credit is nil ($635 as at December 31, 2020).

Capital Trust Securities

CLCT, a trust established by Canada Life, had issued $150 of Canada Life Capital Securities – Series B (CLiCS – Series B), the proceeds of which were used by CLCT to purchase Canada Life senior debentures in the amount of $150.

Distributions and interest on the capital trust securities are classified as financing charges in the Consolidated Statements of Earnings (note 16). The fair value for capital trust securities is determined by the bid-ask price. Refer to note 8 for financial instrument risk management disclosures.

Subject to regulatory approval, CLCT may redeem the CLiCS – Series B, in whole or in part, at any time.

16. Financing Charges

Financing charges consist of the following:

	2021	2020
Operating charges:		
Interest on operating lines and short-term debt instruments	$ 7	$ 5
Financial charges:		
Interest on long-term debentures and other debt instruments	275	251
Interest on limited recourse capital notes	20	–
Interest on capital trust securities	11	11
Other	15	17
	321	279
Total	$ 328	$ 284

17. Other Liabilities

	2021	2020
Pension and other post-employment benefits (note 23)	**$ 989**	$ 1,630
Lease liabilities	**522**	568
Bank overdraft	**407**	444
Deferred income reserves	**314**	345
Other	**3,831**	2,160
Total	**$ 6,063**	$ 5,147

Total other liabilities of $4,238 ($2,604 at December 31, 2020) are expected to be realized within 12 months from the reporting date. This amount excludes deferred income reserves, the changes in which are noted below.

Deferred income reserves	2021	2020
Balance, beginning of year	**$ 345**	$ 380
Additions	**70**	51
Amortization	**(71)**	(78)
Changes in foreign exchange	**(14)**	12
Disposals	**(16)**	(20)
Balance, end of year	**$ 314**	$ 345

	2021		
Lease liabilities	**Property**	**Equipment**	**Total**
Balance, beginning of year	**$ 565**	**$ 3**	**$ 568**
Additions	**21**	**5**	**26**
Modifications	**(2)**	**–**	**(2)**
Lease payments	**(86)**	**(3)**	**(89)**
Changes in foreign exchange rates	**(2)**	**–**	**(2)**
Interest	**21**	**–**	**21**
Balance, end of year	**$ 517**	**$ 5**	**$ 522**

	2020		
	Property	Equipment	Total
Balance, beginning of year	$ 580	$ 5	$ 585
Additions	56	1	57
Modifications	(4)	–	(4)
Lease payments	(85)	(3)	(88)
Changes in foreign exchange rates	(4)	–	(4)
Interest	22	–	22
Balance, end of year	$ 565	$ 3	$ 568

The following table presents the contractual undiscounted cash flows for lease obligations:

	2021	2020
One year or less	**$ 83**	$ 88
Over one year to two years	**71**	78
Over two years to three years	**63**	67
Over three years to four years	**55**	60
Over four years to five years	**52**	54
Over five years	**340**	387
Total undiscounted lease obligations	**$ 664**	$ 734

18. Non-Controlling Interests

The Company has a controlling equity interest in Canada Life, GWL&A, and Putnam at December 31, 2021 and December 31, 2020.

Non-controlling interests attributable to participating account surplus is the proportion of the equity attributable to the participating account of the Company's subsidiaries.

Non-controlling interests in subsidiaries also include non-controlling interests for the issued and outstanding shares of Putnam and PanAgora held by employees of the respective companies, and non-controlling interests through Irish Life's controlling interest in Invesco Ltd. (Ireland).

(a) The non-controlling interests recorded in the Consolidated Statements of Earnings and other comprehensive income are as follows:

	2021	2020
Net earnings attributable to participating account before policyholder dividends		
Canada Life	**$ 1,708**	$ 1,429
GWL&A	**–**	1
	1,708	1,430
Policyholder dividends		
Canada Life	**(1,405)**	(1,362)
GWL&A	**(1)**	(2)
	(1,406)	(1,364)
Net earnings – participating account	**302**	66
Non-controlling interests in subsidiaries	**(1)**	12
Total	**$ 301**	$ 78

The non-controlling interests recorded in other comprehensive income (loss) for the year ended December 31, 2021 was $(28) ($37 for the year ended December 31, 2020).

(b) The carrying value of non-controlling interests consists of the following:

	2021	2020
Participating account surplus in subsidiaries:		
Canada Life	**$ 3,126**	$ 2,858
GWL&A	**12**	13
Total	**$ 3,138**	$ 2,871
Non-controlling interests in subsidiaries	**$ 129**	$ 116

19. Share Capital

(a) Limited Recourse Capital Notes

On August 16, 2021, the Company issued $1,500 aggregate principal amount 3.60% Limited Recourse Capital Notes Series 1 (Subordinated Indebtedness) at par, maturing on December 31, 2081 (LRCN Series 1). The LRCN Series 1 bear interest at a fixed rate of 3.60% per annum payable semi-annually, up to but excluding December 31, 2026. On December 31, 2026 and every five years thereafter until December 31, 2076, the interest rate on the LRCN Series 1 will be reset at an interest rate equal to the five-year Government of Canada Yield, plus 2.641%. Commencing November 30, 2026, the Company will have the option to redeem the LRCN Series 1 every five years during the period from November 30 to December 31, in whole or in part at par, together in each case with accrued and unpaid interest. The Company will be required to redeem the LRCN Series 1 in whole at par, together with accrued and unpaid interest, if GWL&A's acquisition of Prudential's full-service retirement business is terminated prior to, or has not closed on or prior to, May 3, 2022 (or such later date as extended pursuant to the acquisition agreement). The LRCN Series 1 are presented within equity on the Consolidated Balance Sheets. Transaction costs incurred in connection with the LRCN Series 1 issue of $17 ($13 after-tax) were charged to accumulated surplus. Interest expense of $20 for the year ended December 31, 2021 was recognized in financing charges in the Consolidated Statements of Earnings. The LRCN Series 1 had a fair value of $1,475 at December 31, 2021.

Non-payment of interest or principal when due on the LRCN Series 1 will result in a recourse event, with the noteholders' sole remedy being receipt of their proportionate share of Non-Cumulative 5-Year Rate Reset First Preferred Shares, Series U (Series U Preferred Shares) held in a newly formed consolidated trust (Limited Recourse Trust). All claims of the holders of LRCN Series 1 against the Company will be extinguished upon receipt of the corresponding trust assets. The Series U Preferred Shares are eliminated on the Company's Consolidated Balance Sheets while being held within the Limited Recourse Trust.

(b) Preferred Shares

Authorized

Unlimited First Preferred Shares, Class A Preferred Shares and Second Preferred Shares

Unlimited Common Shares

Issued and outstanding and fully paid

	2021		2020	
	Number	Carrying value	Number	Carrying value
First Preferred Shares				
Series F, 5.90% Non-Cumulative	–	$ –	7,740,032	$ 194
Series G, 5.20% Non-Cumulative	**12,000,000**	**300**	12,000,000	300
Series H, 4.85% Non-Cumulative	**12,000,000**	**300**	12,000,000	300
Series I, 4.50% Non-Cumulative	**12,000,000**	**300**	12,000,000	300
Series L, 5.65% Non-Cumulative	**6,800,000**	**170**	6,800,000	170
Series M, 5.80% Non-Cumulative	**6,000,000**	**150**	6,000,000	150
Series N, 1.749% Non-Cumulative Rate Reset	**10,000,000**	**250**	10,000,000	250
Series P, 5.40% Non-Cumulative	**10,000,000**	**250**	10,000,000	250
Series Q, 5.15% Non-Cumulative	**8,000,000**	**200**	8,000,000	200
Series R, 4.80% Non-Cumulative	**8,000,000**	**200**	8,000,000	200
Series S, 5.25% Non-Cumulative	**8,000,000**	**200**	8,000,000	200
Series T, 5.15% Non-Cumulative	**8,000,000**	**200**	8,000,000	200
Series Y, 4.50% Non-Cumulative	**8,000,000**	**200**	–	–
Total	**108,800,000**	**$ 2,720**	108,540,032	$ 2,714
Common shares				
Balance, beginning of year	**927,853,106**	**$ 5,651**	927,281,186	$ 5,633
Exercised and issued under stock option plan	**2,767,232**	**97**	571,920	18
Balance, end of year	**930,620,338**	**$ 5,748**	927,853,106	$ 5,651

On October 8, 2021, the Company issued 8,000,000, 4.50% Non-Cumulative First Preferred Shares, Series Y at $25.00 per share for gross proceeds of $200. The shares are redeemable at the option of the Company on or after December 31, 2026 for $25.00 per share plus a premium if redeemed prior to December 31, 2030, in each case together with all declared and unpaid dividends up to but excluding the date of redemption. Transaction costs incurred in connection with the preferred share issue of $4 ($3 after-tax) were charged to accumulated surplus.

On December 31, 2021 the Company redeemed all of its issued and outstanding, 5.90% Non-Cumulative First Preferred Shares, Series F for $25.00 per share plus an amount equal to all declared and unpaid dividends, less any tax required to be deducted and withheld by the Company.

19. Share Capital (cont'd)

The Series G, 5.20% Non-Cumulative First Preferred Shares are currently redeemable at the option of the Company for $25.00 per share, together with all declared and unpaid dividends up to but excluding the date of redemption.

The Series H, 4.85% Non-Cumulative First Preferred Shares are currently redeemable at the option of the Company for $25.00 per share, together with all declared and unpaid dividends up to but excluding the date of redemption.

The Series I, 4.50% Non-Cumulative First Preferred Shares are currently redeemable at the option of the Company for $25.00 per share, together with all declared and unpaid dividends up to but excluding the date of redemption.

The Series L, 5.65% Non-Cumulative First Preferred Shares are currently redeemable at the option of the Company for $25.00 per share, together with all declared and unpaid dividends up to but excluding the date of redemption.

The Series M, 5.80% Non-Cumulative First Preferred Shares are currently redeemable at the option of the Company for $25.00 per share, together with all declared and unpaid dividends up to but excluding the date of redemption.

The Series N, Non-Cumulative 5-Year Rate Reset First Preferred Shares carry an annual fixed non-cumulative dividend rate of 1.749% up to but excluding December 31, 2025 and are redeemable at the option of the Company on December 31, 2025 and on December 31 every five years thereafter for $25.00 per share plus all declared and unpaid dividends up to but excluding the date of redemption. Subject to the Company's right of redemption and certain other restrictions on conversion described in the Series N share conditions, each Series N share is convertible into one Series O, Non-Cumulative Floating Rate First Preferred Share at the option of the holders on December 31, 2025 and on December 31 every five years thereafter.

The Series P, 5.40% Non-Cumulative First Preferred Shares are currently redeemable at the option of the Company for $25.00 per share, together with all declared and unpaid dividends up to but excluding the date of redemption.

The Series Q, 5.15% Non-Cumulative First Preferred Shares are currently redeemable at the option of the Company for $25.00 per share, together with all declared and unpaid dividends up to but excluding the date of redemption.

The Series R, 4.80% Non-Cumulative First Preferred Shares are currently redeemable at the option of the Company for $25.00 per share, together with all declared and unpaid dividends up to but excluding the date of redemption.

The Series S, 5.25% Non-Cumulative First Preferred Shares are redeemable at the option of the Company for $25.00 per share plus a premium if redeemed prior to June 30, 2023, together with all declared and unpaid dividends up to but excluding the date of redemption.

The Series T, 5.15% Non-Cumulative First Preferred Shares are redeemable at the option of the Company on or after June 30, 2022 for $25.00 per share plus a premium if redeemed prior to June 30, 2026, together with all declared and unpaid dividends up to but excluding the date of redemption.

(c) Common Shares

Normal Course Issuer Bid

The Company renewed its normal course issuer bid (NCIB) effective January 27, 2021 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 year ended December 31, 2021, the Company did not purchase any common shares under the NCIB (nil for the year ended December 31, 2020, under the previous NCIB). On November 4, 2021, OSFI withdrew its guidance provided in March 2020 at the outset of the COVID-19 pandemic that Canadian banks and insurers should suspend share buybacks and not increase dividend payments.

Subsequent Event

On January 25, 2022, the Company announced a new NCIB commencing January 27, 2022 and terminating January 26, 2023 to purchase for cancellation up to but not more than 20,000,000 of its common shares at market prices.

20. Earnings Per Common Share

The following provides the reconciliation between basic and diluted earnings per common share:

	2021	2020
Earnings		
Net earnings	$ **3,262**	$ 3,076
Preferred share dividends	**(134)**	(133)
Net earnings – common shareholders	$ **3,128**	$ 2,943
Number of common shares		
Average number of common shares outstanding	**929,461,348**	927,675,108
Add: Potential exercise of outstanding stock options	**1,496,586**	109,974
Average number of common shares outstanding – diluted basis	**930,957,934**	927,785,082
Basic earnings per common share	$ **3.365**	$ 3.173
Diluted earnings per common share	$ **3.360**	$ 3.172
Dividends per common share (1)	$ **1.804**	$ 1.752

(1) Includes an additional dividend of $0.052 declared November 14, 2021.

21. Capital Management

(a) Policies and Objectives

Managing capital is the continual process of establishing and maintaining the quantity and quality of capital appropriate for the Company and ensuring capital is deployed in a manner consistent with the expectations of the Company's stakeholders. For these purposes, the Board considers the key stakeholders to be the Company's shareholders, policyholders and holders of subordinated liabilities in addition to the relevant regulators in the various jurisdictions where the Company and its subsidiaries operate.

The Company manages its capital on both a consolidated basis as well as at the individual operating subsidiary level. The primary objectives of the Company's capital management strategy are:

- 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;
- to maintain strong credit and financial strength ratings of the Company ensuring stable access to capital markets; and
- to provide an efficient capital structure to maximize shareholders' value in the context of the Company's operational risks and strategic 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.

The capital planning process is the responsibility of the Company's Chief Financial Officer. The capital plan is approved by the Company's Board of Directors on an annual basis. The Board of Directors reviews and approves all capital transactions undertaken by management.

The target level of capitalization for the Company and its subsidiaries is assessed by considering various factors such as the probability of falling below the minimum regulatory capital requirements in the relevant operating jurisdiction, the views expressed by various credit rating agencies that provide financial strength and other ratings to the Company, and the desire to hold sufficient capital to be able to honour all policyholder and other obligations of the Company with a high degree of confidence.

(b) Regulatory Capital

In Canada, OSFI has established a regulatory capital adequacy measurement for life insurance companies incorporated under the Insurance Companies Act (Canada) and their subsidiaries.

The Life Insurance Capital Adequacy Test (LICAT) Ratio compares the regulatory capital resources of a company to its required capital, defined by OSFI, as the aggregate of all defined capital requirements. The total capital resources are provided by the sum of Available Capital, Surplus Allowance and Eligible Deposits.

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

	2021	2020
Tier 1 Capital	$ **12,584**	$ 11,593
Tier 2 Capital	**4,417**	4,568
Total Available Capital	**17,001**	16,161
Surplus Allowance & Eligible Deposits	**13,225**	14,226
Total Capital Resources	$ **30,226**	$ 30,387
Required Capital	$ **24,323**	$ 23,607
Total LICAT Ratio (OSFI Supervisory Target = 100%) (1)	**124%**	129%

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

For entities based in Europe, the local solvency capital regime is the Solvency II basis. At December 31, 2021 and December 31, 2020, all European regulated entities met the capital and solvency requirements as prescribed under Solvency II.

GWL&A is subject to the risk-based capital regulatory regime in the U.S. Other foreign operations and foreign subsidiaries of the Company are required to comply with local capital or solvency requirements in their respective jurisdictions. At December 31, 2021 and December 31, 2020, the Company maintained capital levels above the minimum local regulatory requirements in each of its foreign operations.

22. Share-Based Payments

(a) The Company has a stock option plan (the Plan) pursuant to which options to subscribe for common shares of Lifeco may be granted to certain officers and employees of Lifeco and its affiliates. The Company's Human Resources Committee (the Committee) administers the Plan and, subject to the specific provisions of the Plan, fixes the terms and conditions upon which options are granted. The exercise price of each option granted under the Plan is fixed by the Committee, but cannot under any circumstances be less than the weighted average trading price per Lifeco common share on the Toronto Stock Exchange for the five trading days preceding the date of the grant. Options granted prior to January 1, 2019 vest over a period of five years. Options granted on or after January 1, 2019 vest 50% three years after the grant date and 50% four years after the grant date. Options have a maximum exercise period of ten years from the grant date. Termination of employment may, in certain circumstances, result in forfeiture of the options, unless otherwise determined by the Committee. In 2021, the maximum number of Lifeco common shares issuable under the Plan was 72,500,000.

During 2021, 2,638,300 common share options were granted (1,932,200 during 2020). The weighted average fair value of common share options granted during 2021 was $2.60 per option ($1.86 in 2020). The fair value of each common share option was estimated using the Black-Scholes option-pricing model with the following weighted average assumptions used for those options granted in 2021: dividend yield 5.43% (5.44% in 2020), expected volatility 18.47% (15.75% in 2020), risk-free interest rate 1.18% (1.10% in 2020), and expected life of eight years (eight in 2020).

The following summarizes the changes in options outstanding and the weighted average exercise price:

	2021		2020	
	Options	**Weighted average exercise price**	Options	Weighted average exercise price
Outstanding, beginning of year	**16,399,279**	**$ 32.69**	15,378,339	$ 32.57
Granted	**2,638,300**	**32.28**	1,932,200	32.22
Exercised	**(2,767,232)**	**30.90**	(571,920)	26.71
Forfeited/expired	**(146,620)**	**33.39**	(339,340)	34.74
Outstanding, end of year	**16,123,727**	**$ 32.92**	16,399,279	$ 32.69
Options exercisable at end of year	**8,522,967**	**$ 33.78**	10,084,559	$ 32.94

The weighted average share price at the date of exercise of stock options for the year ended December 31, 2021 was $36.11 ($32.59 in 2020).

Compensation expense due to the Plan transactions accounted for as equity-settled share-based payments of $5 after-tax in 2021 ($4 after-tax in 2020) has been recognized in the Consolidated Statements of Earnings.

The following summarizes information on the ranges of exercise prices including weighted average remaining contractual life at December 31, 2021:

	Outstanding			Exercisable		
Exercise price ranges	**Options**	**Weighted average remaining contractual life**	**Weighted average exercise price**	**Options**	**Weighted average exercise price**	**Expiry**
$23.16 – $36.87	501,180	0.30	28.15	494,580	28.12	2022
$27.13 – $36.87	910,680	1.29	30.35	910,680	30.35	2023
$30.28 – $36.87	1,566,428	2.32	32.98	1,566,428	32.98	2024
$34.68 – $36.87	1,488,059	3.19	35.67	1,488,059	35.67	2025
$30.28 – $36.87	2,196,260	4.19	34.32	2,196,260	34.32	2026
$36.87 – $36.87	1,153,200	5.16	36.87	925,740	36.87	2027
$32.99 – $34.21	1,560,020	6.16	34.20	932,820	34.20	2028
$30.28 – $32.50	2,400,400	7.16	30.33	8,400	30.28	2029
$32.22 – $32.22	1,809,800	8.16	32.22	–	–	2030
$32.10 – $38.75	2,537,700	9.16	32.28	–	–	2031

(b) To promote greater alignment of interests between the Directors and Lifeco's shareholders, the Company and certain of its subsidiaries have mandatory DSU Plans and/or voluntary DSU Plans (the "Mandatory DSU Plans" and the "Voluntary DSU Plans" respectively) in which the Directors of the Company participate. Under the Mandatory DSU Plans, each Director who is a resident of Canada or the United States must receive 50% of their annual Board retainer in the form of Deferred Share Units (DSUs). Under the Voluntary DSU Plans, each Director may elect to receive the balance of their annual Board retainer and Board Committee fees entirely in the form of DSUs, entirely in cash, or equally in cash and DSUs. In both cases, the number of DSUs granted is determined by dividing the amount of remuneration payable to the Director by the weighted average trading price per Lifeco common share on the Toronto Stock Exchange (TSX) for the last five trading days of the preceding fiscal quarter. Directors receive additional DSUs for dividends payable on the Company's common shares based on the value of a DSU at the dividend payment date. DSUs are redeemable when an individual ceases to be a Director, or as applicable, an officer or employee of the Company or any of its affiliates by a lump sum cash payment, based on the weighted average trading price per Lifeco common share on the TSX for the last five trading days preceding the date of redemption. In 2021, $6 in Directors' fees were used to acquire DSUs ($6 in 2020). At December 31, 2021, the carrying value of the DSU liability is $69 ($49 in 2020) recorded within other liabilities.

Certain employees of the Company are entitled to receive DSUs. Under these DSU Plans, certain employees may elect to receive DSUs as settlement of their annual incentive plan or as settlement of PSUs issued under the Company's PSU Plan. In both cases these employees are granted DSUs equivalent to the Company's common shares. Employees receive additional DSUs in respect of dividends payable on the common shares based on the value of the DSUs at the time. DSUs are redeemable when an individual ceases to be an officer or employee of the Company or any of its affiliates, by a lump sum cash payment representing the value of the DSUs at that date. The Company uses the fair-value based method to account for the DSUs granted to employees under the plans. For the year ended December 31, 2021, the Company recognized compensation expense of $16 ($4 in 2020) for the DSU Plans recorded in operating and administrative expenses in the Consolidated Statements of Earnings. At December 31, 2021, the carrying value of the DSU liability is $40 ($25 in 2020) recorded within other liabilities in the Consolidated Balance Sheets.

(c) Certain employees of the Company are entitled to receive PSUs. Under the PSU Plan, these employees are granted PSUs equivalent to the Company's common shares vesting over a three-year period. Employees receive additional PSUs in respect of dividends payable on the common shares based on the value of a PSU at that time. At the maturity date, employees receive cash representing the value of the PSU at this date. The Company uses the fair-value based method to account for the PSUs granted to employees under the plan. For the year ended December 31, 2021, the Company recognized compensation expense, excluding the impact of hedging, of $102 ($41 in 2020) for the PSU Plan recorded in operating and administrative expenses in the Consolidated Statements of Earnings. At December 31, 2021, the carrying value of the PSU liability is $156 ($93 in 2020) recorded within other liabilities.

(d) The Company's Employee Share Ownership Plan (ESOP) is a voluntary plan where eligible employees can contribute up to 5% of their previous year's eligible earnings to purchase common shares of Lifeco. The Company matches 50% of the total employee contributions. The contributions from the Company vest immediately and are expensed. For the year ended December 31, 2021, the Company recognized compensation expense of $13 ($13 in 2020) for the ESOP recorded in operating and administrative expenses in the Consolidated Statements of Earnings.

(e) Putnam sponsors the Putnam Investments, LLC Equity Incentive Plan. Under the terms of the Equity Incentive Plan, Putnam is authorized to grant or sell Class B Shares of Putnam (the Putnam Class B Shares), subject to certain restrictions, and to grant options to purchase Putnam Class B Shares (collectively, the Awards) to certain senior management and key employees of Putnam at fair value at the time of the award. Fair value is determined under the valuation methodology outlined in the Equity Incentive Plan. Awards vest over a period of up to five years and are specified in the individual's award letter. Holders of Putnam Class B Shares are not entitled to vote other than in respect of certain matters in regards to the Equity Incentive Plan and have no rights to convert their shares into any other securities. The number of Putnam Class B Shares that may be subject to Awards under the Equity Incentive Plan is limited to 16,764,705.

During 2021, Putnam granted 2,824,156 (3,092,859 in 2020) restricted Class B common shares to certain members of senior management and key employees.

Compensation expense recorded for the year ended December 31, 2021 related to restricted Class B common shares and Class B stock options earned was $41 ($31 in 2020) and is recorded in operating and administrative expenses in the Consolidated Statements of Earnings.

(f) Certain employees of PanAgora, a subsidiary of Putnam, are eligible to participate in the PanAgora Management Equity Plan under which Class C Shares of PanAgora and options and stock appreciation rights on Class C Shares of PanAgora may be issued. Holders of PanAgora Class C Shares are not entitled to vote and have no rights to convert their shares into any other securities. The number of PanAgora Class C Shares may not exceed 20% of the equity of PanAgora on a fully exercised and converted basis.

Compensation expense recorded for the year ended December 31, 2021 related to restricted Class C Shares and stock appreciation rights was $13 in 2021 ($14 in 2020) and is included as a component of operating and administrative expenses in the Consolidated Statements of Earnings.

23. Pension Plans and Other Post-Employment Benefits

Characteristics, Funding and Risk

The Company's subsidiaries maintain contributory and non-contributory defined benefit pension plans for eligible employees and advisors. The Company's subsidiaries also maintain 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 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 by making contributions in respect of current service. Certain pension payments are indexed either on 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 pension benefits. The defined contribution pension plans provide pension benefits based on accumulated employee and employer contributions. Employer contributions to these plans are a set percentage of employees' annual income and may be subject to certain vesting requirements.

The Company's subsidiaries also provide post-employment health, dental and life insurance benefits to eligible employees, advisors and their dependents. Retirees share in the cost of benefits through deductibles, co-insurance and caps on benefits. These plans are closed to new hires and were previously amended to limit which employees could become eligible to receive benefits. The amount of some of the post-employment benefits other than pensions depends on future cost escalation. These post-employment benefits are not pre-funded and the amount of the obligation for these benefits is included in other liabilities and is supported by general assets.

The Company's subsidiaries have pension and benefit committees or a trusteed arrangement that provides oversight for the benefit plans. The benefit plans are monitored on an ongoing basis to assess the benefit, funding and investment policies, financial status, and funding requirements. Significant changes to a subsidiary company's benefit plans require approval from that company's Board of Directors.

The funding policies of the Company's subsidiaries for the funded pension plans require annual contributions equal to or greater than those required by the applicable regulations and plan provisions that govern the funding of the plans. Where funded plans have a net defined benefit pension plan asset, the Company determines if an economic benefit exists in the form of potential reductions in future contributions by the Company, from the payment of expenses from the plan and in the form of surplus refunds, where permitted by applicable regulation and plan provisions.

By their design, the defined benefit plans expose the Company to the typical risks faced by defined benefit plans such as investment performance, changes to the discount rates used to value the obligations, longevity of plan members, and future inflation. Pension and benefit risk is managed by regular monitoring of the plans, applicable regulations and other factors that could impact the expenses and cash flows of the Company.

The following reflects the financial position of the contributory and non-contributory defined benefit plans of the Company's subsidiaries:

(a) Plan Assets, Benefit Obligation and Funded Status

	Defined benefit pension plans		Other post-employment benefits	
	2021	2020	**2021**	2020
Change in fair value of plan assets				
Fair value of plan assets, beginning of year	**$ 7,602**	$ 6,972	**$ –**	$ –
Interest income	**159**	179	**–**	–
Actual return over (less than) interest income	**498**	453	**–**	–
Employer contributions	**115**	164	**19**	17
Employee contributions	**18**	15	**–**	–
Benefits paid	**(306)**	(285)	**(19)**	(17)
Settlements	**(142)**	(11)	**–**	–
Administrative expenses	**(8)**	(8)	**–**	–
Foreign exchange rate changes	**(193)**	123	**–**	–
Fair value of plan assets, end of year	**$ 7,743**	$ 7,602	**$ –**	$ –
Change in defined benefit obligation				
Defined benefit obligation, beginning of year	**$ 8,554**	$ 7,836	**$ 409**	$ 388
Current service cost	**91**	88	**3**	2
Interest cost	**181**	204	**10**	12
Employee contributions	**18**	15	**–**	–
Benefits paid	**(306)**	(285)	**(19)**	(17)
Curtailments and termination benefits	**(1)**	(11)	**–**	–
Settlements	**(200)**	(14)	**–**	–
Actuarial loss (gain) on financial assumption changes	**(150)**	599	**(25)**	28
Actuarial loss (gain) on demographic assumption changes	**(16)**	(9)	**(10)**	1
Actuarial loss (gain) arising from member experience	**(16)**	18	**(1)**	(4)
Foreign exchange rate changes	**(194)**	113	**–**	(1)
Defined benefit obligation, end of year	**$ 7,961**	$ 8,554	**$ 367**	$ 409
Asset (liability) recognized on the Consolidated Balance Sheets				
Funded status of plans – surplus (deficit)	**$ (218)**	$ (952)	**$ (367)**	$ (409)
Unrecognized amount due to asset ceiling	**(41)**	(29)	**–**	–
Asset (liability) recognized on the Consolidated Balance Sheets	**$ (259)**	$ (981)	**$ (367)**	$ (409)
Recorded in:				
Other assets (note 12)	**$ 363**	$ 240	**$ –**	$ –
Other liabilities (note 17)	**(622)**	(1,221)	**(367)**	(409)
Asset (liability) recognized on the Consolidated Balance Sheets	**$ (259)**	$ (981)	**$ (367)**	$ (409)
Analysis of defined benefit obligation				
Wholly or partly funded plans	**$ 7,646**	$ 8,213	**$ –**	$ –
Wholly unfunded plans	**$ 315**	$ 341	**$ 367**	$ 409

23. Pension Plans and Other Post-Employment Benefits (cont'd)

Under IFRIC 14, *The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction*, the Company must assess whether each pension plan's asset has economic benefit to the Company through future contribution reductions, from the payment of expenses from the plan, or surplus refunds; in the event the Company is not entitled to a benefit, a limit or 'asset ceiling' is required on the balance. The following provides a breakdown of the changes in the asset ceiling:

	Defined benefit pension plans	
	2021	2020
Change in asset ceiling		
Asset ceiling, beginning of year	**$ 29**	$ 37
Interest on asset ceiling	**1**	1
Change in asset ceiling	**11**	(11)
Foreign exchange rate changes	**–**	2
Asset ceiling, end of year	**$ 41**	$ 29

(b) Pension and Other Post-Employment Benefits Expense

The total pension and other post-employment benefit expense included in operating expenses and other comprehensive income are as follows:

	All pension plans		Other post-employment benefits	
	2021	2020	**2021**	2020
Defined benefit current service cost	**$ 109**	$ 103	**$ 3**	$ 2
Defined contribution current service cost	**184**	145	**–**	–
Employee contributions	**(18)**	(15)	**–**	–
Employer current service cost	**275**	233	**3**	2
Administrative expense	**8**	8	**–**	–
Curtailments	**(1)**	(11)	**–**	–
Settlements	**(58)**	(3)	**–**	–
Net interest cost	**23**	26	**10**	12
Expense – profit or loss	**247**	253	**13**	14
Actuarial (gain) loss recognized	**(182)**	608	**(36)**	25
Return on assets (greater) less than assumed	**(498)**	(453)	**–**	–
Change in the asset ceiling	**11**	(11)	**–**	–
Re-measurements – other comprehensive (income) loss	**(669)**	144	**(36)**	25
Total expense (income) including re-measurements	**$ (422)**	$ 397	**$ (23)**	$ 39

(c) Asset Allocation by Major Category Weighted by Plan Assets

	Defined benefit pension plans	
	2021	2020
Equity securities	**39%**	40%
Debt securities	**51%**	48%
Real estate	**7%**	7%
Cash and cash equivalents	**3%**	5%
Total	**100%**	100%

No plan assets are directly invested in the Company's or related parties' securities. Plan assets include investments in segregated funds and other funds managed by subsidiaries of the Company of $6,980 at December 31, 2021 and $6,871 at December 31, 2020, of which $6,902 ($6,790 at December 31, 2020) are included on the Consolidated Balance Sheets. Plan assets do not include any property occupied or other assets used by the Company.

(d) Details of Defined Benefit Obligation

(i) Portion of Defined Benefit Obligation Subject to Future Salary Increases

	Defined benefit pension plans		Other post-employment benefits	
	2021	2020	**2021**	2020
Benefit obligation without future salary increases	**$ 7,361**	$ 7,893	**$ 367**	$ 409
Effect of assumed future salary increases	**600**	661	**–**	–
Defined benefit obligation	**$ 7,961**	$ 8,554	**$ 367**	$ 409

The other post-employment benefits are not subject to future salary increases.

(ii) Portion of Defined Benefit Obligation Without Future Pension Increases

	Defined benefit pension plans		Other post-employment benefits	
	2021	2020	**2021**	2020
Benefit obligation without future pension increases	**$ 7,137**	$ 7,918	**$ 367**	$ 409
Effect of assumed future pension increases	**824**	636	**–**	–
Defined benefit obligation	**$ 7,961**	$ 8,554	**$ 367**	$ 409

The other post-employment benefits are not subject to future pension increases.

(iii) Maturity Profile of Plan Membership

	Defined benefit pension plans		Other post-employment benefits	
	2021	2020	**2021**	2020
Actives	**41%**	40%	**15%**	16%
Deferred vesteds	**18%**	20%	**n/a**	n/a
Retirees	**41%**	40%	**85%**	84%
Total	**100%**	100%	**100%**	100%
Weighted average duration of defined benefit obligation	**17.6 years**	18.7 years	**11.8 years**	11.9 years

(e) Cash Flow Information

	Pension plans	Other post-employment benefits	Total
Expected employer contributions for 2022:			
Funded (wholly or partly) defined benefit plans	$ 80	$ –	$ 80
Unfunded plans	25	22	47
Defined contribution plans	179	–	179
Total	**$ 284**	**$ 22**	**$ 306**

(f) Actuarial Assumptions and Sensitivities

(i) Actuarial Assumptions

	Defined benefit pension plans		Other post-employment benefits	
	2021	2020	**2021**	2020
To determine benefit cost:				
Discount rate – past service liabilities	**2.2%**	2.6%	**2.5%**	3.1%
Discount rate – future service liabilities	**2.8%**	3.2%	**2.6%**	3.3%
Rate of compensation increase	**3.0%**	2.9%	**–**	–
Future pension increases (1)	**1.2%**	1.3%	**–**	–
To determine defined benefit obligation:				
Discount rate – past service liabilities	**2.6%**	2.1%	**3.1%**	2.5%
Rate of compensation increase	**3.1%**	2.9%	**–**	–
Future pension increases (1)	**1.7%**	1.0%	**–**	–
Medical cost trend rates:				
Initial medical cost trend rate			**4.7%**	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.

(ii) Sample Life Expectancies Based on Mortality Assumptions

	Defined benefit pension plans		Other post-employment benefits	
	2021	2020	**2021**	2020
Sample life expectancies based on mortality assumption:				
Male				
Age 65 in fiscal year	**22.6**	22.7	**22.5**	22.5
Age 65 for those age 35 in the fiscal year	**24.5**	24.7	**24.0**	24.0
Female				
Age 65 in fiscal year	**24.7**	24.8	**24.9**	24.7
Age 65 for those age 35 in the fiscal year	**26.6**	26.7	**26.2**	26.2

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 practice. Emerging plan experience is reviewed and considered in establishing the best estimate for future mortality.

The calculation of the defined benefit obligation is sensitive to the mortality assumptions. The effect of a one-year increase in life expectancy would be an increase in the defined benefit obligation of $246 for the defined benefit pension plans and $12 for other post-employment benefits.

(iii) Impact of Changes to Assumptions on Defined Benefit Obligation

	1% increase		1% decrease	
	2021	2020	**2021**	2020
Defined benefit pension plans:				
Impact of a change to the discount rate	**$ (1,199)**	$ (1,350)	**$ 1,568**	$ 1,784
Impact of a change to the rate of compensation increase	**299**	329	**(269)**	(291)
Impact of a change to the rate of inflation	**578**	662	**(507)**	(569)
Other post-employment benefits:				
Impact of a change to assumed medical cost trend rates	**24**	31	**(21)**	(26)
Impact of a change to the discount rate	**(36)**	(44)	**44**	53

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.

24. Accumulated Other Comprehensive Income

	2021								
	Unrealized foreign exchange gains (losses) on translation of foreign operations	Unrealized gains (losses) on hedges of the net investment in foreign operations	Unrealized gains (losses) on available-for-sale assets	Unrealized gains (losses) on cash flow hedges	Re-measurements on defined benefit pension and other post-employment benefit plans	Revaluation surplus on transfer to investment properties	Total	Non-controlling interest	Shareholders
Balance, beginning of year	**$ 1,339**	**$ (135)**	**$ 266**	**$ 24**	**$ (978)**	**$ 10**	**$ 526**	**$ (39)**	**$ 487**
Other comprehensive income (loss)	**(391)**	**117**	**(159)**	**12**	**705**	**–**	**284**	**40**	**324**
Income tax	**–**	**(12)**	**38**	**(3)**	**(190)**	**–**	**(167)**	**(12)**	**(179)**
	(391)	**105**	**(121)**	**9**	**515**	**–**	**117**	**28**	**145**
Balance, end of year	**$ 948**	**$ (30)**	**$ 145**	**$ 33**	**$ (463)**	**$ 10**	**$ 643**	**$ (11)**	**$ 632**

	2020								
	Unrealized foreign exchange gains (losses) on translation of foreign operations	Unrealized gains (losses) on hedges of the net investment in foreign operations	Unrealized gains (losses) on available-for-sale assets	Unrealized gains (losses) on cash flow hedges	Re-measurements on defined benefit pension and other post-employment benefit plans	Revaluation surplus on transfer to investment properties	Total	Non-controlling interest	Shareholders
Balance, beginning of year	$ 1,236	$ (57)	$ 154	$ 13	$ (849)	$ –	$ 497	$ (2)	$ 495
Other comprehensive income (loss)	105	(90)	146	15	(169)	11	18	(54)	(36)
Income tax	(2)	12	(34)	(4)	40	(1)	11	17	28
	103	(78)	112	11	(129)	10	29	(37)	(8)
Balance, end of year	$ 1,339	$ (135)	$ 266	$ 24	$ (978)	$ 10	$ 526	$ (39)	$ 487

25. Related Party Transactions

Power Corporation, which is incorporated and domiciled in Canada, is the Company's parent and has voting control of the Company. The Company is related to other members of the Power Corporation group of companies including IGM, a company in the financial services sector along with its subsidiaries IG Wealth Management, Mackenzie Financial and Investment Planning Council and Pargesa, a holding company with substantial holdings in a diversified industrial group based in Europe.

(a) Principal subsidiaries

The consolidated financial statements of the Company include the operations of the following subsidiaries and their subsidiaries:

Company	Incorporated in	Primary business operation	% Held
The Canada Life Assurance Company	Canada	Insurance and wealth management	100.00%
Great-West Life & Annuity Insurance Company	United States	Financial services	100.00%
Putnam Investments, LLC	United States	Asset management	100.00%(1)

(1) Lifeco holds 100% of the voting shares and 96.19% of the total outstanding shares.

(b) Transactions with related parties included in the consolidated financial statements

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 the year, 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 a 3.85% ownership interest in IGM. The Company uses the equity method to account for its investment in IGM as it exercises significant influence. In 2021, the Company recognized $33 for the equity method share of IGM net earnings and received dividends of $21 from its investment in IGM (note 6).

During the year, the Company completed an agreement for a long-term strategic relationship with Sagard, a wholly-owned subsidiary of Power Corporation, which includes the sale of EverWest to Sagard, in exchange for a minority shareholding in Sagard's subsidiary, Sagard Holdings Management Inc. (note 3).

During the year ended December 31, 2020, the Company completed the sale of GLC Asset Management Group Ltd to Mackenzie. The Company recorded a gain on disposal of $143 after-tax, net of restructuring and other one-time costs of $16 after-tax ($22 pre-tax) in 2020.

During the year ended December 31, 2020, GWL&A completed the acquisition of 100% of the equity of Personal Capital. Prior to the completion of the acquisition, IGM held a 24.8% interest in Personal Capital (approximately 21.7% after giving effect to dilution). The transaction resulted from an auction process conducted by Personal Capital and shareholders other than 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 managed by related parties of the Company and the Company receives management fees related to these services. All transactions were provided at market terms and conditions (note 14).

The Company held debentures issued by IGM; the interest rates and maturity dates are as follows:

	2021	2020
3.44%, matures January 26, 2027	$ **21**	$ 22
6.65%, matures December 13, 2027	**16**	17
7.45%, matures May 9, 2031	**13**	14
7.00%, matures December 31, 2032	**14**	14
4.56%, matures January 25, 2047	**24**	25
4.115%, matures December 9, 2047	**11**	12
4.174%, matures July 13, 2048	**6**	6
Total	$ **105**	$ 110

During 2021, the Company purchased residential mortgages of $12 from IGM ($21 in 2020).

The Company holds investments in Portag3 Ventures Limited Partnership, Portag3 Ventures II Limited Partnership, Sagard Holdings Management Inc., Northleaf Capital Partners Ltd., and other entities which invest in the FinTech sector. These investments were made in partnership with Power Corporation, IGM and, in certain cases, outside investors.

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 2021 or 2020. There were no significant outstanding loans or guarantees with related parties at December 31, 2021 or December 31, 2020. There were no provisions for uncollectible amounts with related parties at December 31, 2021 or December 31, 2020.

(c) Key management compensation

Key management personnel constitute those individuals that have the authority and responsibility for planning, directing and controlling the activities of Lifeco, directly or indirectly, including any Director. The individuals that comprise the key management personnel are the Board of Directors as well as certain key management and officers.

The following describes all compensation paid to, awarded to, or earned by each of the key management personnel for services rendered in all capacities to the Company and its subsidiaries:

	2021	2020
Salary	$ 19	$ 20
Share-based awards	17	17
Option-based awards	6	6
Annual non-equity incentive plan compensation	24	24
Pension value	(1)	1
Total	$ 65	$ 68

26. Income Taxes

(a) Components of the income tax expense

(i) Income tax recognized in Consolidated Statements of Earnings

Current income tax

	2021	2020
Total current income tax	$ 148	$ 271

Deferred income tax

	2021	2020
Origination and reversal of temporary differences	$ 147	$ (168)
Effect of changes in tax rates or imposition of new income taxes	21	7
Tax expense (recovery) arising from unrecognized tax losses, tax credits or temporary differences	(12)	(192)
Total deferred income tax	$ 156	$ (353)
Total income tax expense (recovery)	$ 304	$ (82)

(ii) Income tax recognized in other comprehensive income (note 24)

	2021	2020
Current income tax expense (recovery)	$ (38)	$ 28
Deferred income tax expense (recovery)	205	(39)
Total	$ 167	$ (11)

(iii) Income tax recognized in Consolidated Statements of Changes in Equity

	2021	2020
Current income tax recovery	$ (1)	$ –
Deferred income tax recovery	(6)	–
Total	$ (7)	$ –

26. Income Taxes (cont'd)

(b) The effective income tax rate reported in the Consolidated Statements of Earnings varies from the combined Canadian federal and provincial income tax rate of 26.5% for the following items:

	2021		2020	
Earnings before income taxes	**$ 3,867**		$ 3,072	
Combined basic Canadian federal and provincial tax rate	**1,025**	**26.50%**	814	26.50%
Increase (decrease) in the income tax rate resulting from:				
Non-taxable investment income [(1)]	**(266)**	**(6.88)**	(332)	(10.81)
Operations outside of Canada subject to a lower average foreign tax rate	**(374)**	**(9.66)**	(375)	(12.21)
Impact of rate changes on deferred income taxes	**21**	**0.54**	7	0.23
Recognition of deferred tax assets associated with prior year tax losses	**(15)**	**(0.39)**	(197)	(6.41)
Other	**(87)**	**(2.25)**	1	0.03
Total income tax expense (recovery) and effective income tax rate	**$ 304**	**7.86%**	$ (82)	(2.67)%
Total income tax expense (recovery) and effective income tax rate – common shareholders	**$ 358**	**9.89%**	$ (27)	(0.88)%

(1) In 2020, a $64 tax benefit from the non-taxable gains on the sale of the shares of GLC and IPSI reduced the effective income tax rate by 2.08 points.

(c) Composition and changes in net deferred income tax assets are as follows:

2021

	Insurance and investment contract liabilities	**Portfolio investments**	**Losses carried forward**	**Intangible assets**	**Tax credits**	**Other**	**Total**
Balance, beginning of year	**$ (320)**	**$ (766)**	**$ 1,411**	**$ (670)**	**$ 285**	**$ 389**	**$ 329**
Recognized in Statements of Earnings	**(236)**	**116**	**(19)**	**(125)**	**39**	**69**	**(156)**
Recognized in Statements of Comprehensive Income	**–**	**8**	**–**	**–**	**–**	**(213)**	**(205)**
Recognized in Statements of Changes in Equity	**–**	**–**	**(2)**	**–**	**–**	**8**	**6**
Acquired in business acquisitions	**–**	**(1)**	**1**	**(17)**	**–**	**(4)**	**(21)**
Foreign exchange rate changes and other	**(19)**	**(1)**	**(3)**	**5**	**–**	**33**	**15**
Balance, end of year	**$ (575)**	**$ (644)**	**$ 1,388**	**$ (807)**	**$ 324**	**$ 282**	**$ (32)**

2020

	Insurance and investment contract liabilities	Portfolio investments	Losses carried forward	Intangible assets	Tax credits	Other	Total
Balance, beginning of year	$ (999)	$ (536)	$ 1,056	$ (542)	$ 311	$ 287	$ (423)
Recognized in Statements of Earnings	375	(237)	238	(63)	(25)	65	353
Recognized in Statements of Comprehensive Income	–	(12)	–	–	–	51	39
Recognized in Statements of Changes in Equity	–	–	–	–	–	–	–
Acquired in business acquisitions	300	–	107	(73)	–	7	341
Foreign exchange rate changes and other	4	19	10	8	(1)	(21)	19
Balance, end of year	$ (320)	$ (766)	$ 1,411	$ (670)	$ 285	$ 389	$ 329

	2021	2020
Recorded on Consolidated Balance Sheets:		
Deferred tax assets	$ **1,057**	$ 975
Deferred tax liabilities	**(1,089)**	(646)
Total	$ **(32)**	$ 329

A deferred income tax asset is recognized for deductible temporary differences and unused losses and carryforwards only to the extent that realization of the related income tax benefit through future taxable profits is probable.

Recognition is based on the fact that it is probable that the entity will have taxable profits and/or tax planning opportunities available to allow the deferred income tax asset to be utilized. Changes in circumstances in future periods may adversely impact the assessment of the recoverability. The uncertainty of the recoverability is taken into account in establishing the deferred income tax assets. The Company's annual financial planning process provides a significant basis for the measurement of deferred income tax assets.

Management assesses the recoverability of the deferred income tax assets carrying values based on future years' taxable income projections and believes the carrying values of the deferred income tax assets as of December 31, 2021 are recoverable.

At December 31, 2021, the Company has recognized a deferred tax asset of $1,388 ($1,411 at December 31, 2020) on tax loss carryforwards totaling $6,235, of which $4,731 expire between 2022 and 2041 while $1,504 have no expiry date. The Company will realize this benefit in future years through a reduction in current income taxes payable.

One U.S. subsidiary has had a history of losses. The subsidiary has a net deferred income tax asset balance of $499 (U.S. $393) as at December 31, 2021, comprised principally of net operating losses and future deductions related to goodwill. Management has concluded that it is probable that the subsidiary and other historically profitable subsidiaries with which it files or intends to file a consolidated U.S. income tax return will generate sufficient taxable income to utilize the unused U.S. losses and deductions.

The Company has not recognized a deferred tax asset of $42 ($37 in 2020) on tax loss carryforwards totaling $212 ($188 in 2020). Of this amount, $104 expire between 2022 and 2041 while $108 have no expiry date. In addition, the Company has not recognized a deferred tax asset of $20 ($21 in 2020) on other temporary differences of $94 ($99 in 2020) associated with investments in subsidiaries, branches, and associates.

A deferred income tax liability has not been recognized in respect of the temporary differences associated with investments in subsidiaries, branches and associates as the Company is able to control the timing of the reversal of the temporary differences, and it is probable that the temporary differences will not reverse in the foreseeable future.

27. Operating and Administrative Expenses

	2021	2020
Salaries and other employee benefits	$ **4,191**	$ 3,716
General and administrative	**1,938**	1,554
Interest expense on leases	**21**	22
Amortization of fixed assets	**119**	129
Depreciation of right-of-use assets	**68**	71
Total	$ **6,337**	$ 5,492

28. Derivative Financial Instruments

In the normal course of managing exposure to fluctuations in interest and foreign exchange rates, and to market risks, the Company is an end-user of various derivative financial instruments. It is the Company's policy to transact in derivatives only with the most creditworthy financial intermediaries. Note 8 discloses the credit quality of the Company's exposure to counterparties. Credit risk equivalent amounts are presented net of collateral received, including initial margin on exchange-traded derivatives, of $318 as at December 31, 2021 ($211 at December 31, 2020).

(a) The following summarizes the Company's derivative portfolio and related credit exposure using the following definitions of risk as prescribed by OSFI:

Maximum Credit Risk	The total replacement cost of all derivative contracts with positive values.
Future Credit Exposure	The potential future credit exposure is calculated based on a formula prescribed by OSFI. The factors prescribed by OSFI for this calculation are based on derivative type and duration.
Credit Risk Equivalent	The sum of maximum credit risk and the potential future credit exposure less any collateral held.
Risk Weighted Equivalent	Represents the credit risk equivalent, weighted according to the creditworthiness of the counterparty, as prescribed by OSFI.

	2021				
	Notional amount	**Maximum credit risk**	**Future credit exposure**	**Credit risk equivalent**	**Risk weighted equivalent**
Interest rate contracts					
Swaps	**$ 5,075**	**$ 207**	**$ 59**	**$ 263**	**$ 5**
Futures – long	**1**	**–**	**–**	**–**	**–**
Futures – short	**147**	**–**	**–**	**–**	**–**
Options purchased	**11**	**–**	**–**	**–**	**–**
	5,234	**207**	**59**	**263**	**5**
Foreign exchange contracts					
Cross-currency swaps	**22,654**	**564**	**1,424**	**1,958**	**36**
Forward contracts	**4,455**	**50**	**65**	**100**	**1**
	27,109	**614**	**1,489**	**2,058**	**37**
Other derivative contracts					
Equity contracts	**2,146**	**142**	**134**	**261**	**1**
Futures – long	**15**	**–**	**–**	**–**	**–**
Futures – short	**578**	**1**	**–**	**–**	**–**
Other forward contracts	**1,488**	**3**	**129**	**133**	**1**
	4,227	**146**	**263**	**394**	**2**
Total	**$ 36,570**	**$ 967**	**$ 1,811**	**$ 2,715**	**$ 44**

	2020				
	Maximum Notional amount	Future credit risk	Credit credit exposure	Risk risk equivalent	weighted equivalent
Interest rate contracts					
Swaps	$ 3,688	$ 331	$ 43	$ 333	$ 7
Futures – long	9	–	–	–	–
Futures – short	194	–	–	–	–
Options purchased	221	–	1	1	–
	4,112	331	44	334	7
Foreign exchange contracts					
Cross-currency swaps	15,186	388	1,004	1,237	25
Forward contracts	5,079	57	72	125	1
	20,265	445	1,076	1,362	26
Other derivative contracts					
Equity contracts	727	43	46	86	1
Futures – long	17	–	–	–	–
Futures – short	682	1	–	–	–
Other forward contracts	4,318	9	394	403	3
	5,744	53	440	489	4
Total	$ 30,121	$ 829	$ 1,560	$ 2,185	$ 37

(b) The following provides the notional amount, term to maturity and estimated fair value of the Company's derivative portfolio by category:

	2021				
	Notional Amount				Total estimated fair value
	1 year or less	Over 1 year to 5 years	Over 5 years	Total	
Derivatives not designated as accounting hedges					
Interest rate contracts					
Swaps	$ 518	$ 948	$ 3,586	$ 5,052	$ 164
Futures – long	1	–	–	1	–
Futures – short	147	–	–	147	–
Options purchased	11	–	–	11	–
	677	948	3,586	5,211	164
Foreign exchange contracts					
Cross-currency swaps	2,574	4,298	13,462	20,334	(420)
Forward contracts	2,450	–	–	2,450	(4)
	5,024	4,298	13,462	22,784	(424)
Other derivative contracts					
Equity contracts	1,952	–	–	1,952	52
Futures – long	15	–	–	15	–
Futures – short	578	–	–	578	(2)
Other forward contracts	1,488	–	–	1,488	3
	4,033	–	–	4,033	53
Fair value hedges					
Foreign exchange forward contracts	78	–	–	78	(1)
Cash flow hedges					
Interest rate contracts					
Swaps	–	–	23	23	8
Other derivative contracts					
Equity contracts	43	58	93	194	89
	43	58	116	217	97
Net investment hedges					
Cross-currency swaps	–	–	2,320	2,320	–
Foreign exchange forward contracts	1,409	518	–	1,927	48
	1,409	518	2,320	4,247	48
Total	$ 11,264	$ 5,822	$ 19,484	$ 36,570	$ (63)

28. Derivative Financial Instruments (cont'd)

	2020				
	Notional Amount				Total estimated fair value
	1 year or less	Over 1 year to 5 years	Over 5 years	Total	
Derivatives not designated as accounting hedges					
Interest rate contracts					
Swaps	$ 325	$ 770	$ 2,565	$ 3,660	$ 281
Futures – long	6	3	–	9	–
Futures – short	190	4	–	194	–
Options purchased	41	166	14	221	–
	562	943	2,579	4,084	281
Foreign exchange contracts					
Cross-currency swaps	896	3,068	11,222	15,186	(783)
Forward contracts	3,689	–	–	3,689	32
	4,585	3,068	11,222	18,875	(751)
Other derivative contracts					
Equity contracts	626	–	–	626	18
Futures – long	17	–	–	17	–
Futures – short	682	–	–	682	(4)
Other forward contracts	4,318	–	–	4,318	8
	5,643	–	–	5,643	22
Fair value hedges					
Foreign exchange forward contracts	74	–	–	74	3
Cash flow hedges					
Interest rate contracts					
Swaps	–	–	28	28	14
Other derivative contracts					
Equity contracts	–	101	–	101	24
	–	101	28	129	38
Net investment hedges					
Foreign exchange forward contracts	786	530	–	1,316	15
Total	$ 11,650	$ 4,642	$ 13,829	$ 30,121	$ (392)

Futures contracts included in the above are exchange traded contracts; all other contracts are over-the-counter.

(c) *Interest Rate Contracts*

Interest rate swaps, futures and options are used as part of a portfolio of assets to manage interest rate risk associated with investment activities and insurance and investment contract liabilities. Interest-rate swap agreements require the periodic exchange of payments without the exchange of the notional principal amount on which payments are based. Call options grant the Company the right to enter into a swap with predetermined fixed-rate payments over a predetermined time period on the exercise date. Call options are used to manage the variability in future interest payments due to a change in credited interest rates and the related potential change in cash flows due to surrenders. Call options are also used to hedge minimum rate guarantees.

Foreign Exchange Contracts

Cross-currency swaps are used in combination with other investments to manage foreign currency risk associated with investment activities, and insurance and investment contract liabilities. Cross-currency swaps are also used to hedge the Company's net investment in foreign operations. Under these swaps principal amounts and fixed or floating interest payments may be exchanged in different currencies. The Company also enters into certain foreign exchange forward contracts to hedge certain product liabilities.

Other Derivative Contracts

Equity index swaps, futures and options are used to hedge certain product liabilities. Equity index swaps are also used as substitutes for cash instruments and are used to periodically hedge the market risk associated with certain fee income. Equity put options are used to manage potential credit risk impact of significant declines in certain equity markets.

Equity total return swaps are used to manage exposure to fluctuations in the total return of common shares related to deferred compensation arrangements. Total return swaps require the exchange of net contractual payments periodically or at maturity without the exchange of the notional principal amounts on which the payments are based. These instruments are designated as cash flow hedges.

The ineffective portion of the cash flow hedges during 2021, which includes interest rate contracts, foreign exchange contracts, and equity total return swap contracts, and the anticipated net gains (losses) expected to be reclassified out of accumulated other comprehensive income within the next twelve months is nil. The maximum time frame for which variable cash flows are hedged is 23 years.

29. Legal Provisions and Contingent Liabilities

The Company and its subsidiaries are from time-to-time subject to legal actions, including arbitrations and class actions. Provisions are established if, in management's judgment, it is probable a payment will be required and the amount of the payment can be reliably estimated. It is inherently difficult to predict the outcome of any of these proceedings with certainty, and it is possible that an adverse resolution could have a material adverse effect on the consolidated financial position of the Company. However, based on information presently known, it is not expected that any of the existing legal actions, either individually or in the aggregate, will have a material adverse effect on the consolidated financial position of the Company. Actual results could differ from management's best estimates.

30. Commitments

(a) Letters of Credit

Letters of credit are written commitments provided by a bank. The total amount of letter of credit facilities is U.S. $1,904 of which U.S. $1,599 were issued as of December 31, 2021.

The Capital and Risk Solutions segment periodically uses letters of credit as collateral under certain reinsurance contracts for on balance sheet policy liabilities.

(b) Investment Commitments

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 were $4,027 as at December 31, 2021, with $3,831 maturing within one year, $188 maturing within two years, $2 maturing within three years and $6 maturing in over 5 years.

(c) Pledged Assets

In addition to the assets pledged by the Company disclosed elsewhere in the consolidated financial statements:

(i) The amount of assets included in the Company's balance sheet which have a security interest by way of pledging is $1,263 ($1,421 at December 31, 2020) in respect of reinsurance agreements.

In addition, under certain reinsurance contracts, bonds presented in portfolio investments are held in trust and escrow accounts. Assets are placed in these accounts pursuant to the requirements of certain legal and contractual obligations to support contract liabilities assumed.

(ii) The Company has pledged, in the normal course of business, $63 ($75 at December 31, 2020) of assets of the Company for the purpose of providing collateral for the counterparty.

31. Segmented Information

The operating segments of the Company are Canada, United States, Europe, Capital and Risk Solutions and Lifeco Corporate. These segments reflect the Company's management structure and internal financial reporting. Each of these segments operates in the financial services industry and the revenues from these segments are derived principally from interests in life insurance, health insurance, retirement and investment services, asset management and reinsurance businesses.

Transactions between operating segments occur at market terms and conditions and have been eliminated upon consolidation.

The Company has a capital allocation model to measure the performance of the operating segments. The impact of the capital allocation model is included in the segmented information presented below.

(a) Consolidated Net Earnings

	2021					
	Canada	United States	Europe	Capital and Risk Solutions	Lifeco Corporate	Total
Income						
Total net premiums	$ 13,900	$ 4,518	$ 4,862	$ 29,533	$ –	$ 52,813
Net investment income						
Regular net investment income (loss)	2,878	1,937	1,325	262	(9)	6,393
Changes in fair value through profit or loss	522	(900)	(1,375)	(334)	4	(2,083)
Total net investment income (loss)	3,400	1,037	(50)	(72)	(5)	4,310
Fee and other income	1,991	3,880	1,415	8	–	7,294
	19,291	9,435	6,227	29,469	(5)	64,417
Benefits and expenses						
Paid or credited to policyholders	13,577	4,797	3,200	28,721	–	50,295
Other [(1)]	3,792	3,654	1,736	212	107	9,501
Financing charges	134	159	24	9	2	328
Amortization of finite life intangible assets	110	171	55	–	–	336
Restructuring and integration expenses	–	90	–	–	–	90
Earnings (loss) before income taxes	1,678	564	1,212	527	(114)	3,867
Income taxes	182	73	140	(30)	(61)	304
Net earnings (loss) before non-controlling interests	1,496	491	1,072	557	(53)	3,563
Non-controlling interests	304	(7)	4	–	–	301
Net earnings (loss)	1,192	498	1,068	557	(53)	3,262
Preferred share dividends	114	–	18	–	2	134
Net earnings (loss) before capital allocation	1,078	498	1,050	557	(55)	3,128
Impact of capital allocation	109	1	(74)	(25)	(11)	–
Net earnings (loss) – common shareholders	$ 1,187	$ 499	$ 976	$ 532	$ (66)	$ 3,128

(1) Includes commissions, operating and administrative expenses, and premium taxes.

	2020					
	Canada	United States	Europe	Capital and Risk Solutions	Lifeco Corporate	Total
Income						
Total net premiums	$ 13,188	$ 6,773	$ 3,651	$ 19,407	$ –	$ 43,019
Net investment income						
Regular net investment income	3,050	1,278	1,313	320	2	5,963
Changes in fair value through profit or loss	2,633	938	1,669	459	–	5,699
Total net investment income	5,683	2,216	2,982	779	2	11,662
Fee and other income	1,756	2,769	1,366	11	–	5,902
	20,627	11,758	7,999	20,197	2	60,583
Benefits and expenses						
Paid or credited to policyholders	15,572	8,413	5,184	19,318	–	48,487
Other (1)	3,545	2,870	1,686	239	28	8,368
Financing charges	127	110	25	12	10	284
Amortization of finite life intangible assets	104	83	51	–	–	238
Restructuring and integration expenses	92	42	–	–	–	134
Earnings (loss) before income taxes	1,187	240	1,053	628	(36)	3,072
Income taxes	54	(158)	33	(1)	(10)	(82)
Net earnings (loss) before non-controlling interests	1,133	398	1,020	629	(26)	3,154
Non-controlling interests	76	7	1	(6)	–	78
Net earnings (loss)	1,057	391	1,019	635	(26)	3,076
Preferred share dividends	114	–	19	–	–	133
Net earnings (loss) before capital allocation	943	391	1,000	635	(26)	2,943
Impact of capital allocation	127	(11)	(87)	(21)	(8)	–
Net earnings (loss) – common shareholders	$ 1,070	$ 380	$ 913	$ 614	$ (34)	$ 2,943

(1) Includes commissions, operating and administrative expenses, and premium taxes.

The revenue by source currency for Capital and Risk Solutions:

	2021	2020
Revenue		
United States	**$ 21,256**	$ 16,118
United Kingdom	**1,369**	1,807
Japan	**4,297**	–
Other	**2,547**	2,272
Total revenue	**$ 29,469**	$ 20,197

31. Segmented Information (cont'd)

(b) Consolidated Total Assets and Liabilities

	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	**$ 203,982**	**$ 208,211**	**$ 200,899**	**$ 17,396**	**$ 630,488**

	2021				
	Canada	United States	Europe	Capital and Risk Solutions	Total
Liabilities					
Insurance and investment contract liabilities	**$ 84,829**	**$ 74,632**	**$ 47,356**	**$ 14,016**	**$ 220,833**
Other liabilities	**7,752**	**8,800**	**4,309**	**892**	**21,753**
Investment and insurance contracts on account of segregated fund policyholders	**101,537**	**116,919**	**138,963**	**–**	**357,419**
Total	**$ 194,118**	**$ 200,351**	**$ 190,628**	**$ 14,908**	**$ 600,005**

	2020				
	Canada	United States	Europe	Capital and Risk Solutions	Total
Assets					
Invested assets	$ 87,732	$ 54,522	$ 50,793	$ 5,951	$ 198,998
Goodwill and intangible assets	5,625	5,729	3,037	–	14,391
Other assets	3,661	30,347	10,151	8,910	53,069
Investments on account of segregated fund policyholders	90,680	117,982	125,370	–	334,032
Total	$ 187,698	$ 208,580	$ 189,351	$ 14,861	$ 600,490

	2020				
	Canada	United States	Europe	Capital and Risk Solutions	Total
Liabilities					
Insurance and investment contract liabilities	$ 81,556	$ 76,793	$ 48,243	$ 11,455	$ 218,047
Other liabilities	7,731	8,004	4,767	894	21,396
Investment and insurance contracts on account of segregated fund policyholders	90,680	117,982	125,370	–	334,032
Total	$ 179,967	$ 202,779	$ 178,380	$ 12,349	$ 573,475

The assets by source currency for Capital and Risk Solutions:

	2021	2020
Assets		
United Kingdom	**$ 6,507**	$ 7,572
United States	**5,902**	6,667
Japan	**4,102**	–
Other	**885**	622
Total assets	**$ 17,396**	$ 14,861

32. Comparative Figures

The Company reclassified and adjusted certain comparative figures for disclosure items to conform to the current year's presentation. These reclassifications and adjustments had no impact on the total equity or net earnings of the Company.

Independent Auditor’s Report

To the Shareholders of Great-West Lifeco Inc.

Opinion

We have audited the consolidated financial statements of Great-West Lifeco Inc. (the “Company”), which comprise the consolidated balance sheets as at December 31, 2021 and 2020, and the consolidated statements of earnings, comprehensive income, changes in equity and cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies (collectively referred to as the “financial statements”).

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2021 and 2020, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards (“IFRS”).

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards (“Canadian GAAS”). Our responsibilities under those standards are further described in the *Auditor’s Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the year ended December 31, 2021. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Insurance Contract Liabilities – Refer to Notes 2 and 13 to the financial statements

Key Audit Matter Description

The Company has insurance contract liabilities representing a significant portion of its total liabilities. Insurance contract liabilities are determined in accordance with generally accepted actuarial practices established by the Canadian Institute of Actuaries using the Canadian Asset Liability Method (CALM). This method requires the use of complex valuation models incorporating projections of cash inflows and outflows using the best estimate of future experience together with a margin for adverse deviation.

While there are many assumptions which management makes, the assumptions with the greatest estimation uncertainty are those related to mortality, including the impact, if any, of the COVID-19 pandemic, and policyholder behaviour. These assumptions required significant auditor attention in specific circumstances where (i) there is limited Company and industry experience data, and (ii) the historical experience may not be a good indicator of the future. Auditing of certain valuation models, mortality and policyholder behaviour assumptions required a high degree of auditor judgment and an increased extent of audit effort, including the need to involve actuarial specialists.

How the Key Audit Matter was Addressed in the Audit

Our audit procedures related to certain valuation models, mortality and policyholder behaviour assumptions included the following, among others:

- With the assistance of actuarial specialists, tested the appropriateness of certain valuation models used in the estimation process by:
  - Calculating an independent estimate of the insurance contract liability for a sample of insurance policies and comparing the results to the Company’s estimate.
  - Testing the accuracy of certain valuation models for changes in key assumptions.
- With the assistance of actuarial specialists, tested the reasonableness of mortality and policyholder behaviour assumptions, by:
  - Evaluating whether management’s assumptions were determined in accordance with actuarial principles and practices under the Canadian actuarial standards of practice.
  - Testing experience studies and other inputs used in the determination of the mortality and policyholder behaviour assumptions.
  - Analyzing management’s interpretation and judgment of its experience study results and emerging claims experience, evaluating triggers and drivers for revisions of assumptions, assessing reasonable possible alternative assumptions, and considering industry and other external sources of benchmarking where applicable.

Income Taxes – Refer to Notes 2 and 26 to the financial statements

Key Audit Matter Description

The Company recognizes deferred income taxes for the tax expected to be payable or recoverable on differences arising between the financial statement and tax basis of assets and liabilities, and is recorded at enacted or substantively enacted tax rates in effect for the years in which the differences are expected to be realized. The Company applies judgment in assessing the recoverability of the deferred income tax asset carrying values based on future years' taxable income projections. Certain of the Company's subsidiaries have had a history of losses and have a deferred income tax asset comprised principally of net operating losses. The Company has concluded that through the use of certain tax planning opportunities, it is probable that sufficient taxable income will be generated to utilize certain of the unused losses.

The determination of the recoverability of the Company's deferred tax assets in the Company's subsidiaries required management to make judgements related to the assessment of management's planned implementation of tax strategies. In addition, management makes significant estimates and assumptions in projecting future taxable income, specifically the revenue growth rates and projected expense margins and in the determination of whether the deferred tax asset will be realized. Auditing these judgements required a high degree of auditor judgment as the estimations made by management contain significant measurement uncertainty. This resulted in an increased extent of audit effort, including the need to involve income tax and other specialists.

How the Key Audit Matter was Addressed in the Audit

Our audit procedures related to the tax strategies, revenue growth rates and projected expense margins, and the determination of whether the deferred tax assets in the Company's subsidiaries will be realized included the following, among others:

- With the assistance of income tax specialists, analyzed the reasonableness of management's projected future taxable income available to determine whether the models properly factored in the impact of the tax planning strategies.
- Tested the reasonableness of the revenue growth rates and projected expense margins used to project future taxable income that was available to realize the deferred tax asset by:
  - Assessing the key factors influencing management's revenue growth rates and projected expense margins used in the projections through both market and internally entity specific driven evidence.
  - Performing a retrospective analysis of projected future taxable income against actual results from prior years.
- With the assistance of income tax and other specialists, evaluated the proposed tax planning strategies considered in the recoverability analysis to assess whether the deferred tax asset will be realized.

Massachusetts Mutual Life Insurance Acquisition – Refer to Note 3(a) to the financial statements

Key Audit Matter Description

On December 31, 2020, the Company purchased the retirement services business of Massachusetts Mutual Life Insurance Company ("MassMutual") via indemnity reinsurance and recognized the assets acquired and the liabilities assumed at their acquisition-date fair values, including customer contract intangible assets ("intangible assets") and certain insurance contract liabilities ("insurance contract liabilities"). During the measurement period in 2021, management finalized the purchase price allocation of the MassMutual acquisition.

Management used discounted cash flow models to determine the fair value of the intangible assets. While there are several assumptions and estimates required, those with the highest degree of subjectivity are the forecasted revenues and earnings and discount rates.

There are many components embedded in the determination of the fair value of the insurance contract liabilities that required management to make judgments and assumptions relating to (1) the appropriate accounting treatment and (2) appropriateness of valuation models that incorporate projections of cash inflows and outflows using the best estimate of future experience together with the discount rates. The judgments and assumptions with the greatest subjectivity are the determination of the appropriate accounting treatment, appropriateness of the valuation models, policyholder behaviour and discount rates assumptions.

Auditing of these judgments, assumptions and estimates required a high degree of auditor judgment and an increased extent of audit effort, including the need to involve fair value, actuarial and financial instrument specialists.

How the Key Audit Matter Was Addressed in the Audit

Our audit procedures related to these judgments, assumptions and estimates used to determine the fair value of intangible assets and insurance contract liabilities included the following, among others:

Intangible assets:

- Evaluated the reasonableness of forecasted revenue and earnings by comparing the forecasts to:
  - Historical results of the acquired entity.
  - Actual results of the acquired entity post acquisition.
  - Underlying analyses detailing business strategies and growth plans including estimated revenue and cost per participant.
  - Third-party reports and comparable company performance.
- With the assistance of fair value specialists, evaluated the reasonableness of the discount rates used by testing the source information underlying the determination of the discount rates and developing a range of independent estimates and comparing those to the discount rates selected by management.

Insurance contract liabilities:

- With the assistance of financial instrument specialists evaluated management's assessment related to the accounting treatment of the insurance contract liabilities by:
  - Assessing the executed contracts to understand the nature of the products and to determine whether all key facts and circumstances were incorporated into management's assessment.
  - Analyzing relevant accounting standards, including various aspects of IFRS, conceptual framework and guidance.
- With the assistance of actuarial specialists, tested the appropriateness of the valuation models used in the estimation process by:
  - Testing the valuation models for the incorporation of the key assumptions.
  - Recalculating management's estimate of the insurance contract liability for a sample of insurance policies and comparing the results to the Company's estimate.
- With the assistance of actuarial specialists, tested the reasonableness of policyholder behaviour assumptions, by:
  - Evaluating whether management's assumptions were determined in accordance with actuarial principles and practices.
  - Testing experience studies and other inputs used in the determination of the policyholder behaviour assumptions.
  - Analyzing management's interpretation and judgments based on the relative inputs, considering reasonable possible alternative assumptions, and considering industry and other external sources of benchmarking where applicable.
- With the assistance of fair value specialists, evaluated the reasonableness of the discount rates used by testing the source information and methodology underlying the determination of the discount rates and compare it to the discount rates selected by management.

Other Information

Management is responsible for the other information. The other information comprises:

- Management's Discussion and Analysis
- The information, other than the financial statements and our auditor's report thereon, in the Annual Report.

Our opinion on the financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon. In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

We obtained Management's Discussion and Analysis prior to the date of this auditor's report. If, based on the work we have performed on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact in this auditor's report. We have nothing to report in this regard.

The Annual Report is expected to be made available to us after the date of the auditor's report. If, based on the work we will perform on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact to those charged with governance.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian GAAS will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian GAAS, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is Paul Stauch.

/s/ **Deloitte LLP**

Chartered Professional Accountants

Winnipeg, Manitoba
February 9, 2022

Sources of Earnings

The following is provided in accordance with the OSFI guideline requiring Sources of Earnings (SOE) disclosure. SOE is not an International Financial Reporting Standards (IFRS) measure. There is no standard SOE methodology. The calculation of SOE is dependent on and sensitive to the methodology, estimates and assumptions used.

SOE identifies various sources of IFRS net earnings. It provides an analysis of the difference between actual net income and expected net income based on assumptions made at the beginning of the reporting period. The terminology used in the discussion of sources of earnings is described below:

Expected Profit on In-Force Business

This component represents the portion of the consolidated net income on business in-force at the start of the reporting period that was expected to be realized based on the achievement of the best-estimate assumptions. It includes releases of provisions for adverse deviations, expected net earnings on deposits, and expected net management fees.

Impact of New Business

This component represents the point-of-sale impact on net income of writing new business during the reporting period. This is the difference between the premium received and the sum of the expenses incurred as a result of the sale and the new liabilities established at the point of sale.

Experience Gains and Losses

This component represents gains and losses that are due to differences between the actual experience during the reporting period and the best-estimate assumptions at the start of the reporting period.

Management Actions and Changes in Assumptions

This component represents 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.

Other

This component represents the amounts not included in any other line of the sources of earnings.

Earnings on Surplus

This component represents the earnings on the Company's surplus funds.

Great-West Lifeco's sources of earnings are shown below for 2021 and 2020.

Sources of Earnings
(in Canadian $ millions)

	Shareholders net earnings					
For the year ended December 31, 2021	Canada	United States	Europe	Capital and Risk Solutions	Lifeco Corporate	Total
Expected profit on in-force business	$ 1,314	$ 895	$ 889	$ 691	$ (18)	$ 3,771
Impact of new business	(20)	(241)	(37)	(90)	–	(208)
Experience gains and losses	260	128	152	(235)	(21)	284
Management actions and changes in assumptions	(58)	(8)	212	(20)	–	126
Other	–	(190)	(31)	–	(68)	(289)
Earnings on surplus	41	(15)	(48)	(24)	(18)	(64)
Net earnings before tax	1,537	569	1,137	502	(125)	3,620
Taxes	(236)	(74)	(140)	30	61	(359)
Net earnings before non-controlling interests	1,301	495	997	532	(64)	3,261
Non-controlling interests	–	4	(3)	–	–	1
Net earnings – shareholders	1,301	499	994	532	(64)	3,262
Preferred share dividends	(114)	–	(18)	–	(2)	(134)
Net earnings – common shareholders	$ 1,187	$ 499	$ 976	$ 532	$ (66)	$ 3,128

Sources of Earnings
(in Canadian $ millions)

For the year ended December 31, 2020	Shareholders net earnings					
	Canada	United States	Europe	Capital and Risk Solutions	Lifeco Corporate	Total
Expected profit on in-force business	$ 1,241	$ 447	$ 808	$ 628	$ (18)	$ 3,106
Impact of new business	(43)	(164)	(71)	(29)	–	(307)
Experience gains and losses	183	(5)	(59)	(77)	(10)	32
Management actions and changes in assumptions	(106)	(43)	304	65	–	220
Other	(68)	(42)	–	–	–	(110)
Earnings on surplus	86	39	(15)	26	(16)	120
Net earnings before tax	1,293	232	967	613	(44)	3,061
Taxes	(109)	157	(33)	1	10	26
Net earnings before non-controlling interests	1,184	389	934	614	(34)	3,087
Non-controlling interests	–	(9)	(2)	–	–	(11)
Net earnings – shareholders	1,184	380	932	614	(34)	3,076
Preferred share dividends	(114)	–	(19)	–	–	(133)
Net earnings – common shareholders	$ 1,070	$ 380	$ 913	$ 614	$ (34)	$ 2,943

Analysis of Results

Expected profit on in-force business is the major driver of earnings. The expected profit on in-force business of $3,771 in 2021 was $665 higher than 2020. The increase year-over-year is primarily a result of the acquisition of MassMutual, higher market levels, business growth in Capital and Risk Solutions and the impact of 2020 pricing actions, partially offset by the negative impact of currency movements.

The strain on new sales of $208 in 2021 was $99 lower than 2020 primarily due to gains on new sales in Capital and Risk Solutions and higher sales volume in Europe partially offset by the inclusion of Personal Capital and MassMutual new business expenses.

Experience gains of $284 in 2021 were $252 higher than 2020. The gains in 2021 were primarily a result of positive investment experience, favourable morbidity experience in Canada and Europe, favourable expense and fee-based experience in the U.S. and favourable annuitant mortality experience across all regions. These were partially offset by unfavourable life mortality experience in Europe and Capital and Risk Solutions, unfavourable expense and fee-based experience across Canada, Europe, Capital and Risk Solutions and Lifeco Corporate, property and casualty losses in Capital and Risk Solutions and unfavourable policyholder behaviour experience in Canada. The gains in 2020 were primarily a result of positive investment experience, favorable annuitant mortality experience across Canada, Europe and Capital and Risk Solutions and favourable morbidity experience in Canada and Europe. These were partially offset by unfavorable life mortality and expense and fee-based experience across Canada, Europe and Capital and Risk Solutions, and unfavourable policyholder behaviour experience across all segments.

Management actions and changes in assumptions contributed $126 to pre-tax earnings in 2021 compared to $220 in 2020. Management actions and changes in assumptions were $(58) in Canada, $(8) in the U.S., $212 in Europe and $(20) in Capital and Risk Solutions.

Effective October 15, 2021, the Canadian Actuarial Standards Board published revised standards for the valuation of insurance contract liabilities. The revised standards include decreases to ultimate reinvestment rates, revised calibration criteria for stochastic risk-free interest rates and an increase to the maximum net credit spread on reinvestment over the long term. The impact of the revised standards is included in changes in assumptions.

In Canada, strengthening of policyholder behaviour, mortality and morbidity assumptions were partially offset by economic and asset related assumption updates, net of the impact of the new standards.

In the U.S. assumption changes and management actions included transaction costs related to acquisitions and economic and asset related assumption updates, net of the impact of the new standards.

In Europe, favourable updates to economic and asset related assumptions, longevity and policyholder behaviour assumptions were partially offset by transaction costs on acquisitions.

In Capital and Risk Solutions assumption changes and management actions included updates to expense, mortality and longevity assumptions.

Other of $(289) in 2021 was due to restructuring and integration costs in the U.S., transaction costs related to acquisitions in the U.S. and Europe, the disposition of a European business, and a provision for potential payments related to the 2003 acquisition in Lifeco Corporate.

Earnings on surplus of $(64) in 2021 was $184 lower than 2020 primarily due to lower other comprehensive income in Europe, Capital and Risk Solutions and the U.S., lower gains on seed capital in the U.S. and Canada, increased external financing costs in the U.S. and lower other investment income.

Taxes of $(359) in 2021 included changes to uncertain tax estimates.

Five-Year Summary
(in Canadian $ millions except per share amounts)

At December 31	**2021**	2020	2019	2018	2017
Total assets	**$ 630,488**	$ 600,490	$ 451,167	$ 427,689	$ 419,838
Total assets under administration (1)	**$ 2,279,574**	$ 1,975,847	$ 1,629,681	$ 1,398,873	$ 1,349,913
For the Year Ended December 31					
Premiums and deposits:					
Total net premiums	**$ 52,813**	$ 43,019	$ 24,510	$ 35,461	$ 33,902
Self-funded premium equivalents (Administrative services only contracts)	**11,108**	6,123	3,295	3,068	2,827
Segregated funds deposits	**29,657**	21,916	24,685	24,475	24,885
Proprietary mutual funds and institutional deposits	**75,225**	100,287	84,259	76,258	61,490
Add back: U.S. Individual Life Insurance & Annuity Business – initial reinsurance ceded premiums	**–**	–	13,889	–	–
Total premiums and deposits (1)	**$ 168,803**	$ 171,345	$ 150,638	$ 139,262	$ 123,104
Condensed Statements of Earnings					
Income					
Total net premiums	**$ 52,813**	$ 43,019	$ 24,510	$ 35,461	$ 33,902
Net investment income					
Regular net investment income	**6,393**	5,963	6,161	6,358	6,141
Changes in fair value through profit or loss	**(2,083)**	5,699	6,946	(3,606)	1,466
Total net investment income	**4,310**	11,662	13,107	2,752	7,607
Fee and other income	**7,294**	5,902	7,081	5,819	5,608
Total income	**64,417**	60,583	44,698	44,032	47,117
Benefits and expenses					
Paid or credited to policyholders	**50,295**	48,487	33,091	32,068	35,643
Other (2)	**9,829**	8,652	8,451	8,223	8,115
Amortization of finite life intangible assets	**336**	238	224	212	168
Restructuring and integration expenses	**90**	134	52	67	259
Loss on assets held for sale	**–**	–	–	–	202
Earnings before income taxes	**3,867**	3,072	2,880	3,462	2,730
Income taxes	**304**	(82)	373	387	422
Net earnings before non-controlling interests	**3,563**	3,154	2,507	3,075	2,308
Non-controlling interests	**301**	78	15	(19)	30
Net earnings – shareholders	**3,262**	3,076	2,492	3,094	2,278
Preferred share dividends	**134**	133	133	133	129
Net earnings – common shareholders	**$ 3,128**	$ 2,943	$ 2,359	$ 2,961	$ 2,149
Earnings per common share	**$ 3.365**	$ 3.173	$ 2.494	$ 2.996	$ 2.173
Return on common shareholders' equity (3)	**14.0%**	14.1%	11.7%	14.0%	10.9%
Book value per common share (3)	**$ 24.71**	$ 22.97	$ 21.53	$ 22.08	$ 20.11
Dividends to common shareholders – per share	**$ 1.804**	$ 1.752	$ 1.652	$ 1.556	$ 1.468

(1) This metric is a non-GAAP financial measure, does not have standard meanings prescribed by GAAP and is not directly comparable to similar measures used by other companies. Additional information regarding this non-GAAP financial measure, including a reconciliation of such non-GAAP financial measure to a measure prescribed by GAAP, is incorporated by reference herein and can be found in the Non-GAAP Financial Measures and Ratios section of the Company's 2021 Annual MD&A, available for review under the Company's profile on SEDAR at www.sedar.com.

(2) Includes commissions, operating and administrative expenses, premium taxes and financing charges.

(3) Additional information regarding the composition of this financial measure has been incorporated by reference herein and can be found in the Glossary section of the Company's 2021 Annual MD&A, available for review under the Company's profile on SEDAR at www.sedar.com.

Directors and Senior Officers

As of February 9, 2022

Board of Directors

R. Jeffrey Orr [3, 4, 5, 7]
Chair of the Board, Lifeco
President and Chief Executive Officer,
Power Corporation of Canada

Michael R. Amend [2, 6]
Chief Digital and Information Officer,
Ford Motor Company

Deborah J. Barrett, FCPA, FCA, ICD.D [1, 2, 5]
Corporate Director

Robin A. Bienfait [1, 6]
Chief Executive Officer,
Emnovate

Heather E. Conway [1, 4, 6]
Co-President and Executive Director,
Hot Docs Canadian International
Documentary Film Festival

Marcel R. Coutu [3, 4, 5]
Corporate Director

André Desmarais, O.C., O.Q. [3, 4, 6]
Deputy Chairman,
Power Corporation of Canada

Paul Desmarais, Jr., O.C., O.Q. [3, 5]
Chairman,
Power Corporation of Canada

Gary A. Doer, O.M. [4, 6]
Senior Business Advisor,
Dentons Canada LLP

David G. Fuller [2, 5]
Corporate Director

Claude Généreux [4, 5]
Executive Vice-President,
Power Corporation of Canada

Elizabeth C. Lempres [1, 2, 6, 7]
Corporate Director

Paula B. Madoff [5, 7]
Corporate Director

Paul A. Mahon [7]
President and Chief Executive Officer,
Lifeco

Susan J. McArthur [3, 4, 5]
Co-founder and Executive Chair,
LockDocs Inc.

T. Timothy Ryan [3, 4, 6]
Corporate Director

Gregory D. Tretiak, FCPA, FCA [6, 7]
Executive Vice-President and
Chief Financial Officer,
Power Corporation of Canada

Siim A. Vanaselja, FCPA, FCA [1, 6]
Corporate Director

Brian E. Walsh [3, 4, 5, 7]
Principal and Chief Strategist,
Titan Advisors, LLC

Committees

1. **Audit Committee**
   Chair: Siim A. Vanaselja
2. **Conduct Review Committee**
   Chair: Deborah J. Barrett
3. **Governance and Nominating Committee**
   Chair: R. Jeffrey Orr
4. **Human Resources Committee**
   Chair: Claude Généreux
5. **Investment Committee**
   Chair: Paula B. Madoff
6. **Risk Committee**
   Chair: Gregory D. Tretiak
7. **Reinsurance Committee**
   Chair: Gregory D. Tretiak

Senior Officers

Paul A. Mahon
President and Chief Executive Officer

Arshil Jamal
President and Group Head,
Strategy, Investments, Reinsurance
and Corporate Development

David M. Harney
President and Chief Operating Officer,
Europe

Jeffrey F. Macoun
President and Chief Operating Officer,
Canada

Edmund F. Murphy III
President and Chief Executive Officer,
Empower

Robert L. Reynolds
Chair,
Great-West Lifeco U.S. LLC
President and Chief Executive Officer,
Putnam Investments, LLC

Graham R. Bird
Executive Vice-President and
Chief Risk Officer

Sharon C. Geraghty
Executive Vice-President and
General Counsel

Garry MacNicholas
Executive Vice-President and
Chief Financial Officer

Grace M. Palombo
Executive Vice-President and
Chief Human Resources Officer

Steven M. Rullo
Executive Vice-President and
Global Chief Information Officer

Nancy D. Russell
Senior Vice-President and
Chief Internal Auditor

David B. Simmonds
Senior Vice-President and
Global Chief Communications and
Sustainability Officer

Anne C. Sonnen
Senior Vice-President and
Chief Compliance Officer

Raman Srivastava
Executive Vice-President and
Global Chief Investment Officer

Dervla M. Tomlin
Executive Vice-President and
Chief Actuary

Jeremy W. Trickett
Senior Vice-President and
Chief Governance Officer

Shareholder Information

Registered Office

100 Osborne Street North
Winnipeg, Manitoba, Canada R3C 1V3
Phone: 204-946-1190
Website: greatwestlifeco.com

Stock Exchange Listings

Great-West Lifeco Inc. trades on the Toronto Stock Exchange (TSX) under the ticker symbol GWO.

The following shares are listed on the Toronto Stock Exchange: Common Shares (**GWO**); Non-Cumulative First Preferred Shares Series Series G (**GWO.PR.G**), Series H (**GWO.PR.H**), Series I (**GWO.PR.I**), Series L (**GWO.PR.L**), Series M (**GWO.PR.M**), Series N (**GWO.PR.N**), Series P (**GWO.PR.P**), Series Q (**GWO.PR.Q**), Series R (**GWO.PR.R**), Series S (**GWO.PR.S**), Series T (**GWO.PR.T**) and Series Y (**GWO.PR.Y**).

Shareholder Services

For information or assistance regarding your registered share account, including dividends, changes of address or ownership, share certificates, direct registration, to eliminate duplicate mailings or to receive shareholder material electronically, please contact our transfer agent in Canada, the United States, United Kingdom or in Ireland directly. If you hold your shares through a broker, please contact your broker directly.

Transfer Agent and Registrar

The transfer agent and registrar of Great-West Lifeco is **Computershare Investor Services Inc.**

In Canada, the Common Shares are transferable at the following locations:

Canadian Offices	Computershare Investor Services Inc.
	Phone: 1-888-284-9137 (toll free in Canada and the United States), 514-982-9557 (direct dial)
	100 University Avenue, 8th Floor, Toronto, Ontario M5J 2Y1
	800, 324 8th Avenue S.W., Calgary, Alberta T2P 2Z2
	1500 Robert-Bourassa Boulevard, 7th Floor, Montréal, Québec H3A 3S8
	2nd Floor, 510 Burrard Street, Vancouver, British Columbia V6C 3B9

The Non-Cumulative First Preferred Shares, Series G, H, I, L, M, N, P, Q, R, S, T and Y are only transferable at the Toronto office of Computershare Investor Services Inc.

Internationally, the Common Shares are also transferable at the following locations:

United States Offices	Computershare Trust Company, N.A.
	Phone: 1-888-284-9137 (toll free in Canada and the United States)
	150 Royall Street, Canton MA 02021
	480 Washington Boulevard, Jersey City NJ 07310
	462 South 4th Street, Louisville KY 40202
United Kingdom Office	Computershare Investor Services PLC
	Phone: 0370 702 0003
	The Pavilions, Bridgwater Road, Bristol BS99 6ZZ
Ireland Office	Computershare Investor Services (Ireland) Limited
	Phone: 353 1 447 5566
	3100 Lake Drive, Citywest, Business Campus, Dublin 24, D24 AK82

Shareholders wishing to contact the transfer agent by email can do so at GWO@computershare.com.

Dividends

Common Shares and First Preferred Shares Series G, H, I, L, M, N, P, Q, R, S, T and Y – Dividend record dates are usually between the 1st and 3rd of March, June, September and December. Dividends are usually paid the last business day of each quarter.

Investment Information for Common Shares (GWO)

	Market price per common share ($)			Dividends paid ($)	Dividend payout ratio [1]	Dividend yield [2]
	High	Low	Close			
2021	**39.60**	**29.20**	**37.96**	**1.804**	**53.6%**	**5.2%**
2020	35.30	19.16	30.35	1.752	55.2%	6.4%
2019	34.38	27.59	33.26	1.652	66.2%	5.3%
2018	35.51	27.10	28.18	1.556	51.9%	5.0%
2017	37.74	33.32	35.10	1.468	67.6%	4.1%

1 Ratio based on IFRS net earnings
2 Dividends as a percent of average high and low market price for the reporting period

Investor Information

Financial analysts, portfolio managers and other investors requiring information may contact Investor Relations by emailing investorrelations@canadalife.com. Financial information may also be accessed at greatwestlifeco.com.

For copies of our annual or quarterly reports, visit greatwestlifeco.com or contact the Corporate Secretary's Office at corporate.secretary@canadalife.com.

Our Brands

ABOUT US

Great-West Lifeco Inc. is an international financial services holding company with interests in life insurance, health insurance, retirement and investment services, asset management and reinsurance businesses. We operate in Canada, the United States and Europe under the brands Canada Life, Empower, Putnam Investments and Irish Life. At the end of 2021, our companies had approximately 28,000 employees, 215,000 advisor relationships, and thousands of distribution partners – all serving over 33 million customer relationships across these regions. Great-West Lifeco trades on the Toronto Stock Exchange (TSX) under the ticker symbol GWO, and is a member of the Power Corporation group of companies. To learn more, visit greatwestlifeco.com.

GREAT-WEST LIFECO INC.

canada life™ | Irish Life | EMPOWER | Putnam INVESTMENTS

canada life Asset Management | canada life™ Investment Management | Canada Life™ Reinsurance

claimsecure | FINANCIAL HORIZONS GROUP | GWL REALTY ADVISORS | ILIM

PanAgora | personal CAPITAL AN EMPOWER COMPANY | Setanta ASSET MANAGEMENT | QUADRUS Quadrus Investment Services Ltd.

GREAT-WEST
LIFECO INC.

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