GREAT-WEST
LIFECO INC.

Consolidated Financial Statements

For the year ended December 31, 2022

GREAT-WEST LIFECO INC.

CONSOLIDATED STATEMENTS OF EARNINGS

(in Canadian $ millions except per share amounts)

	For the years ended December 31	
	2022	2021
Income		
Premium income		
Gross premiums written	**$ 64,718**	$ 57,397
Ceded premiums	**(11,897)**	(4,584)
Total net premiums	**52,821**	52,813
Net investment income (note 6)		
Regular net investment income	**8,146**	6,393
Changes in fair value through profit or loss	**(23,903)**	(2,083)
Total net investment income (loss)	**(15,757)**	4,310
Fee and other income	**7,598**	7,294
	44,662	64,417
Benefits and expenses		
Policyholder benefits		
Gross	**58,836**	49,355
Ceded	**(2,888)**	(3,544)
Total net policyholder benefits	**55,948**	45,811
Changes in insurance and investment contract liabilities		
Gross	**(24,006)**	1,152
Ceded	**(4,462)**	1,891
Total net changes in insurance and investment contract liabilities	**(28,468)**	3,043
Policyholder dividends and experience refunds	**2,184**	1,441
Total paid or credited to policyholders	**29,664**	50,295
Commissions	**2,675**	2,664
Operating and administrative expenses (note 27)	**7,109**	6,337
Premium taxes	**497**	500
Financing charges (note 16)	**398**	328
Amortization of finite life intangible assets (note 10)	**373**	336
Restructuring and integration expenses (note 4)	**178**	90
Earnings before income taxes	**3,768**	3,867
Income taxes (note 26)	**234**	304
Net earnings before non-controlling interests	**3,534**	3,563
Attributable to non-controlling interests (note 18)	**185**	301
Net earnings	**3,349**	3,262
Preferred share dividends (note 20)	**130**	134
Net earnings - common shareholders	**$ 3,219**	$ 3,128
Earnings per common share (note 20)		
Basic	**$ 3.455**	$ 3.365
Diluted	**$ 3.452**	$ 3.360

GREAT-WEST LIFECO INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in Canadian $ millions)

	For the years ended December 31	
	2022	2021
Net earnings	**$ 3,349**	$ 3,262
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	**497**	(391)
Unrealized gains (losses) on hedges of the net investment in foreign operations	**88**	117
Income tax (expense) benefit	**28**	(12)
Unrealized gains (losses) on available-for-sale assets	**(986)**	(131)
Income tax (expense) benefit	**186**	35
Realized (gains) losses on available-for-sale assets	**44**	(28)
Income tax expense (benefit)	**(7)**	3
Unrealized gains (losses) on cash flow hedges	**(45)**	60
Income tax (expense) benefit	**12**	(16)
Realized (gains) losses on cash flow hedges	**—**	(48)
Income tax expense (benefit)	**—**	13
Non-controlling interests	**260**	107
Income tax (expense) benefit	**(73)**	(30)
Total items that may be reclassified	**4**	(321)
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)	**505**	705
Income tax (expense) benefit	**(130)**	(190)
Non-controlling interests	**(41)**	(67)
Income tax (expense) benefit	**11**	18
Total items that will not be reclassified	**345**	466
Total other comprehensive income	**349**	145
Comprehensive income	**$ 3,698**	$ 3,407

GREAT-WEST
LIFECO INC.

CONSOLIDATED BALANCE SHEETS

(in Canadian $ millions)

	December 31	
	2022	2021
Assets		
Cash and cash equivalents (note 5)	**$ 7,290**	$ 6,075
Bonds (note 6)	**159,587**	140,612
Mortgage loans (note 6)	**39,529**	28,852
Stocks (note 6)	**14,268**	14,183
Investment properties (note 6)	**8,344**	7,763
Loans to policyholders	**8,820**	8,319
	237,838	205,804
Funds held by ceding insurers (note 7)	**15,186**	17,194
Reinsurance assets (note 13)	**25,018**	21,138
Goodwill (note 10)	**10,604**	9,081
Intangible assets (note 10)	**6,209**	5,514
Derivative financial instruments (note 28)	**2,314**	967
Owner occupied properties (note 11)	**724**	736
Fixed assets (note 11)	**399**	422
Other assets (note 12)	**6,798**	4,522
Premiums in course of collection, accounts and interest receivable	**6,980**	6,366
Current income taxes	**336**	268
Deferred tax assets (note 26)	**1,152**	1,057
Investments on account of segregated fund policyholders (note 14)	**387,897**	357,419
Total assets	**$ 701,455**	$ 630,488
Liabilities		
Insurance contract liabilities (note 13)	**$ 233,888**	$ 208,378
Investment contract liabilities (note 13)	**13,810**	12,455
Debentures and other debt instruments (note 15)	**10,509**	8,804
Funds held under reinsurance contracts	**8,247**	1,542
Derivative financial instruments (note 28)	**1,639**	1,030
Accounts payable	**3,194**	3,032
Other liabilities (note 17)	**8,794**	6,063
Current income taxes	**150**	193
Deferred tax liabilities (note 26)	**1,009**	1,089
Investment and insurance contracts on account of segregated fund policyholders (note 14)	**387,897**	357,419
Total liabilities	**669,137**	600,005
Equity		
Non-controlling interests (note 18)		
Participating account surplus in subsidiaries	**3,156**	3,138
Non-controlling interests in subsidiaries	**152**	129
Shareholders' equity		
Share capital (note 19)		
Limited recourse capital notes	**1,500**	1,500
Preferred shares	**2,720**	2,720
Common shares	**5,791**	5,748
Accumulated surplus	**17,809**	16,424
Accumulated other comprehensive income (note 24)	**981**	632
Contributed surplus	**209**	192
Total equity	**32,318**	30,483
Total liabilities and equity	**$ 701,455**	$ 630,488

Approved by the Board of Directors:

Jeffrey Orr
Chair of the Board

Paul Mahon
President and Chief Executive Officer

GREAT-WEST LIFECO INC.

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(in Canadian $ millions)

	December 31, 2022					
	Share capital	**Contributed surplus**	**Accumulated surplus**	**Accumulated other comprehensive income**	**Non-controlling interests**	**Total equity**
Balance, beginning of year	**$ 9,968**	**$ 192**	**$ 16,424**	**$ 632**	**$ 3,267**	**$ 30,483**
Net earnings	**—**	**—**	**3,349**	**—**	**185**	**3,534**
Other comprehensive income (loss)	**—**	**—**	**—**	**349**	**(157)**	**192**
	9,968	**192**	**19,773**	**981**	**3,295**	**34,209**
Dividends to shareholders						
Preferred shareholders (note 20)	**—**	**—**	**(130)**	**—**	**—**	**(130)**
Common shareholders	**—**	**—**	**(1,826)**	**—**	**—**	**(1,826)**
Shares exercised and issued under share-based payment plans (note 19)	**43**	**(54)**	**—**	**—**	**50**	**39**
Share-based payment plans expense	**—**	**67**	**—**	**—**	**—**	**67**
Equity settlement of Putnam share-based plans	**—**	**—**	**—**	**—**	**(66)**	**(66)**
Recognition of non-controlling interest	**—**	**—**	**—**	**—**	**15**	**15**
Disposal of investment in subsidiary	**—**	**—**	**8**	**—**	**6**	**14**
Shares cancelled under Putnam share-based plans	**—**	**4**	**—**	**—**	**(4)**	**—**
Preferred share redemption costs	**—**	**—**	**(4)**	**—**	**—**	**(4)**
Dilution loss on non-controlling interests	**—**	**—**	**(12)**	**—**	**12**	**—**
Balance, end of year	**$ 10,011**	**$ 209**	**$ 17,809**	**$ 981**	**$ 3,308**	**$ 32,318**

	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	(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

GREAT-WEST
LIFECO INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(in Canadian $ millions)

	For the years ended December 31	
	2022	2021
Operations		
Earnings before income taxes	**$ 3,768**	$ 3,867
Income taxes paid, net of refunds received	**(348)**	(351)
Adjustments:		
Change in insurance and investment contract liabilities	**(23,273)**	1,819
Change in funds held by ceding insurers	**(294)**	845
Change in funds held under reinsurance contracts	**(294)**	(84)
Change in reinsurance assets	**3,830**	1,915
Changes in fair value through profit or loss	**23,903**	2,083
Other	**(245)**	279
	7,047	10,373
Financing Activities		
Issue of common shares (note 19)	**43**	97
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 euro-denominated debt (note 15)	**691**	—
Increase in line of credit of subsidiaries [1]	**1,096**	63
Decrease in line of credit of subsidiaries [1]	**(495)**	(827)
Increase (decrease) in debentures and other debt instruments	**5**	(4)
Share issue costs (note 19)	**—**	(3)
Preferred share redemption costs	**(4)**	—
Dividends paid on common shares	**(1,826)**	(1,677)
Dividends paid on preferred shares (note 20)	**(130)**	(134)
	(620)	(992)
Investment Activities		
Bond sales and maturities	**27,036**	27,288
Mortgage loan repayments	**3,080**	3,276
Stock sales	**4,278**	6,286
Investment property sales	**55**	40
Change in loans to policyholders	**(171)**	64
Business acquisitions, net of cash and cash equivalents acquired (note 3)	**(2,155)**	(380)
Investment in bonds	**(26,810)**	(35,169)
Investment in mortgage loans	**(5,635)**	(4,574)
Investment in stocks	**(4,461)**	(7,073)
Investment in investment properties	**(710)**	(970)
	(5,493)	(11,212)
Effect of changes in exchange rates on cash and cash equivalents	**281**	(40)
Increase (decrease) in cash and cash equivalents	**1,215**	(1,871)
Cash and cash equivalents, beginning of year	**6,075**	7,946
Cash and cash equivalents, end of year	**$ 7,290**	$ 6,075
Supplementary cash flow information		
Interest income received	**$ 5,833**	$ 4,965
Interest paid	**408**	348
Dividend income received	**403**	382

[1] The Company has reclassified certain comparative figures to conform to the current year's presentation. These reclassifications had no impact on the equity or net earnings of the Company.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(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), Empower Annuity Insurance Company of America (Empower, formerly known as Great-West Life & Annuity Insurance Company) and Putnam Investments, LLC (Putnam). Effective August 1, 2022, Great-West Life & Annuity Insurance Company changed its legal name to Empower Annuity Insurance Company of America.

The consolidated financial statements (financial statements) of the Company as at and for the year ended December 31, 2022 were approved by the Board of Directors on February 8, 2023.

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.

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

<u>Basis of Consolidation</u>
The consolidated financial statements of the Company were prepared as at and for the year ended December 31, 2022 with comparative information as at and for the year ended December 31, 2021. 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.

<u>Impact of COVID-19 and the Conflict Between Russia and Ukraine on Significant Judgments, Estimates and Assumptions</u>
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.

Global financial markets continued to be volatile during 2022, in part due to Russia's military invasion of Ukraine and the related sanctions and economic fallout. The Company continues to monitor potential impacts of the conflict, including financial impacts, heightened cyber risks, and risks related to the global supply chain.

The results of the Company reflect management's judgments regarding the impact of prevailing market conditions related to global credit, equities, investment properties, foreign exchange and inflation, 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).
- 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 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 or classified as available-for-sale. 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 and Available-for-Sale

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 other miscellaneous 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, cross-currency 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* (IAS 39). 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. Empower (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.

(ad) Future Accounting Policies

The Company actively monitors changes in IFRS, both proposed and released, by the IASB for potential impact on the Company. The following sets out significant standards that will be adopted on January 1, 2023:

IFRS 17 - *Insurance Contracts* (IFRS 17), and IFRS 9 - *Financial Instruments* (IFRS 9)

IFRS 17 will replace IFRS 4, effective January 1, 2023.

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

- Identify insurance contracts as arrangements where the Company accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder or beneficiary of the contract for specified uncertain future events that adversely affect the policyholder and whose amount and timing is unknown.
- Separately account for specified embedded derivatives, distinct investment components, and distinct non-insurance goods and services from insurance contracts.
- Identify portfolios of insurance contracts, which comprises contracts that are subject to similar risks and managed together. Portfolios are further divided based on expected profitability at inception. At a minimum, each portfolio of insurance contracts issued shall be divided into the following groups:
    - Contracts that are onerous at initial recognition;
    - Contracts that at initial recognition have no significant possibility of becoming onerous subsequently; and
    - Any of the remaining contracts in the portfolio.
- Apply the three measurement models introduced by IFRS 17 as further described below:

  General Measurement Model (GMM)

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

  Under this model, the Company will measure insurance contract liabilities on the balance sheet as the total of:

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

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

Premium Allocation Approach (PAA)

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

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

Variable Fee Approach (VFA)

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

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

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

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

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

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

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

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

The current disclosure for the measurement and classification of the Company's portfolio investments (note 6) provides most of the information required by IFRS 9.

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

The expected quantitative impact of transitioning to IFRS 17 and IFRS 9 is illustrated in the opening balance sheet reconciliation table below.

Balance Sheet Condensed View	**As Reported IFRS 4 IAS 39 Dec. 31, 2021**	**Asset / Liability Reclassification**	**IFRS 9**	**IFRS 17**	**Income Tax**	**Restated IFRS 17 & 9 Balance Sheet Jan. 1, 2022**
Assets						
Bonds	$ 140,612	$ —	$ 2,041	$ —	$ —	$ 142,653
Mortgage loans	28,852	—	505	—	—	29,357
Stocks	14,183	16	26	—	—	14,225
Other assets impacted by IFRS 17 & 9	67,677	(20,040)	—	697	350	48,684
Other assets not impacted by IFRS 17 & 9	21,745	—	—	—	—	21,745
Investments on account of segregated fund policyholders	357,419	—	—	—	—	357,419
Total assets	**$ 630,488**	**$ (20,024)**	**$ 2,572**	**$ 697**	**$ 350**	**$ 614,083**
Liabilities						
Insurance contract liabilities	$ 208,378	$ (58,904)	$ —	$ 6,812	$ —	$ 156,286
Investment contract liabilities	12,455	41,210	—	—	—	53,665
Other liabilities impacted by IFRS 17 & 9	11,726	(1,815)	—	—	(325)	9,586
Other liabilities not impacted by IFRS 17 & 9	10,027	—	—	—	—	10,027
Investments and insurance contracts on account of segregated fund policyholders	357,419	(357,419)	—	—	—	—
Insurance contracts on account of segregated fund policyholders	—	65,253	—	—	—	65,253
Investment contracts on account of segregated fund policyholders	—	292,166	—	—	—	292,166
Total liabilities	**600,005**	**(19,509)**	**—**	**6,812**	**(325)**	**586,983**
Total equity	**30,483**	**(515)**	**2,572**	**(6,115)**	**675**	**27,100**
Total liabilities and equity	**$ 630,488**	**$ (20,024)**	**$ 2,572**	**$ 697**	**$ 350**	**$ 614,083**

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

Asset and liability reclassifications were primarily driven by changes to the groupings of certain assets and liabilities, reclassifications of certain insurance contract liabilities to investment contract liabilities, and presenting liabilities on account of segregated fund policyholders separately between insurance and investment contract liabilities. IFRS 9 adjustments primarily relate to a change in designation of certain loans and receivables held at amortized cost under IAS 39 to FVTPL under IFRS 9. IFRS 17 adjustments

relate to changes in insurance contract liabilities and reinsurance assets, which are primarily the result of the establishment of CSM for in-force contracts of $6.3 billion associated with the shareholders' account and $2.3 billion associated with the participating account, partially offset by the removal of provisions no longer required under IFRS 17. This does not include the CSM on in-force segregated fund business which does not have a material impact on capital or opening equity.

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

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

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

3. Business Acquisitions and Other Transactions

(a) Acquisition of Personal Capital Corporation

On August 17, 2020, Empower 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 increase in 2021 was 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 $236 (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. During the first quarter of 2022, the Company made its first payment of U.S. $59 based on assets under management metrics achieved through December 31, 2021.

During the third quarter of 2022, the remaining contingent consideration provision of $54 (U.S. $41) was released, resulting in a recovery of $54 to operating and administrative expenses in the Consolidated Statements of Earnings, as the current growth in net new assets was below the level where further contingent consideration would be payable. The fair value of contingent consideration was nil at December 31, 2022.

(b) Acquisition of Prudential Retirement Services Business

On April 1, 2022, Empower completed the purchase, through a share purchase and a reinsurance transaction, of the full-service retirement business of Prudential Financial, Inc. (Prudential). The Company assumed the economics and risks associated with the business, while Prudential continues to retain the obligation to the contract holders of the reinsured portion. The Company acquired the business for $4,350 (U.S. $3,480) of total value which includes purchase consideration of $2,628 (U.S. $2,102) including the base purchase price, ceding commission and working capital adjustments and $1,722 (U.S. $1,378) of required capital to support the business.

The transaction was funded with $1,500 (U.S. $1,193) of limited recourse capital notes and U.S. $823 of short-term debt, in addition to existing resources. On March 30, 2022, Great-West Lifeco U.S. LLC, a subsidiary of the Company, established a 2-year U.S. $500 non-revolving credit facility with interest on the drawn balance equal to a floating rate based on Adjusted Term Secured Overnight Financing Rate (SOFR). The facility is fully and unconditionally guaranteed by the Company. On the acquisition date, the U.S. $500 facility was fully drawn, along with U.S. $323 from an existing revolving credit facility, to finance a portion of the acquisition. The existing revolving credit facility incurs interest on the drawn balance equal to a floating rate based on Adjusted Term SOFR. On July 1, 2022, Great-West Lifeco U.S. LLC made a payment of U.S. $150 on its existing revolving credit facility, followed by a final payment of U.S. $173 on December 30, 2022. As at December 31, 2022, the $675 (U.S. $500) facility was fully drawn, along with nil from the existing revolving credit facility.

During the fourth quarter of 2022, the Company completed its comprehensive evaluation of the fair value of net assets acquired from Prudential and the purchase price allocation. The initial purchase consideration was adjusted from $2,744 to $2,628 (U.S. $2,195 to U.S. $2,102).

Initial goodwill presented in the Company's June 30, 2022 consolidated financial statements of $1,109 (U.S. $887) was adjusted to $1,264 (U.S. $1,011). Adjustments were made to the provisional amounts disclosed in the Company's June 30, 2022 consolidated financial statements for the recognition and measurement of

intangible assets, assets acquired and liabilities assumed. Intangible assets recognized include customer contracts of $450 (U.S. $360), which have accumulated amortization of $22 (U.S. $16) as at December 31, 2022. Included in other liabilities, the Company also assumed an investment advisory contract with unfavourable out-of-market terms, initially recognized at $38 (U.S. $30), of which $5 (U.S. $4) has been amortized through the year ended December 31, 2022.

The Company determined the fair value of the intangible assets and insurance contract liabilities acquired, using valuation techniques that incorporate projections of cash flows 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. Adjustments were also made to the provisional amounts reported for investments on account of segregated fund policyholders acquired and investment and insurance contracts on account of segregated fund policyholders assumed, which had no impact on the fair value of net assets acquired.

The initial amounts assigned to the assets acquired, goodwill, intangible assets and liabilities assumed on April 1, 2022, and reported as at December 31, 2022 are as follows:

Assets acquired and goodwill		
Cash and cash equivalents	$	**487**
Bonds		**36,292**
Mortgage loans		**8,017**
Stocks		**381**
Goodwill		**1,264**
Intangible assets		**450**
Other assets		**100**
Premiums in the course of collection, accounts and interest receivable		**276**
Investments on account of segregated fund policyholders		**77,700**
Total assets acquired and goodwill	**$**	**124,967**
Liabilities assumed		
Insurance contract liabilities	$	**43,550**
Investment contract liabilities		**690**
Accounts payable		**11**
Other liabilities		**388**
Investment and insurance contracts on account of segregated fund policyholders		**77,700**
Total liabilities assumed	**$**	**122,339**

The following provides the change in the carrying value from April 1, 2022 to December 31, 2022 of the goodwill on acquisition:

Goodwill previously reported at June 30, 2022	$	**1,109**
Final measurement of intangible assets		**285**
Purchase consideration adjustments		**(116)**
Other measurement period adjustments		**(14)**
Goodwill reported at December 31, 2022	**$**	**1,264**

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

identifiable and separately recognized in the acquisition. These synergies represent meaningful expense and revenue opportunities which are expected to be accretive to earnings. The goodwill is deductible for tax purposes.

During the year ended December 31, 2022, the Company incurred acquisition expenses of $102 (U.S. $79), which are recorded in the Consolidated Statements of Earnings.

During the year ended December 31, 2022, Prudential contributed revenue of $609 (U.S. $525), net earnings of $94 (U.S. $70) and other comprehensive loss of $43 (U.S. $34). These amounts are included in the Consolidated Statements of Earnings and Comprehensive Income.

Supplemental pro-forma revenue and net earnings for the combined entity, as though the acquisition date for this business combination had been as of the beginning of the annual reporting period, has not been included as it is impracticable as Prudential had a different financial reporting basis than the Company.

(c) 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.

During the fourth quarter of 2022, the Company completed its comprehensive evaluation of the fair value of the net assets acquired from Ark Life, and the purchase price allocation.

Initial goodwill presented in the Company’s December 31, 2021 consolidated financial statements of $21 (€15), was adjusted upon the completion of the purchase price allocation. An excess of the fair value of the net assets acquired over the purchase price of $20 (€14) was recognized in the Consolidated Statements of Earnings as regular net investment income and is non-taxable. Adjustments were made to the provisional amounts disclosed in the Company’s December 31, 2021 consolidated financial statements for the recognition and measurement of intangible assets and liabilities assumed. Intangible assets recognized include customer contracts of $48 (€34), which have accumulated amortization of $4 (€3) as at December 31, 2022.

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

The Company determined the fair value of the intangible assets using valuation techniques that incorporate projections of discounted cash flows by applying judgments and estimates for forecasted revenues, renewal expenses, and discount rates.

The amounts assigned to the assets acquired, goodwill and liabilities assumed on November 1, 2021, reported as at December 31, 2022 are as follows:

Assets acquired and goodwill		
Cash and cash equivalents	$	**17**
Bonds		**333**
Intangible assets		**48**
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	**$**	**4,569**
Liabilities assumed		
Insurance contract liabilities	$	**1,257**
Investment contract liabilities		**43**
Other liabilities		**62**
Deferred tax liabilities		**11**
Investment and insurance contracts on account of segregated fund policyholders		**2,844**
Total liabilities assumed	**$**	**4,217**

The following provides the change in the carrying value of goodwill from December 31, 2021 to December 31, 2022:

Goodwill previously reported at December 31, 2021	**$**	**21**
Recognition and measurement of intangible assets		**(48)**
Recognition of deferred tax liabilities on intangible assets and other measurement period adjustments		**7**
Excess of the fair value of the net assets acquired over the purchase price at December 31, 2022	**$**	**(20)**

During the fourth quarter of 2022, Ark Life Assurance Company dac changed its legal name to Irish Life Ark Dublin dac.

(d) U.S. Reinsurance Agreement

On December 31, 2022, Empower completed two separate agreements to cede, via indemnity reinsurance, $7,946 of insurance contract liabilities to a non-related party. As a result of the transaction, $7,946 of reinsurance assets (note 13), $7,031 of funds held under reinsurance contracts and $918 of other liabilities (note 17) were recognized on the Consolidated Balance Sheets at December 31, 2022. Within the Consolidated Statements of Earnings, the Company recognized an increase of $8,005 to ceded premiums, as well as a decrease of $8,005 to total paid or credited to policyholders and an increase of $3 to operating and administrative expenses (note 27) as a result of the transaction.

4. Restructuring and Integration Expenses

(a) Canada Restructuring

At December 31, 2022, the Company has a restructuring provision of $14 ($56 at December 31, 2021) remaining in other liabilities. The change in the restructuring provision for the Canada restructuring is set out below:

	2022	2021
Balance, beginning of year	**$ 56**	$ 86
Amounts used	**(42)**	(30)
Balance, end of year	**$ 14**	$ 56

The Company expects to utilize a significant portion of these amounts during 2023.

(b) Empower Restructuring and Integration

The Company recorded integration expenses of $128 ($74 in 2021) and restructuring expenses of $50 ($10 in 2021) in the Consolidated Statements of Earnings during year ended December 31, 2022. The restructuring is primarily attributable to staff reductions and other exit costs related to the Company's acquisitions of the retirement services businesses of Massachusetts Mutual Life Insurance Company and Prudential (note 3).

At December 31, 2022, the Company has a restructuring provision of $28 ($19 at December 31, 2021) remaining in other liabilities. The change in the restructuring provision for the Empower restructuring is set out below:

	2022	2021
Balance, beginning of year	**$ 19**	$ 37
Restructuring expenses	**50**	10
Amounts used	**(43)**	(28)
Changes in foreign exchange rates	**2**	—
Balance, end of year	**$ 28**	$ 19

The Company expects to pay out a significant portion of these amounts during 2023. The Company expects to incur further restructuring and integration expenses associated with the Prudential acquisition in 2023 (note 3).

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.

	2022	2021
Cash	$ **4,013**	$ 3,202
Short-term deposits	**3,277**	2,873
Total	$ **7,290**	$ 6,075

At December 31, 2022, cash and short-term deposits of $879 were restricted for use by the Company ($1,303 at December 31, 2021) 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:

	2022		2021	
	Carrying value	**Fair value**	Carrying value	Fair value
Bonds				
Designated fair value through profit or loss [1]	**$ 113,596**	**$ 113,596**	$ 103,645	$ 103,645
Classified fair value through profit or loss [1]	**181**	**181**	168	168
Available-for-sale	**11,864**	**11,864**	12,123	12,123
Loans and receivables	**33,946**	**30,448**	24,676	26,717
	159,587	**156,089**	140,612	142,653
Mortgage loans				
Residential				
Designated fair value through profit or loss [1]	**3,125**	**3,125**	2,609	2,609
Available-for-sale	**240**	**240**	—	—
Loans and receivables	**12,202**	**11,256**	9,580	9,860
	15,567	**14,621**	12,189	12,469
Commercial	**23,962**	**21,953**	16,663	17,189
	39,529	**36,574**	28,852	29,658
Stocks				
Designated fair value through profit or loss [1]	**13,305**	**13,305**	13,269	13,269
Available-for-sale	**206**	**206**	209	209
Available-for-sale, at cost [2]	**119**	**119**	124	124
Equity method	**638**	**610**	581	633
	14,268	**14,240**	14,183	14,235
Investment properties	**8,344**	**8,344**	7,763	7,763
Total	**$ 221,728**	**$ 215,247**	$ 191,410	$ 194,309

[1] Under IAS 39, 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] Fair value cannot be reliably measured, therefore the investments are held at cost.

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

	2022			
	Term to maturity			
	1 year or less	Over 1 year to 5 years	Over 5 years	Total
Bonds [1]	**$ 13,560**	**$ 42,892**	**$ 103,095**	**$ 159,547**
Mortgage loans [2]	**2,688**	**19,108**	**17,722**	**39,518**
Total	**$ 16,248**	**$ 62,000**	**$ 120,817**	**$ 199,065**

	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

[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, 2022 (9,200,448 at December 31, 2021) representing a 3.87% ownership interest (3.85% at December 31, 2021). 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, certain shared strategic alliances, significant intercompany transactions and service agreements that influence the financial and operating policies of both companies.

	2022	2021
Carrying value, beginning of year	**$ 366**	$ 354
Equity method share of IGM net earnings	**30**	33
Dividends received	**(21)**	(21)
Carrying value, end of year	**$ 375**	$ 366
Share of equity, end of year	**$ 237**	$ 243
Fair value, end of year	**$ 347**	$ 418

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, 2022 can be obtained in its publicly available information.

At December 31, 2022, IGM owned 37,337,133 (37,337,133 at December 31, 2021) common shares of the Company.

(d) Included in portfolio investments are the following:

(i) Carrying amount of impaired investments

	2022	2021
Impaired amounts by classification		
Fair value through profit or loss	**$ 11**	$ 14
Available-for-sale	**—**	7
Loans and receivables	**40**	71
Total	**$ 51**	$ 92

The carrying amount of impaired investments includes $40 bonds and $11 mortgage loans at December 31, 2022. ($18 bonds, $71 mortgage loans and $3 stocks at December 31, 2021). The above carrying values for loans and receivables are net of allowances of $16 at December 31, 2022 and $28 at December 31, 2021.

(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:

	2022			2021		
	Bonds	**Mortgage loans**	**Total**	Bonds	Mortgage loans	Total
Balance, beginning of year	**$ —**	**$ 28**	**$ 28**	$ —	$ 57	$ 57
Net provision for credit losses - in year	**—**	**42**	**42**	—	30	30
Write-offs, net of recoveries	**—**	**(54)**	**(54)**	—	(59)	(59)
Balance, end of year	**$ —**	**$ 16**	**$ 16**	$ —	$ 28	$ 28

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:

	2022					
	Bonds	**Mortgage loans**	**Stocks**	**Investment properties**	**Other**	**Total**
Regular net investment income:						
Investment income earned	**$ 5,858**	**$ 1,217**	**$ 404**	**$ 459**	**$ 705**	**$ 8,643**
Net realized gains (losses)						
Available-for-sale	**(71)**	**—**	**27**	**—**	**—**	**(44)**
Other classifications	**—**	**17**	**—**	**—**	**(31)**	**(14)**
Net allowances for credit losses on loans and receivables	**—**	**(42)**	**—**	**—**	**—**	**(42)**
Other income (expenses)	**—**	**—**	**—**	**(154)**	**(243)**	**(397)**
	5,787	**1,192**	**431**	**305**	**431**	**8,146**
Changes in fair value through profit or loss assets:						
Classified fair value through profit or loss	**4**	**—**	**—**	**—**	**—**	**4**
Designated fair value through profit or loss	**(22,558)**	**(639)**	**(636)**	**—**	**(33)**	**(23,866)**
Recorded at fair value through profit or loss	**—**	**—**	**—**	**(41)**	**—**	**(41)**
	(22,554)	**(639)**	**(636)**	**(41)**	**(33)**	**(23,903)**
Total	**$ (16,767)**	**$ 553**	**$ (205)**	**$ 264**	**$ 398**	**$ (15,757)**

	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

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 $191 at December 31, 2022 ($169 at December 31, 2021). 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, 2022, the Company had loaned securities (which are included in invested assets) with a fair value of $9,550 ($10,525 at December 31, 2021).

7. Funds Held by Ceding Insurers

At December 31, 2022, the Company had amounts on deposit of $15,186 ($17,194 at December 31, 2021) 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:

	2022		2021	
	Carrying value	**Fair value**	Carrying value	Fair value
Cash and cash equivalents	**$ 222**	**$ 222**	$ 336	$ 336
Bonds	**11,172**	**11,172**	14,105	14,105
Mortgages	**457**	**457**	558	558
Other assets	**129**	**129**	126	126
Total	**$ 11,980**	**$ 11,980**	$ 15,125	$ 15,125
Supporting:				
Reinsurance liabilities	**$ 11,825**	**$ 11,825**	$ 14,907	$ 14,907
Surplus	**155**	**155**	218	218
Total	**$ 11,980**	**$ 11,980**	$ 15,125	$ 15,125

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

	2022	2021
Bonds issued or guaranteed by:		
Treasuries	**$ 383**	$ 1,032
Government related	**1,122**	1,463
Agency securitized	**139**	183
Non-agency securitized	**1,350**	1,660
Financials	**2,020**	2,628
Communications	**327**	427
Consumer products	**1,728**	2,031
Energy	**517**	644
Industrials	**1,029**	1,243
Technology	**386**	498
Transportation	**319**	404
Utilities	**1,652**	1,892
Total long-term bonds	**10,972**	14,105
Short-term bonds	**200**	—
Total	**$ 11,172**	$ 14,105

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

	2022	2021
Multi-family residential	**$ 110**	$ 126
Commercial	**347**	432
Total	**$ 457**	$ 558

(d) Asset quality:

Bond Portfolio by Credit Rating

	2022	2021
AAA	**$ 1,037**	$ 1,251
AA	**2,607**	3,721
A	**4,289**	5,222
BBB	**3,124**	3,749
BB and lower	**115**	162
Total	**$ 11,172**	$ 14,105

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.

	2022	2021
Cash and cash equivalents	**$ 7,290**	$ 6,075
Bonds		
Fair value through profit or loss	**113,777**	103,813
Available-for-sale	**11,864**	12,123
Loans and receivables	**33,946**	24,676
Mortgage loans	**39,529**	28,852
Loans to policyholders	**8,820**	8,319
Funds held by ceding insurers [1]	**15,186**	17,194
Reinsurance assets	**25,018**	21,138
Interest due and accrued	**1,709**	1,239
Accounts receivable	**3,556**	3,183
Premiums in course of collection	**1,715**	1,944
Trading account assets	**2,972**	1,671
Finance leases receivable	**536**	433
Other assets [2]	**1,995**	1,196
Derivative assets	**2,314**	967
Total	**$ 270,227**	$ 232,823

[1] Includes $11,980 ($15,125 at December 31, 2021) 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 $1,348 of collateral received from counterparties as at December 31, 2022 ($318 at December 31, 2021) relating to derivative assets.

As at December 31, 2022, $12,061 of the $25,018 of reinsurance assets are ceded to Protective Life Insurance Company ($14,512 of $21,138 at December 31, 2021). This concentration risk is mitigated by funds held in trust and other arrangements of $13,685 as at December 31, 2022 ($15,963 at December 31, 2021).

(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:

	2022				
	Canada	**United States**	**Europe**	**Capital and Risk Solutions**	**Total**
Bonds issued or guaranteed by:					
Treasuries	**$ 892**	**$ 330**	**$ 7,539**	**$ 3,222**	**$ 11,983**
Government related	**17,054**	**3,283**	**6,631**	**373**	**27,341**
Agency securitized	**175**	**1,270**	**—**	**15**	**1,460**
Non-agency securitized	**2,355**	**15,022**	**734**	**123**	**18,234**
Financials	**3,625**	**13,507**	**4,520**	**921**	**22,573**
Communications	**1,008**	**1,872**	**667**	**137**	**3,684**
Consumer products	**4,352**	**10,934**	**1,743**	**968**	**17,997**
Energy	**2,277**	**3,698**	**406**	**285**	**6,666**
Industrials	**2,187**	**8,670**	**1,250**	**418**	**12,525**
Technology	**848**	**3,394**	**392**	**298**	**4,932**
Transportation	**3,503**	**2,090**	**638**	**122**	**6,353**
Utilities	**9,507**	**8,482**	**3,131**	**478**	**21,598**
Total long-term bonds	**47,783**	**72,552**	**27,651**	**7,360**	**155,346**
Short-term bonds	**3,001**	**17**	**822**	**401**	**4,241**
Total	**$ 50,784**	**$ 72,569**	**$ 28,473**	**$ 7,761**	**$ 159,587**

	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

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

	2022				
	Canada	**United States**	**Europe**	**Capital and Risk Solutions**	**Total**
Single family residential	**$ 1,856**	**$ —**	**$ —**	**$ —**	**$ 1,856**
Multi-family residential	**4,732**	**4,677**	**897**	**40**	**10,346**
Equity release	**1,392**	**—**	**1,705**	**268**	**3,365**
Commercial	**9,126**	**11,278**	**3,503**	**55**	**23,962**
Total	**$ 17,106**	**$ 15,955**	**$ 6,105**	**$ 363**	**$ 39,529**

	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

(iii) Asset Quality

Bond Portfolio by Credit Rating

	2022	2021
AAA	**$ 25,399**	$ 20,254
AA	**32,244**	35,460
A	**55,063**	48,764
BBB	**45,080**	35,098
BB and lower	**1,801**	1,036
Total	**$ 159,587**	$ 140,612

Derivative Portfolio by Credit Rating

	2022	2021
Over-the-counter contracts (counterparty ratings):		
AA	**$ 1,604**	$ 662
A	**697**	304
Exchange-traded	**13**	1
Total	**$ 2,314**	$ 967

(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:

	2022	2021
Less than 30 days	**$ 530**	$ 164
30 - 90 days	**348**	34
Greater than 90 days	**147**	141
Total	**$ 1,025**	$ 339

(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:

	2022	2021
Participating	**$ 1,327**	$ 1,376
Non-participating	**1,896**	1,895
Total	**$ 3,223**	$ 3,271

(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 35% (approximately 48% in 2021) of insurance and investment contract liabilities are non-cashable prior to maturity or claim, with a further 30% approximately (24% in 2021) of insurance and investment contract liabilities subject to fair value adjustments under certain conditions.
- 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, 2022, 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 and a U.S. $500 non-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 Empower.

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	$ 9,544	$ 725	$ —	$ 675	$ 725	$ 540	$ 6,879
Capital trust securities [1]	150	—	—	—	—	—	150
Purchase obligations	537	184	108	79	55	47	64
Pension contributions	315	315	—	—	—	—	—
Total	**$ 10,546**	**$ 1,224**	**$ 108**	**$ 754**	**$ 780**	**$ 587**	**$ 7,093**

[1] Payments due have not been reduced to reflect that the Company held capital trust securities of $37 principal amount ($44 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.

(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.
- For products that provide policyholders the right to redeem balances at book value, the Company has product features to mitigate interest rate risk.
- 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 2022 (0.11% in 2021). 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. Actual movements in interest rates may produce different impacts on the value of liabilities, net of changes in the value of assets supporting liabilities, depending on the extent of the change in interest rates in different geographies and at different durations. An immediate 1% increase in interest rates in Canada could lead to an increase in the value of liabilities, net of changes in the value of assets supporting liabilities, and a decrease in net earnings, but the impact would not be expected to be material.

The following 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.

	2022		2021	
	1% increase	**1% decrease [1]**	1% increase	1% decrease [1]
Change in interest rates				
Increase (decrease) in non-participating insurance and investment contract liabilities	**$ (92)**	**$ 386**	$ (219)	$ 678
Increase (decrease) in net earnings	**$ 79**	**$ (290)**	$ 197	$ (555)

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

The earnings sensitivities illustrated in this section represent impacts under the Company's accounting policies as at December 31, 2022, including accounting for insurance contracts under IFRS 4 and financial instruments under IAS 39. These sensitivities may change on transition to IFRS 17 and IFRS 9.

(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.

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.

	2022				2021			
	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	**$ (43)**	**$ (31)**	**$ 31**	**$ 180**	$ (26)	$ (16)	$ 22	$ 76
Increase (decrease) in net earnings	**$ 37**	**$ 27**	**$ (28)**	**$ (146)**	$ 21	$ 13	$ (19)	$ (66)

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.

	2022				2021			
	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	**$ (63)**	**$ (32)**	**$ 90**	**$ 302**	$ (92)	$ (46)	$ 38	$ 144
Increase (decrease) in net earnings	**$ 52**	**$ 26**	**$ (70)**	**$ (236)**	$ 79	$ 39	$ (30)	$ (112)

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:

	2022		2021	
	1% increase	**1% decrease**	1% increase	1% decrease
Change in best estimate return assumptions				
Increase (decrease) in non-participating insurance contract liabilities	**$ (676)**	**$ 806**	$ (715)	$ 829
Increase (decrease) in net earnings	**$ 525**	**$ (620)**	$ 567	$ (649)

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.

The earnings sensitivities illustrated in this section represent impacts under the Company's accounting policies as at December 31, 2022, including accounting for insurance contracts under IFRS 4 and financial instruments under IAS 39. These sensitivities may change on transition to IFRS 17 and IFRS 9.

(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 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.

	2022			
		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	**$ 2,314**	**$ (856)**	**$ (1,274)**	**$ 184**
Total financial instruments - assets	**$ 2,314**	**$ (856)**	**$ (1,274)**	**$ 184**
Financial instruments - liabilities				
Derivative financial instruments	**$ 1,639**	**$ (856)**	**$ (513)**	**$ 270**
Total financial instruments - liabilities	**$ 1,639**	**$ (856)**	**$ (513)**	**$ 270**

	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
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

[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. At December 31, 2022, total financial collateral, including initial margin and overcollateralization, received on derivative assets was $1,348 ($318 at December 31, 2021), and pledged on derivative liabilities was $754 ($480 at December 31, 2021).

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:

	2022			
Assets measured at fair value	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	**$ 7,290**	**$ —**	**$ —**	**$ 7,290**
Financial assets at fair value through profit or loss				
Bonds	**—**	**113,651**	**126**	**113,777**
Mortgage loans	**—**	**—**	**3,125**	**3,125**
Stocks	**10,532**	**76**	**2,697**	**13,305**
Total financial assets at fair value through profit or loss	**10,532**	**113,727**	**5,948**	**130,207**
Available-for-sale financial assets				
Bonds	**—**	**11,864**	**—**	**11,864**
Mortgage loans	**—**	**—**	**240**	**240**
Stocks	**—**	**10**	**196**	**206**
Total available-for-sale financial assets	**—**	**11,874**	**436**	**12,310**
Investment properties	**—**	**—**	**8,344**	**8,344**
Funds held by ceding insurers	**222**	**11,629**	**—**	**11,851**
Derivatives [1]	**13**	**2,301**	**—**	**2,314**
Reinsurance assets	**—**	**73**	**—**	**73**
Other assets:				
Trading account assets	**309**	**1,723**	**940**	**2,972**
Other [2]	**11**	**180**	**—**	**191**
Total assets measured at fair value	**$ 18,377**	**$ 141,507**	**$ 15,668**	**$ 175,552**
Liabilities measured at fair value				
Derivatives [3]	**$ —**	**$ 1,639**	**$ —**	**$ 1,639**
Investment contract liabilities	**—**	**13,810**	**—**	**13,810**
Other liabilities	**11**	**180**	**—**	**191**
Total liabilities measured at fair value	**$ 11**	**$ 15,629**	**$ —**	**$ 15,640**

1 Excludes collateral received from counterparties of $1,348.

2 Includes collateral received under securities lending arrangements.

3 Excludes collateral pledged to counterparties of $532.

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

Assets measured at fair value	2021 Level 1	Level 2	Level 3	Total
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.

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:

	2022							
	Fair value through profit or loss bonds	Fair value through profit or loss mortgage loans	Fair value through profit or loss stocks [3]	Available-for-sale mortgage loans	Available for-sale stocks	Investment properties	Trading account assets	Total Level 3 assets
Balance, beginning of year	$ 100	$ 2,609	$ 1,680	$ —	$ 204	$ 7,763	$ 531	$ 12,887
Total gains (losses)								
Included in net earnings	(5)	(654)	209	—	27	(41)	(125)	(589)
Included in other comprehensive income [1]	—	(70)	20	10	(36)	(42)	30	(88)
Purchases	51	—	888	—	29	710	710	2,388
Issues	—	1,401	—	230	—	—	—	1,631
Sales	(20)	—	(100)	—	(28)	(55)	(168)	(371)
Settlements	—	(161)	—	—	—	—	—	(161)
Other	—	—	—	—	—	9	—	9
Transfers into Level 3 [2]	—	—	—	—	—	—	12	12
Transfers out of Level 3 [2]	—	—	—	—	—	—	(50)	(50)
Balance, end of year	$ 126	$ 3,125	$ 2,697	$ 240	$ 196	$ 8,344	$ 940	$ 15,668
Total gains (losses) for the year included in net investment income	$ (5)	$ (654)	$ 209	$ —	$ 27	$ (41)	$ (125)	$ (589)
Change in unrealized gains (losses) for the year included in earnings for assets held at December 31, 2022	$ (5)	$ (652)	$ 209	$ —	$ —	$ (34)	$ (126)	$ (608)

[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] 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.

[3] Includes investments in mutual and segregated funds where there are redemption restrictions. The fair value is based on observable, quoted prices.

9. Fair Value Measurement (cont'd)

	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 account 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, 5]	—	—	(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.

5 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 Reversionary rate Vacancy rate	Range of 3.9% - 14.0% Range of 4.0% - 7.5% Weighted average of 2.5%	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. 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. 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 and available-for-sale)	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 4.3% - 6.9%	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.
Stocks	The determination of the fair value of stocks requires the use of estimates such as future cash flows, discount rates, projected earnings multiples, or recent transactions.	Discount rate	Various	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:

	2022				
	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	$ —	$ 30,379	$ 69	$ —	$ 30,448
Mortgage loans	—	33,209	—	—	33,209
Loans to policyholders	—	8,820	—	—	8,820
Total loans and receivables financial assets	—	72,408	69	—	72,477
Available-for-sale financial assets					
Stocks [1]	—	—	—	119	119
Other stocks [2]	347	—	—	263	610
Funds held by ceding insurers	—	—	—	129	129
Total assets disclosed at fair value	$ 347	$ 72,408	$ 69	$ 511	$ 73,335
Liabilities and equity disclosed at fair value					
Debentures and other debt instruments	$ 877	$ 8,485	$ —	$ —	$ 9,362
Limited recourse capital notes	—	1,125	—	—	1,125
Total liabilities and equity disclosed at fair value	$ 877	$ 9,610	$ —	$ —	$ 10,487

[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.

	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 disclosed at fair value					
Debentures and other debt instruments	$ 186	$ 9,569	$ —	$ —	$ 9,755
Limited recourse capital notes	—	1,475	—	—	1,475
Total liabilities 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.

10. Goodwill and Intangible Assets

(a) Goodwill

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

	2022	2021
Cost		
Balance, beginning of year	**$ 10,258**	$ 11,283
Business acquisitions and dispositions	**1,281**	46
Purchase price allocation adjustments	**31**	161
Allocated to intangible assets	**(55)**	(1,181)
Changes in foreign exchange rates	**338**	(51)
Balance, end of year	**$ 11,853**	$ 10,258
Accumulated impairment		
Balance, beginning of year	**$ (1,177)**	$ (1,177)
Changes in foreign exchange rates	**(72)**	—
Balance, end of year	**$ (1,249)**	$ (1,177)
Net carrying amount	**$ 10,604**	$ 9,081

(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:

	2022	2021
Canada		
Group Customer	**$ 1,482**	$ 1,479
Individual Customer	**2,560**	2,549
Europe	**2,355**	2,379
United States		
Financial Services	**4,207**	2,674
Total	**$ 10,604**	$ 9,081

(b) Intangible Assets

Intangible assets of $6,209 ($5,514 as at December 31, 2021) 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:

	2022			
	Brands and trademarks	**Customer contract related**	**Shareholders' portion of acquired future participating account profit**	**Total**
Cost				
Balance, beginning of year	**$ 1,048**	**$ 2,542**	**$ 354**	**$ 3,944**
Changes in foreign exchange rates	**31**	**136**	**—**	**167**
Balance, end of year	**$ 1,079**	**$ 2,678**	**$ 354**	**$ 4,111**
Accumulated impairment				
Balance, beginning of year	**$ (130)**	**$ (1,028)**	**$ —**	**$ (1,158)**
Changes in foreign exchange rates	**(7)**	**(64)**	**—**	**(71)**
Balance, end of year	**$ (137)**	**$ (1,092)**	**$ —**	**$ (1,229)**
Net carrying amount	**$ 942**	**$ 1,586**	**$ 354**	**$ 2,882**

10. Goodwill and Intangible Assets (cont'd)

	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

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

	2022	2021
Canada		
Group Customer	**$ 354**	$ 354
Individual Customer	**649**	649
Europe	**218**	221
United States		
Asset Management	**1,566**	1,473
Financial Services	**95**	89
Total	**$ 2,882**	$ 2,786

(iii) Finite life intangible assets:

	2022			
	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	**$ 2,494**	**$ 107**	**$ 2,488**	**$ 5,089**
Additions	**522**	**—**	**352**	**874**
Changes in foreign exchange rates	**140**	**(2)**	**76**	**214**
Disposals	**—**	**—**	**(30)**	**(30)**
Balance, end of year	**$ 3,156**	**$ 105**	**$ 2,886**	**$ 6,147**
Accumulated amortization and impairment				
Balance, beginning of year	**$ (821)**	**$ (66)**	**$ (1,474)**	**$ (2,361)**
Changes in foreign exchange rates	**(32)**	**2**	**(58)**	**(88)**
Disposals	**—**	**—**	**2**	**2**
Amortization	**(160)**	**(4)**	**(209)**	**(373)**
Balance, end of year	**$ (1,013)**	**$ (68)**	**$ (1,739)**	**$ (2,820)**
Net carrying amount	**$ 2,143**	**$ 37**	**$ 1,147**	**$ 3,327**

During 2022, the Company recognized an impairment of $25 on software assets in the United Kingdom which is presented within operating and administrative expenses in the Consolidated Statements of Earnings.

	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

The weighted average remaining amortization period of the customer contract related and distribution channels are 15 and 11 years respectively (15 and 12 years respectively at December 31, 2021).

(c) Recoverable Amount

For the purposes of annual impairment testing, the Company allocates intangible assets 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 2022, the Company conducted its annual impairment testing of intangible assets and goodwill based on September 30, 2022 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:

	2022	2021
Carrying value, beginning of year	$ **882**	$ 871
Less: accumulated depreciation/impairments	**(146)**	(130)
Net carrying value, beginning of year	**736**	741
Additions	**14**	21
Disposals	**—**	(1)
Impairments	**(18)**	—
Depreciation	**(19)**	(16)
Foreign exchange	**11**	(9)
Net carrying value, end of year	$ **724**	$ 736

The net carrying value of fixed assets is $399 at December 31, 2022 ($422 at December 31, 2021).

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

	2022	2021
Canada	$ **601**	$ 652
United States	**334**	317
Europe	**187**	188
Capital and Risk Solutions	**1**	1
Total	$ **1,123**	$ 1,158

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

	2022	2021
Deferred acquisition costs	$ **663**	$ 615
Right-of-use assets	**371**	389
Trading account assets [1]	**2,972**	1,671
Finance leases receivable	**536**	433
Defined benefit pension plan assets (note 23)	**463**	363
Prepaid expenses	**134**	123
Miscellaneous other assets	**1,659**	928
Total	$ **6,798**	$ 4,522

[1] Includes bonds of $2,647 and stocks of $325 at December 31, 2022 (bonds of $1,322 and stocks of $349 at December 31, 2021).

Total other assets of $4,799 ($2,752 at December 31, 2021) 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

	2022	2021
Balance, beginning of year	**$ 615**	$ 618
Additions	**121**	113
Amortization	**(58)**	(55)
Changes in foreign exchange rates	**8**	(34)
Disposals	**(23)**	(27)
Balance, end of year	**$ 663**	$ 615

Right-of-use assets

	2022		
	Property	**Equipment**	**Total**
Cost, beginning of year	**$ 578**	**$ 12**	**$ 590**
Additions	**40**	**2**	**42**
Modifications	**(8)**	**(1)**	**(9)**
Changes in foreign exchange rates	**16**	**—**	**16**
Cost, end of year	**$ 626**	**$ 13**	**$ 639**
Accumulated depreciation, beginning of year	**$ (194)**	**$ (7)**	**$ (201)**
Depreciation	**(66)**	**(3)**	**(69)**
Modifications	**6**	**1**	**7**
Changes in foreign exchange rates	**(5)**	**—**	**(5)**
Accumulated depreciation, end of year	**$ (259)**	**$ (9)**	**$ (268)**
Carrying amount, end of year	**$ 367**	**$ 4**	**$ 371**

	2021		
	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 depreciation, beginning of year	$ (134)	$ (5)	$ (139)
Depreciation	(66)	(2)	(68)
Modifications	7	—	7
Changes in foreign exchange rates	(1)	—	(1)
Accumulated depreciation, end of year	$ (194)	$ (7)	$ (201)
Carrying amount, end of year	$ 384	$ 5	$ 389

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 nine 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:

	2022	2021
One year or less	**$ 34**	$ 30
Over one year to two years	**36**	31
Over two years to three years	**37**	32
Over three years to four years	**37**	33
Over four years to five years	**37**	33
Over five years	**879**	717
Total undiscounted lease payments	**1,060**	876
Less: unearned finance lease income	**524**	443
Total finance leases receivable	**$ 536**	$ 433
Finance income on the net investment in the leases	**$ 28**	$ 27

13. Insurance and Investment Contract Liabilities

(a) Insurance and investment contract liabilities

	2022		
	Gross liability	**Reinsurance assets**	**Net**
Insurance contract liabilities	**$ 233,888**	**$ 24,945**	**$ 208,943**
Investment contract liabilities	**13,810**	**73**	**13,737**
Total	**$ 247,698**	**$ 25,018**	**$ 222,680**

	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

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

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

	2022		
	Gross liability	**Reinsurance assets**	**Net**
Participating			
Canada	**$ 49,871**	**$ (226)**	**$ 50,097**
United States	**10,649**	**4,003**	**6,646**
Europe	**128**	**—**	**128**
Capital and Risk Solutions	**761**	**—**	**761**
Non-Participating			
Canada	**32,056**	**274**	**31,782**
United States	**105,000**	**16,193**	**88,807**
Europe	**37,415**	**4,688**	**32,727**
Capital and Risk Solutions	**11,818**	**86**	**11,732**
Total	**$ 247,698**	**$ 25,018**	**$ 222,680**

	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

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

2022	**Bonds**	**Mortgage loans**	**Stocks**	**Investment properties**	**Other**	**Total**
Carrying value						
Participating liabilities						
Canada	**$ 20,382**	**$ 11,710**	**$ 8,043**	**$ 4,519**	**$ 5,217**	**$ 49,871**
United States	**4,472**	**597**	**137**	**—**	**5,443**	**10,649**
Europe	**54**	**—**	**46**	**8**	**20**	**128**
Capital and Risk Solutions	**554**	**6**	**—**	**—**	**201**	**761**
Non-participating liabilities						
Canada	**21,731**	**4,287**	**2,764**	**715**	**2,559**	**32,056**
United States	**58,238**	**12,616**	**817**	**—**	**33,329**	**105,000**
Europe	**24,270**	**6,105**	**388**	**2,345**	**4,307**	**37,415**
Capital and Risk Solutions	**5,374**	**224**	**—**	**—**	**6,220**	**11,818**
Other	**13,653**	**3,076**	**1,229**	**327**	**403,154**	**421,439**
Total equity	**10,859**	**908**	**844**	**430**	**19,277**	**32,318**
Total carrying value	**$ 159,587**	**$ 39,529**	**$ 14,268**	**$ 8,344**	**$ 479,727**	**$ 701,455**
Fair value	**$ 156,089**	**$ 36,574**	**$ 14,240**	**$ 8,344**	**$ 479,727**	**$ 694,974**

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

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:

	2022		
	Participating		
	Gross liability	Reinsurance assets	Net
Balance, beginning of year	$ 61,770	$ (102)	$ 61,872
Impact of new business	(60)	(4)	(56)
Normal change in force	(571)	11	(582)
Management action and changes in assumptions	(415)	(138)	(277)
Business movement from/to external parties	—	4,038	(4,038)
Impact of foreign exchange rate changes	685	(28)	713
Balance, end of year	$ 61,409	$ 3,777	$ 57,632

	Non-participating			
	Gross liability	Reinsurance assets	Net	Total Net
Balance, beginning of year	$ 146,608	$ 21,134	$ 125,474	$ 187,346
Impact of new business	5,881	(374)	6,255	6,199
Normal change in force	(28,141)	(5,733)	(22,408)	(22,990)
Management action and changes in assumptions	264	433	(169)	(446)
Business movement from/to external parties	(29)	5,084	(5,113)	(9,151)
Prudential acquisition (note 3)	43,550	—	43,550	43,550
Impact of foreign exchange rate changes	4,346	624	3,722	4,435
Balance, end of year	$ 172,479	$ 21,168	$ 151,311	$ 208,943

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

	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

Under IFRS 4, 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.

In 2022, the major contributor to the increase in net insurance contract liabilities was the Prudential acquisition of $43,550. This was partially offset by decreases due to normal change in the in force business of $22,990, primarily due to fair value adjustments due to increased interest rates. Business movement from/to external parties includes a new reinsurance arrangement (note 3).

Net non-participating insurance contract liabilities decreased by $169 in 2022 due to management actions and changes in assumptions including a $127 decrease in Capital & Risk Solutions and $147 decrease in Europe, partially offset by an increase of $105 in Canada.

The decrease in Capital & Risk Solutions was primarily due to updated longevity assumptions of $194, partially offset by increases due to updated mortality assumptions of $55 and updated expense and tax assumptions of $24.

The decrease in Europe was primarily due to updated longevity assumptions of $128.

The increase in Canada was primarily due to updated policyholder behaviour assumptions of $311. This was partially offset by decreases due to updated mortality assumptions of $76, modeling refinements of $58, and a decrease of $55 due to a change in the corporate tax rate.

There was no change in the U.S. due to management actions or changes in assumptions.

Net participating insurance contract liabilities decreased by $277 in 2022 due to management actions and changes in assumptions.

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.

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

	2022			2021		
	Gross liability	**Reinsurance assets**	**Net**	Gross liability	Reinsurance assets	Net
Balance, beginning of year	**$ 12,455**	**$ 106**	**$ 12,349**	$ 9,145	$ 130	$ 9,015
Normal change in force business	**2,433**	**38**	**2,395**	3,497	38	3,459
Investment experience	**(2,523)**	**(76)**	**(2,447)**	(242)	(62)	(180)
Management action and changes in assumptions	**1**	**—**	**1**	—	—	—
Prudential acquisition (note 3)	**690**	**—**	**690**	—	—	—
Ark Life acquisition (note 3)	**—**	**—**	**—**	43	—	43
Impact of foreign exchange rate changes	**754**	**5**	**749**	12	—	12
Balance, end of year	**$ 13,810**	**$ 73**	**$ 13,737**	$ 12,455	$ 106	$ 12,349

The carrying value of investment contract liabilities approximates their fair value. The impact to investment experience in 2022 was due to fair value adjustments related to increased interest rates.

(e) Gross premiums written and gross policyholder benefits

(i) Premium Income

		2022		2021
Direct premiums	**$**	**30,016**	$	26,219
Assumed reinsurance premiums		**34,702**		31,178
Total	**$**	**64,718**	$	57,397

(ii) Policyholder Benefits

		2022		2021
Direct	**$**	**24,628**	$	20,903
Assumed reinsurance		**34,208**		28,452
Total	**$**	**58,836**	$	49,355

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

The earnings sensitivities illustrated in the table above represent impacts under the Company's accounting policies as at December 31, 2022, including accounting for insurance contracts under IFRS 4 and financial instruments under IAS 39. These sensitivities may change on transition to IFRS 17 and IFRS 9.

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.

	2022			2021		
	Gross liability	**Reinsurance assets**	**Net**	Gross liability	Reinsurance assets	Net
Canada	**$ 81,927**	**$ 48**	**$ 81,879**	$ 84,829	$ 92	$ 84,737
United States	**115,649**	**20,196**	**95,453**	74,632	14,721	59,911
Europe	**37,543**	**4,688**	**32,855**	47,356	6,197	41,159
Capital and Risk Solutions	**12,579**	**86**	**12,493**	14,016	128	13,888
Total	**$ 247,698**	**$ 25,018**	**$ 222,680**	$ 220,833	$ 21,138	$ 199,695

(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 $6,388 at December 31, 2022 ($3,125 at December 31, 2021).

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

In Europe, the Company offers UWP products 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, 2022, the amount of GMWB product in-force in Canada, the U.S., Ireland and Germany was $7,033 ($3,316 at December 31, 2021).

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

	2022	2021
Cash and cash equivalents	**$ 14,562**	$ 12,500
Bonds	**69,371**	60,647
Mortgage loans	**2,159**	2,377
Stocks and units in unit trusts	**117,878**	134,568
Mutual funds	**168,459**	133,916
Investment properties	**13,035**	12,776
	385,464	356,784
Accrued income	**692**	442
Other liabilities	**(4,647)**	(2,932)
Non-controlling mutual funds interest	**6,388**	3,125
Total [1]	**$ 387,897**	$ 357,419

[1] At December 31, 2022, $66,283 of investments on account of segregated fund policyholders are reinsured by the Company on a modified coinsurance basis ($83,754 at December 31, 2021). Included in this amount are $157 of cash and cash equivalents, $12,437 of bonds, $15 of stocks and units in unit trusts, $53,778 of mutual funds, $103 of accrued income and $(207) of other liabilities.

(b) Investment and insurance contracts on account of segregated fund policyholders

	2022	2021
Balance, beginning of year	**$ 357,419**	$ 334,032
Additions (deductions):		
Policyholder deposits	**40,618**	29,657
Net investment income	**8,019**	9,442
Net realized capital gains on investments	**1,082**	15,799
Net unrealized capital gains (losses) on investments	**(62,823)**	11,473
Unrealized gains (losses) due to changes in foreign exchange rates	**9,487**	(7,109)
Policyholder withdrawals	**(46,859)**	(40,324)
Business acquisitions [1]	**77,700**	2,844
Change in Segregated Fund investment in General Fund	**64**	(30)
Change in General Fund investment in Segregated Fund	**(14)**	(22)
Net transfer (to) from General Fund	**(59)**	22
Non-controlling mutual funds interest	**3,263**	1,635
Total	**30,478**	23,387
Balance, end of year	**$ 387,897**	$ 357,419

[1] Investment and insurance contracts on account of segregated fund policyholders acquired through the Prudential acquisition in 2022 and the acquisition of Ark Life in 2021 (note 3).

(c) Investment income on account of segregated fund policyholders

	2022	2021
Net investment income	**$ 8,019**	$ 9,442
Net realized capital gains on investments	**1,082**	15,799
Net unrealized capital gains (losses) on investments	**(62,823)**	11,473
Unrealized gains (losses) due to changes in foreign exchange rates	**9,487**	(7,109)
Total	**(44,235)**	29,605
Change in investment and insurance contracts liability on account of segregated fund policyholders	**(44,235)**	29,605
Net	**$ —**	$ —

(d) Investments on account of segregated fund policyholders by fair value hierarchy level (note 9)

	2022			
	Level 1	**Level 2**	**Level 3**	**Total**
Investments on account of segregated fund policyholders [1]	**$ 270,907**	**$ 106,720**	**$ 14,455**	**$ 392,082**

[1] Excludes other liabilities, net of other assets, of $4,185.

	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.

During 2022, certain foreign stock holdings valued at $2,301 have been transferred from Level 2 to Level 1 ($2,137 were transferred from Level 2 to Level 1 at December 31, 2021) 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, 2022, $3,928 ($5,394 at December 31, 2021) 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:

	2022	2021
Balance, beginning of year	**$ 13,822**	$ 13,556
Total gains (losses) included in segregated fund investment income	**(310)**	415
Purchases [1]	**1,011**	333
Sales	**(366)**	(482)
Transfers into Level 3	**343**	5
Transfers out of Level 3	**(45)**	(5)
Balance, end of year	**$ 14,455**	$ 13,822

[1] Includes $236 of Level 3 assets acquired through the Prudential acquisition (note 3).

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 sub-advised by related parties of the Company, who are paid sub-advisory fees at normal market rates for their services.

The Company earns management fees related to managing the segregated fund products. 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 2022, fee and other income earned by the Company resulting from the Company's interests in segregated funds and other structured entities was $6,332 ($6,194 during 2021).

Included within other assets (note 12) at December 31, 2022 is $2,777 ($1,525 at December 31, 2021) of investments by the Company in bonds and stocks of Putnam and Empower sponsored funds and $195 ($146 at December 31, 2021) of investments in stocks of sponsored unit trusts in Europe.

15. Debentures and Other Debt Instruments

	2022		2021	
	Carrying value	**Fair value**	Carrying value	Fair value
Short-term				
Commercial paper and other short-term debt instruments with interest rates 4.628% (0.172% to 0.203% at December 31, 2021), unsecured	**$ 135**	**$ 135**	$ 122	$ 122
Revolving credit facility with interest equal to LIBOR plus 0.70% (U.S. $50; U.S. $50 at December 31, 2021), unsecured	**67**	**67**	64	64
Non-revolving credit facility with interest based on Adjusted Term SOFR (U.S. $500; U.S. $0 at December 31, 2021), unsecured	**675**	**675**	—	—
Total short-term	**877**	**877**	186	186
Capital:				
Long-term				
Lifeco				
6.74% Debentures due November 24, 2031, unsecured	**196**	**223**	195	270
6.67% Debentures due March 21, 2033, unsecured	**395**	**447**	394	549
5.998% Debentures due November 16, 2039, unsecured	**343**	**372**	342	478
4.70% Senior bonds due November 16, 2029, unsecured, (€500)	**721**	**744**	—	—
3.337% Debentures due February 28, 2028, unsecured	**498**	**467**	498	533
2.981% Debentures due July 8, 2050, unsecured	**494**	**342**	493	479
2.50% Senior bonds due April 18, 2023, unsecured, (€500) [1]	**725**	**724**	720	743
2.379% Debentures due May 14, 2030, unsecured	**597**	**507**	597	602
1.75% Senior bonds due December 7, 2026, unsecured, (€500) [1]	**722**	**665**	717	768
	4,691	**4,491**	3,956	4,422
Canada Life				
6.40% Subordinated debentures due December 11, 2028, unsecured	**100**	**108**	100	125
Canada Life Capital Trust (CLCT)				
7.529% due June 30, 2052, unsecured, face value $150	**157**	**177**	157	215
Great-West Lifeco Finance 2018, LP				
4.581% Senior notes due May 17, 2048, unsecured, (U.S. $500)	**669**	**555**	629	820
4.047% Senior notes due May 17, 2028, unsecured, (U.S. $300)	**403**	**380**	379	431
	1,072	**935**	1,008	1,251
Great-West Lifeco Finance (Delaware) LP				
4.15% Senior notes due June 3, 2047, unsecured, (U.S. $700)	**930**	**729**	874	1,057
Great-West Lifeco U.S. Finance 2020, LP				
0.904% Senior notes due August 12, 2025, unsecured, (U.S. $500)	**672**	**600**	632	617
Empower Finance 2020, LP				
3.075% Senior notes due September 17, 2051, unsecured, (U.S. $700)	**935**	**588**	879	899
1.776% Senior notes due March 17, 2031, unsecured, (U.S. $400)	**537**	**406**	506	490
1.357% Senior notes due September 17, 2027, unsecured, (U.S. $400)	**538**	**451**	506	493
	2,010	**1,445**	1,891	1,882
Total long-term	**9,632**	**8,485**	8,618	9,569
Total	**$ 10,509**	**$ 9,362**	$ 8,804	$ 9,755

[1] Designated as hedges of the net investment in foreign operations.

On March 30, 2022, Great-West Lifeco U.S. LLC, a subsidiary of the Company, established a 2-year U.S. $500 non-revolving credit facility with interest on the drawn balance equal to a floating rate based on Adjusted Term SOFR. The facility is fully and unconditionally guaranteed by the Company. On April 1, 2022, the U.S. $500 facility was fully drawn, along with U.S. $323 from an existing revolving credit facility, to finance a portion of the Prudential acquisition (note 3). The existing revolving credit facility incurs interest on the drawn balance equal to a floating rate based on Adjusted Term SOFR. On July 1, 2022, Great-West Lifeco U.S. LLC made a payment of U.S. $150 on its existing revolving credit facility, followed by a final payment of U.S. $173 on December 30, 2022. As at December 31, 2022, the $675 (U.S. $500) facility was fully drawn, along with nil from the existing revolving credit facility.

On November 16, 2022, the Company issued €500 aggregate principal amount 4.70% senior bonds at par, maturing on November 16, 2029, which had a carrying value of $721 at December 31, 2022. The bonds are admitted to the Official List of Euronext Dublin and are listed for trading on the Global Exchange Market of Euronext Dublin.

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:

	2022	2021
Operating charges:		
Interest on operating lines and short-term debt instruments	**$ 24**	$ 7
Financial charges:		
Interest on long-term debentures and other debt instruments	**280**	275
Interest on limited recourse capital notes	**54**	20
Interest on capital trust securities	**11**	11
Other	**29**	15
	374	321
Total	**$ 398**	$ 328

17. Other Liabilities

	2022	2021
Pension and other post-employment benefits (note 23)	**$ 563**	$ 989
Lease liabilities	**507**	522
Bank overdraft	**274**	407
Deferred income reserves	**293**	314
Other	**7,157**	3,831
Total	**$ 8,794**	$ 6,063

Total other liabilities of $6,636 ($4,238 at December 31, 2021) 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

	2022	2021
Balance, beginning of year	**$ 314**	$ 345
Additions	**63**	70
Amortization	**(63)**	(71)
Changes in foreign exchange	**(7)**	(14)
Disposals	**(14)**	(16)
Balance, end of year	**$ 293**	$ 314

Lease liabilities

	2022		
	Property	**Equipment**	**Total**
Balance, beginning of year	**$ 517**	**$ 5**	**$ 522**
Additions	**40**	**2**	**42**
Modifications	**(2)**	**—**	**(2)**
Lease payments	**(86)**	**(3)**	**(89)**
Changes in foreign exchange rates	**15**	**—**	**15**
Interest	**19**	**—**	**19**
Balance, end of year	**$ 503**	**$ 4**	**$ 507**

	2021		
	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

The following table presents the contractual undiscounted cash flows for lease obligations:

	2022	2021
One year or less	$ 79	$ 83
Over one year to two years	72	71
Over two years to three years	62	63
Over three years to four years	56	55
Over four years to five years	55	52
Over five years	310	340
Total undiscounted lease obligations	$ 634	$ 664

18. Non-Controlling Interests

The Company has a controlling equity interest in Canada Life, Empower, and Putnam at December 31, 2022 and December 31, 2021.

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) as well as through a Canada Life subsidiary's controlling interest in certain Canadian advisor businesses.

(a) The non-controlling interests recorded in the Consolidated Statements of Earnings and other comprehensive income are as follows:

	2022	2021
Net earnings attributable to participating account before policyholder dividends		
Canada Life	$ 1,809	$ 1,708
Empower	—	—
	1,809	1,708
Policyholder dividends		
Canada Life	(1,625)	(1,405)
Empower	(2)	(1)
	(1,627)	(1,406)
Net earnings - participating account	182	302
Non-controlling interests in subsidiaries	3	(1)
Total	$ 185	$ 301

The non-controlling interests recorded in other comprehensive income (loss) for the year ended December 31, 2022 was $(157) ($(28) for the year ended December 31, 2021).

(b) The carrying value of non-controlling interests consists of the following:

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

19. Share Capital

(a) Limited Recourse Capital Notes

			2022		2021	
Limited recourse capital notes	**Earliest redemption date**	**Interest rate**	**Carrying value**	**Fair value**	Carrying value	Fair value
Series 1	November 30, 2026	3.60 %	**$ 1,500**	**$ 1,125**	$ 1,500	$ 1,475

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.

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

	2022		2021	
	Number	**Carrying value**	Number	Carrying value
First Preferred Shares				
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**	8,000,000	200
Total	**108,800,000**	**$ 2,720**	108,800,000	$ 2,720
Common shares				
Balance, beginning of year	**930,620,338**	**$ 5,748**	927,853,106	$ 5,651
Exercised and issued under stock option plan	**1,232,772**	**43**	2,767,232	97
Balance, end of year	**931,853,110**	**$ 5,791**	930,620,338	$ 5,748

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.

The Series Y, 4.50% Non-Cumulative First Preferred 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, 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, 2022 for one year to purchase and cancel up to 20,000,000 of its common shares at market prices in order to mitigate the dilutive effect of stock options granted under the Company's Stock Option Plan and for other capital management purposes. During the year ended December 31, 2022, the Company did not purchase any common shares under the NCIB (nil for the year ended December 31, 2021, under the previous NCIB).

Subsequent Event

On January 25, 2023, the Company announced a new NCIB commencing January 27, 2023 and terminating January 26, 2024 to purchase for cancellation up to but not more than 20,000,000 of its common shares at market prices.

20. Earnings Per Common Share

The following provides the reconciliation between basic and diluted earnings per common share:

	2022	2021
Earnings		
Net earnings	**$ 3,349**	$ 3,262
Preferred share dividends	**(130)**	(134)
Net earnings - common shareholders	**$ 3,219**	$ 3,128
Number of common shares		
Average number of common shares outstanding	**931,682,589**	929,461,348
Add: Potential exercise of outstanding stock options	**598,494**	1,496,586
Average number of common shares outstanding - diluted basis	**932,281,083**	930,957,934
Basic earnings per common share	**$ 3.455**	$ 3.365
Diluted earnings per common share	**$ 3.452**	$ 3.360
Dividends per common share	**$ 1.960**	$ 1.804

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 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.

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.

(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:

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

[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, 2022 and December 31, 2021, all European regulated entities met the capital and solvency requirements as prescribed under Solvency II.

Empower 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, 2022 and December 31, 2021, 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 2022, the maximum number of Lifeco common shares issuable under the Plan was 72,500,000.

During 2022, 2,369,100 common share options were granted (2,638,300 during 2021). The weighted average fair value of common share options granted during 2022 was $3.57 per option ($2.60 in 2021). 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 2022: dividend yield 5.07% (5.43% in 2021), expected volatility 18.15% (18.47% in 2021), risk-free interest rate 1.60% (1.18% in 2021), and expected life of eight years (eight in 2021).

The following summarizes the changes in options outstanding and the weighted average exercise price:

	2022		2021	
	Options	**Weighted average exercise price**	Options	Weighted average exercise price
Outstanding, beginning of year	**16,123,727**	**$ 32.92**	16,399,279	$ 32.69
Granted	**2,369,100**	**38.68**	2,638,300	32.28
Exercised	**(1,232,772)**	**31.24**	(2,767,232)	30.90
Forfeited/expired	**(166,440)**	**34.41**	(146,620)	33.39
Outstanding, end of year	**17,093,615**	**$ 33.82**	16,123,727	$ 32.92
Options exercisable at end of year	**8,950,405**	**$ 33.73**	8,522,967	$ 33.78

The weighted average share price at the date of exercise of stock options for the year ended December 31, 2022 was $39.35 ($36.11 in 2021).

Compensation expense due to the Plan transactions accounted for as equity-settled share-based payments of $6 after-tax in 2022 ($5 after-tax in 2021) 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, 2022:

	Outstanding			Exercisable		
Exercise price ranges	**Options**	**Weighted average remaining contractual life**	**Weighted average exercise price**	**Options**	**Weighted average exercise price**	**Expiry**
$27.13 - $36.87	777,980	0.30	30.15	777,980	30.15	2023
$30.28 - $36.87	1,166,380	1.32	32.53	1,166,380	32.53	2024
$34.68 - $36.87	1,453,683	2.19	35.67	1,453,683	35.67	2025
$30.28 - $36.87	1,888,352	3.19	34.50	1,888,352	34.50	2026
$30.28 - $36.87	1,255,300	4.19	36.41	1,255,300	36.41	2027
$30.28 - $34.21	1,551,020	5.16	34.19	1,237,010	34.20	2028
$30.28 - $32.50	2,345,500	6.16	30.33	1,171,700	30.33	2029
$32.22 - $32.22	1,782,800	7.16	32.22	—	—	2030
$32.10 - $38.75	2,503,500	8.16	32.28	—	—	2031
$31.59 - $38.71	2,369,100	9.16	38.68	—	—	2032

(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 2022, $6 in Directors' fees were used to acquire DSUs ($6 in 2021). At December 31, 2022, the carrying value of the DSU liability is $66 ($69 in 2021) 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, 2022, the Company recognized compensation expense of $2 ($16 in 2021) for the DSU Plans recorded in operating and administrative expenses in the Consolidated Statements of Earnings. At December 31, 2022, the carrying value of the DSU liability is $40 ($40 in 2021) 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, 2022, the Company recognized compensation expense, excluding the impact of hedging, of $74 ($102 in 2021) for the PSU Plan recorded in operating and administrative expenses in the Consolidated Statements of Earnings. At December 31, 2022, the carrying value of the PSU liability is $131 ($156 in 2021) 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, 2022, the Company recognized compensation expense of $13 ($13 in 2021) 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 2022, Putnam granted 3,519,634 (2,824,156 in 2021) restricted Class B common shares to certain members of senior management and key employees.

Compensation expense recorded for the year ended December 31, 2022 related to restricted Class B common shares and Class B stock options earned was $49 ($41 in 2021) 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, 2022 related to restricted Class C Shares and stock appreciation rights was $13 in 2022 ($13 in 2021) 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	
	2022	2021	**2022**	2021
Change in fair value of plan assets				
Fair value of plan assets, beginning of year	**$ 7,743**	$ 7,602	**$ —**	$ —
Interest income	**193**	159	**—**	—
Actual return over (less than) interest income	**(1,420)**	498	**—**	—
Employer contributions	**109**	115	**18**	19
Employee contributions	**21**	18	**—**	—
Benefits paid	**(324)**	(306)	**(18)**	(19)
Settlements	**(10)**	(142)	**—**	—
Administrative expenses	**(8)**	(8)	**—**	—
Foreign exchange rate changes	**(13)**	(193)	**—**	—
Fair value of plan assets, end of year	**$ 6,291**	$ 7,743	**$ —**	$ —
Change in defined benefit obligation				
Defined benefit obligation, beginning of year	**$ 7,961**	$ 8,554	**$ 367**	$ 409
Current service cost	**72**	91	**3**	3
Interest cost	**197**	181	**11**	10
Employee contributions	**21**	18	**—**	—
Benefits paid	**(324)**	(306)	**(18)**	(19)
Curtailments and termination benefits	**(2)**	(1)	**—**	—
Settlements	**(10)**	(200)	**—**	—
Actuarial loss (gain) on financial assumption changes	**(2,074)**	(150)	**(60)**	(25)
Actuarial loss (gain) on demographic assumption changes	**(1)**	(16)	**(33)**	(10)
Actuarial loss (gain) arising from member experience	**8**	(16)	**(16)**	(1)
Foreign exchange rate changes	**(23)**	(194)	**2**	—
Defined benefit obligation, end of year	**$ 5,825**	$ 7,961	**$ 256**	$ 367
Asset (liability) recognized on the Consolidated Balance Sheets				
Funded status of plans - surplus (deficit)	**$ 466**	$ (218)	**$ (256)**	$ (367)
Unrecognized amount due to asset ceiling	**(310)**	(41)	**—**	—
Asset (liability) recognized on the Consolidated Balance Sheets	**$ 156**	$ (259)	**$ (256)**	$ (367)
Recorded in:				
Other assets (note 12)	**$ 463**	$ 363	**$ —**	$ —
Other liabilities (note 17)	**(307)**	(622)	**(256)**	(367)
Asset (liability) recognized on the Consolidated Balance Sheets	**$ 156**	$ (259)	**$ (256)**	$ (367)
Analysis of defined benefit obligation				
Wholly or partly funded plans	**$ 5,586**	$ 7,646	**$ —**	$ —
Wholly unfunded plans	**$ 239**	$ 315	**$ 256**	$ 367

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	
	2022	2021
Change in asset ceiling		
Asset ceiling, beginning of year	**$ 41**	$ 29
Interest on asset ceiling	**1**	1
Change in asset ceiling	**251**	11
Foreign exchange rate changes	**17**	—
Asset ceiling, end of year	**$ 310**	$ 41

(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	
	2022	2021	**2022**	2021
Defined benefit current service cost	**$ 93**	$ 109	**$ 3**	$ 3
Defined contribution current service cost	**184**	184	**—**	—
Employee contributions	**(21)**	(18)	**—**	—
Employer current service cost	**256**	275	**3**	3
Administrative expense	**8**	8	**—**	—
Curtailments	**(2)**	(1)	**—**	—
Settlements	**—**	(58)	**—**	—
Net interest cost	**5**	23	**11**	10
Expense - profit or loss	**267**	247	**14**	13
Actuarial (gain) loss recognized	**(2,067)**	(182)	**(109)**	(36)
Return on assets (greater) less than assumed	**1,420**	(498)	**—**	—
Change in the asset ceiling	**251**	11	**—**	—
Re-measurements - other comprehensive (income) loss	**(396)**	(669)	**(109)**	(36)
Total expense (income) including re-measurements	**$ (129)**	$ (422)	**$ (95)**	$ (23)

(c) Asset Allocation by Major Category Weighted by Plan Assets

	Defined benefit pension plans	
	2022	2021
Equity securities	**36%**	39%
Debt securities	**52%**	51%
Real estate	**8%**	7%
Cash and cash equivalents	**4%**	3%
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 $5,614 at December 31, 2022 and $6,980 at December 31, 2021, of which $5,520 ($6,902 at December 31, 2021) 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	
	2022	2021	**2022**	2021
Benefit obligation without future salary increases	**$ 5,393**	$ 7,361	**$ 256**	$ 367
Effect of assumed future salary increases	**432**	600	**—**	—
Defined benefit obligation	**$ 5,825**	$ 7,961	**$ 256**	$ 367

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	
	2022	2021	**2022**	2021
Benefit obligation without future pension increases	**$ 5,151**	$ 7,137	**$ 256**	$ 367
Effect of assumed future pension increases	**674**	824	**—**	—
Defined benefit obligation	**$ 5,825**	$ 7,961	**$ 256**	$ 367

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	
	2022	2021	**2022**	2021
Actives	**37 %**	41 %	**14 %**	15 %
Deferred vesteds	**16 %**	18 %	**n/a**	n/a
Retirees	**47 %**	41 %	**86 %**	85 %
Total	**100 %**	100 %	**100 %**	100 %
Weighted average duration of defined benefit obligation	**14.5 years**	17.6 years	**9.9 years**	11.8 years

(e) Cash Flow Information

	Pension plans	Other post-employment benefits	Total
Expected employer contributions for 2023:			
Funded (wholly or partly) defined benefit plans	$ 62	$ —	$ 62
Unfunded plans	25	19	44
Defined contribution plans	209	—	209
Total	**$ 296**	**$ 19**	**$ 315**

(f) Actuarial Assumptions and Sensitivities

(i) Actuarial Assumptions

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

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

(ii) Sample Life Expectancies Based on Mortality Assumptions

	Defined benefit pension plans		Other post-employment benefits	
	2022	2021	**2022**	2021
Sample life expectancies based on mortality assumption:				
Male				
Age 65 in fiscal year	**22.8**	22.6	**22.8**	22.5
Age 65 for those age 35 in the fiscal year	**24.6**	24.5	**24.2**	24.0
Female				
Age 65 in fiscal year	**24.8**	24.7	**25.1**	24.9
Age 65 for those age 35 in the fiscal year	**26.7**	26.6	**26.5**	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 $164 for the defined benefit pension plans and $5 for other post-employment benefits.

(iii) Impact of Changes to Assumptions on Defined Benefit Obligation

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

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

	2022								
	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	**$ 948**	**$ (30)**	**$ 145**	**$ 33**	**$ (463)**	**$ 10**	**$ 643**	**$ (11)**	**$ 632**
Other comprehensive income (loss)	**497**	**88**	**(942)**	**(45)**	**505**	**—**	**103**	**219**	**322**
Income tax	**—**	**28**	**179**	**12**	**(130)**	**—**	**89**	**(62)**	**27**
	497	**116**	**(763)**	**(33)**	**375**	**—**	**192**	**157**	**349**
Balance, end of year	**$ 1,445**	**$ 86**	**$ (618)**	**$ —**	**$ (88)**	**$ 10**	**$ 835**	**$ 146**	**$ 981**

	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

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 Groupe Bruxelles Lambert, a holding company based in Europe with substantial holdings in global industrial and services companies.

(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%
Empower Annuity Insurance Company of America	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 96.39% 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 2021, Canada Life and IGM executed a termination agreement covering the transition of shared information technology services from Canada Life to alternate providers over a number of years. Canada Life also provided life insurance, annuity and disability insurance products under a distribution agreement with IGM. In addition, Canada Life provided distribution services to IGM. All transactions were provided at market terms and conditions.

The Company owns 9,200,448 shares, held through Canada Life, representing a 3.87% ownership interest in IGM. The Company uses the equity method to account for its investment in IGM as it exercises significant influence. In 2022, the Company recognized $30 for the equity method share of IGM net earnings and received dividends of $21 from its investment in IGM (note 6).

Segregated funds of the Company were invested in funds managed by IG Wealth Management and Mackenzie Investments. Mackenzie Investments also manages certain of the Company's portfolio investments. The Company also has interests in mutual funds, open-ended investment companies and unit trusts. Some of these funds are sub-advised by related parties of the Company, who are paid sub-advisory fees related to these services. During 2022, the Company and its subsidiaries made additional investments in funds managed by related parties. 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:

	2022	2021
3.44%, matures January 26, 2027	**$ 19**	$ 21
6.65%, matures December 13, 2027	**14**	16
7.45%, matures May 9, 2031	**11**	13
7.00%, matures December 31, 2032	**11**	14
4.56%, matures January 25, 2047	**18**	24
4.115%, matures December 9, 2047	**8**	11
4.174%, matures July 13, 2048	**4**	6
Total	**$ 85**	$ 105

Power Corporation also controls Sagard Holdings Management Inc. (Sagard), a multi-strategy alternative asset manager, Power Sustainable, a global multi-platform alternative asset manager, and Portage Ventures (Portage), a global fintech venture capital investment strategy. Lifeco has a minority investment in Sagard. Lifeco and Mackenzie Financial Corporation, a wholly-owned subsidiary of IGM, are investors in Northleaf Capital Partners Ltd. (Northleaf), a global private equity, private credit and infrastructure fund manager. The Company and its subsidiaries invest in funds managed by Sagard, Power Sustainable, Portage and Northleaf.

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

There were no material loans or guarantees issued to or from related parties during 2022 or 2021. There were no significant outstanding loans or guarantees with related parties at December 31, 2022 or December 31, 2021. There were no provisions for uncollectible amounts with related parties at December 31, 2022 or December 31, 2021.

(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:

	2022	2021
Salary	**$ 20**	$ 19
Share-based awards	**19**	17
Option-based awards	**7**	6
Annual non-equity incentive plan compensation	**29**	24
Pension value	**—**	(1)
Total	**$ 75**	$ 65

26. Income Taxes

(a) Components of the income tax expense

(i) Income tax recognized in Consolidated Statements of Earnings

Current income tax

	2022	2021
Total current income tax	**$ 421**	$ 148

Deferred income tax

	2022	2021
Origination and reversal of temporary differences	**$ (232)**	$ 147
Effect of changes in tax rates or imposition of new income taxes	**24**	21
Tax expense (recovery) arising from unrecognized tax losses, tax credits or temporary differences	**21**	(12)
Total deferred income tax	**$ (187)**	$ 156
Total income tax expense	**$ 234**	$ 304

(ii) Income tax recognized in other comprehensive income (note 24)

	2022	2021
Current income tax expense (recovery)	**$ (157)**	$ (38)
Deferred income tax expense (recovery)	**68**	205
Total	**$ (89)**	$ 167

(iii) Income tax recognized in Consolidated Statements of Changes in Equity

	2022	2021
Current income tax (recovery)	**$ (1)**	$ (1)
Deferred income tax (recovery)	**7**	(6)
Total	**$ 6**	$ (7)

(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 27.50%[1] for the following items:

	2022		2021	
Earnings before income taxes	**$ 3,768**		$ 3,867	
Combined basic Canadian federal and provincial tax rate	**1,036**	**27.50 %**	1,025	26.50 %
Increase (decrease) in the income tax rate resulting from:				
Non-taxable investment income	**(228)**	**(6.05)**	(266)	(6.88)
Operations outside of Canada subject to a lower average foreign tax rate	**(444)**	**(11.79)**	(374)	(9.66)
Impact of rate changes on deferred income taxes	**24**	**0.64**	21	0.54
(Recognition) de-recognition of deferred tax assets associated with prior year tax losses	**8**	**0.21**	(15)	(0.39)
Other	**(162)**	**(4.30)**	(87)	(2.25)
Total income tax expense and effective income tax rate	**$ 234**	**6.21 %**	$ 304	7.86 %
Total income tax expense and effective income tax rate - common shareholders	**$ 209**	**5.88 %**	$ 358	9.89 %

[1] A Canadian federal corporate income tax rate change, enacted in 2022 (effective after April 7, 2022), increased the statutory income tax rate from 26.50% to 28.0% (prorated to 27.50% in 2022).

In December 2021, the Organization for Economic Co-operation and Development (OECD) published model rules outlining a structure for a new global 15% minimum tax regime to be implemented by all participating countries at an agreed future date, currently expected to be 2024. Detailed commentary on the rules was released by the OECD during 2022. At this point, the countries where the Company currently operates have all indicated their participation; however, none have implemented legislation. A number of these countries currently operate at a lower tax rate than the proposed minimum, and when legislation is enacted the Company expects an increase in the effective tax rate. The Company is awaiting the legislation and detailed guidance to assess the full implications in the jurisdictions in which the Company operates.

(c) Composition and changes in net deferred income tax assets are as follows:

	2022						
	Insurance and investment contract liabilities	**Portfolio investments**	**Losses carried forward**	**Intangible assets**	**Tax credits**	**Other**	**Total**
Balance, beginning of year	**$ (575)**	**$ (644)**	**$ 1,388**	**$ (807)**	**$ 324**	**$ 282**	**$ (32)**
Recognized in Statements of Earnings	**(1,494)**	**1,471**	**144**	**(58)**	**(46)**	**170**	**187**
Recognized in Statements of Comprehensive Income	**—**	**51**	**—**	**—**	**—**	**(119)**	**(68)**
Recognized in Statements of Changes in Equity	**—**	**—**	**(5)**	**—**	**—**	**(2)**	**(7)**
Acquired in business acquisitions	**(90)**	**(4)**	**—**	**139**	**—**	**34**	**79**
Foreign exchange rate changes and other	**(70)**	**(14)**	**92**	**(60)**	**12**	**24**	**(16)**
Balance, end of year	**$ (2,229)**	**$ 860**	**$ 1,619**	**$ (786)**	**$ 290**	**$ 389**	**$ 143**

26. Income Taxes (cont'd)

	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)

Recorded on Consolidated Balance Sheets:	**2022**	2021
Deferred tax assets	**$ 1,152**	$ 1,057
Deferred tax liabilities	**(1,009)**	(1,089)
Total	**$ 143**	$ (32)

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, 2022 are recoverable.

At December 31, 2022, the Company has recognized a deferred tax asset of $1,619 ($1,388 at December 31, 2021) on tax loss carryforwards totaling $7,319, of which $4,478 expire between 2026 and 2042 while $2,841 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 $466 (U.S. $345) as at December 31, 2022, comprised principally of net operating losses. 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 $109 ($42 in 2021) on tax loss carryforwards totaling $550 ($212 in 2021). Of this amount, $156 expire between 2023 and 2038 while $394 have no expiry date. In addition, the Company has not recognized a deferred tax asset of $11 ($20 in 2021) on

other temporary differences of $55 ($94 in 2021) 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

	2022	2021
Salaries and other employee benefits	**$ 4,614**	$ 4,191
General and administrative	**2,291**	1,938
Interest expense on leases	**19**	21
Depreciation of fixed assets	**116**	119
Depreciation of right-of-use assets	**69**	68
Total	**$ 7,109**	$ 6,337

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 eligible collateral received, including initial margin on exchange-traded derivatives, of $378 as at December 31, 2022 ($65 at December 31, 2021)[1].

[1] The Company has adjusted certain comparative figures to conform to the current year's presentation. These adjustments had no impact on the equity or net earnings of the Company.

(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.

	2022				
	Notional amount	**Maximum credit risk**	**Future credit exposure**	**Credit risk equivalent**	**Risk weighted equivalent**
Interest rate contracts					
Swaps	**$ 6,267**	**$ 99**	**$ 72**	**$ 130**	**$ 2**
Futures - long	**6**	**—**	**—**	**—**	**—**
Futures - short	**169**	**—**	**—**	**—**	**—**
Options purchased	**1**	**—**	**—**	**—**	**—**
	6,443	**99**	**72**	**130**	**2**
Foreign exchange contracts					
Cross-currency swaps	**30,522**	**2,108**	**1,890**	**3,687**	**63**
Forward contracts	**5,828**	**35**	**77**	**97**	**1**
	36,350	**2,143**	**1,967**	**3,784**	**64**
Other derivative contracts					
Equity contracts	**1,750**	**55**	**109**	**164**	**1**
Futures - long	**12**	**—**	**—**	**—**	**—**
Futures - short	**1,134**	**13**	**—**	**—**	**—**
Other forward contracts	**271**	**4**	**—**	**—**	**—**
Equity options-purchased	**1**	**—**	**—**	**—**	**—**
Equity options-written	**3**	**—**	**—**	**—**	**—**
Credit default swaps	**675**	**—**	**—**	**—**	**—**
	3,846	**72**	**109**	**164**	**1**
Total	**$ 46,639**	**$ 2,314**	**$ 2,148**	**$ 4,078**	**$ 67**

	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

(b) The following provides the notional amount, term to maturity and estimated fair value of the Company's derivative portfolio by category:

	2022				
	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	$ 581	$ 1,341	$ 4,320	$ 6,242	$ (358)
Futures - long	6	—	—	6	—
Futures - short	169	—	—	169	—
Options purchased	1	—	—	1	—
	757	1,341	4,320	6,418	(358)
Foreign exchange contracts					
Cross-currency swaps	3,215	7,521	17,416	28,152	943
Forward contracts	3,262	—	—	3,262	(66)
	6,477	7,521	17,416	31,414	877
Other derivative contracts					
Equity contracts	1,482	—	—	1,482	6
Futures - long	12	—	—	12	—
Futures - short	1,134	—	—	1,134	13
Other forward contracts	271	—	—	271	3
Equity options-purchased	1	—	—	1	—
Equity options-written	3	—	—	3	—
Credit default swaps	—	500	175	675	—
	2,903	500	175	3,578	22
Fair value hedges					
Foreign exchange forward contracts	83	—	—	83	(3)
Cash flow hedges					
Interest rate contracts					
Swaps	—	—	25	25	3
Foreign exchange contracts					
Cross-currency swaps	—	100	—	100	6
Other derivative contracts					
Equity contracts	58	210	—	268	22
	58	310	25	393	31
Net investment hedges					
Cross-currency swaps	—	—	2,270	2,270	134
Foreign exchange forward contracts	2,027	456	—	2,483	(28)
	2,027	456	2,270	4,753	106
Total	$ 12,305	$ 10,128	$ 24,206	$ 46,639	$ 675

28. Derivative Financial Instruments (cont'd)

	2021[1]				
	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	151	—	194	89
	43	151	23	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	$ 5,915	$ 19,391	$ 36,570	$ (63)

[1] The Company has reclassified certain comparative figures to conform to the current year's presentation. These reclassifications had no impact on the equity or net earnings of the Company.

Futures contracts included in the above are exchange traded contracts; all other contracts are over-the-counter.

(c) The following provides details of the Company's derivative portfolio by type of instrument:

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.

Credit default swaps are used to transfer credit risk to another party.

The ineffective portion of the cash flow hedges during 2022, 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 22 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.

Subsidiaries of the Company in the United States are defendants in legal actions, including class actions, relating to the costs and features of their retirement and fund products and the conduct of their businesses. Management believes the claims are without merit and will be vigorously defending these actions. Based on the information presently known these actions will not have a material adverse effect on the consolidated financial position of the Company.

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. $1,913 of which U.S. $1,497 were issued as of December 31, 2022.

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 $5,336 as at December 31, 2022, with $5,245 maturing within one year, $84 maturing within two years and $7 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 $1,467 ($1,263 at December 31, 2021) 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, $74 ($63 at December 31, 2021) 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.

31. Segmented Information (cont'd)

(a) Consolidated Net Earnings

	2022					
	Canada	United States	Europe	Capital and Risk Solutions	Lifeco Corporate	Total
Income						
Total net premiums	$ 15,103	$ 2,025	$ 3,962	$ 31,731	$ —	$ 52,821
Net investment income						
Regular net investment income	3,066	3,253	1,526	250	51	8,146
Changes in fair value through profit or loss	(6,900)	(8,088)	(7,066)	(1,856)	7	(23,903)
Total net investment income (loss)	(3,834)	(4,835)	(5,540)	(1,606)	58	(15,757)
Fee and other income	1,988	4,271	1,334	5	—	7,598
	13,257	1,461	(244)	30,130	58	44,662
Benefits and expenses						
Paid or credited to policyholders	7,628	(3,941)	(3,193)	29,170	—	29,664
Other [1]	3,893	4,374	1,741	248	25	10,281
Financing charges	133	228	22	9	6	398
Amortization of finite life intangible assets	111	205	56	1	—	373
Restructuring and integration expenses	—	178	—	—	—	178
Earnings before income taxes	1,492	417	1,130	702	27	3,768
Income taxes	160	(10)	59	18	7	234
Net earnings before non-controlling interests	1,332	427	1,071	684	20	3,534
Non-controlling interests	188	(6)	3	—	—	185
Net earnings	1,144	433	1,068	684	20	3,349
Preferred share dividends	112	—	18	—	—	130
Net earnings before capital allocation	1,032	433	1,050	684	20	3,219
Impact of capital allocation	84	27	(66)	(22)	(23)	—
Net earnings (loss) - common shareholders	$ 1,116	$ 460	$ 984	$ 662	$ (3)	$ 3,219

[1] Includes commissions, operating and administrative expenses, and premium taxes.

31. Segmented Information (cont'd)

	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.

The revenue by source currency for Capital and Risk Solutions:

	2022	2021
Revenue		
United States	**$ 27,369**	$ 21,256
United Kingdom	**1,089**	1,369
Japan	**(383)**	4,297
Other	**2,055**	2,547
Total revenue	**$ 30,130**	$ 29,469

Negative income in the table above is primarily due to unrealized fair value losses through profit or loss on bonds, which are largely offset through changes in insurance contract liabilities.

(b) Consolidated Total Assets and Liabilities

	2022				
	Canada	**United States**	**Europe**	**Capital and Risk Solutions**	**Total**
Assets					
Invested assets	**$ 90,751**	**$ 98,929**	**$ 39,420**	**$ 8,738**	**$ 237,838**
Goodwill and intangible assets	**5,794**	**7,966**	**3,053**	**—**	**16,813**
Other assets	**4,721**	**37,584**	**8,994**	**7,608**	**58,907**
Investments on account of segregated fund policyholders	**93,816**	**166,274**	**127,807**	**—**	**387,897**
Total	**$ 195,082**	**$ 310,753**	**$ 179,274**	**$ 16,346**	**$ 701,455**

	2022				
	Canada	**United States**	**Europe**	**Capital and Risk Solutions**	**Total**
Liabilities					
Insurance and investment contract liabilities	**$ 81,927**	**$ 115,649**	**$ 37,542**	**$ 12,580**	**$ 247,698**
Other liabilities	**8,238**	**20,204**	**4,112**	**988**	**33,542**
Investment and insurance contracts on account of segregated fund policyholders	**93,816**	**166,274**	**127,807**	**—**	**387,897**
Total	**$ 183,981**	**$ 302,127**	**$ 169,461**	**$ 13,568**	**$ 669,137**

	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

The assets by source currency for Capital and Risk Solutions:

	2022	2021
Assets		
United Kingdom	**$ 5,396**	$ 6,507
United States	**6,832**	5,902
Japan	**3,310**	4,102
Other	**808**	885
Total assets	**$ 16,346**	$ 17,396

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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, 2022 and 2021, 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, 2022 and 2021, 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, 2022. 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 liabilitiy 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 policyholder behaviour and mortality 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 judgments 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 judgments 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.

Prudential Financial Retirement Business Acquisition – Refer to Note 3(b) to the financial statements

Key Audit Matter Description

On April 1, 2022, the Company completed the acquisition of the full-service retirement business of Prudential Financial, Inc. ("Prudential"), through a share purchase and reinsurance transaction. The Company recognized the assets acquired and the liabilities assumed based on their respective acquisition-date fair values, including customer contract intangible assets ("intangible assets") and certain insurance contract liabilities ("insurance contract liabilities").

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) the 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 rate 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, estimates and the accounting treatment 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.

Adoption of new and amended Accounting Standards – IFRS 17 Insurance Contracts ("IFRS 17") – Refer to Note 2 to the financial statements

Key Audit Matter Description

For the period beginning on January 1, 2023, the Company will be adopting IFRS 17 and has included an estimate of the financial impact on the opening consolidated balance sheet as at January 1, 2022 (the transition date) in accordance with IAS 8, *Changes in Accounting Errors and Estimates*. IFRS 17 is a complex accounting standard requiring considerable judgment and interpretation in its implementation, and will impact how the Company recognizes, measures, presents and discloses insurance contracts. In adopting the new standard, the Company has made certain accounting policy choices, and has disclosed the expected opening retained earnings impact along with certain reclassifications and other transitional adjustments which reflect the future application of IFRS 17 requirements including the establishment of the initial contractual service margin. These disclosures will be more extensive in 2023, once the new standard is adopted.

Management was required to make judgments and estimates to determine the accounting treatment at transition and to estimate the expected opening retained earnings impact. This resulted in an increased extent of audit effort, including the involvement of various specialists.

How the Key Audit Matter was Addressed in the Audit

When additional IFRS 17 disclosures are required in the December 31, 2023 consolidated financial statements, further testing of the impacts of transition will be performed. With the assistance of various specialists, our audit procedures related to management's determination of the accounting treatment at transition and the estimate of the expected opening retained earnings impact included the following, among others:

- Evaluated management's judgments to determine the accounting treatment at transition by analyzing the disclosures against IFRS 17 accounting guidance;

- Assessed the appropriateness and reasonableness of certain reclassifications, key models, significant assumptions and other relevant inputs used in determining the transitional adjustments including the contractual service margin and their related impact on the expected opening retained earnings.

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 8, 2023