Partner Reinsurance Company Ltd.

Consolidated Financial Statements and Independent Auditors' Report

December 31, 2023 and 2022

April 30, 2024

Report of Independent Auditors

To the Board of Directors and Shareholder of Partner Reinsurance Company Ltd.

Opinion

We have audited the accompanying consolidated financial statements of Partner Reinsurance Company Ltd. and its subsidiaries (the "Company"), which comprise the consolidated balance sheets as of December 31, 2023 and 2022, and the related consolidated statements of operations and comprehensive income, of shareholder's equity and of cash flows for the years then ended, including the related notes (collectively referred to as the "consolidated financial statements").

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (US GAAS). Our responsibilities under those standards are further described in the *Auditors' responsibilities for the audit of the consolidated financial statements* section of our report. We are required to be independent of the Company and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of management for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for one year after the date the consolidated financial statements are available to be issued.

PricewaterhouseCoopers Ltd., Chartered Professional Accountants, P.O. Box HM 1171, Hamilton HM EX, Bermuda
T: +1 (441) 295 2000, F:+1 (441) 295 1242, www.pwc.com/bermuda

Auditors’ responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error and to issue an auditors’ report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with US GAAS will always detect a material misstatement when it exists. 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. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgement made by a reasonable user based on the consolidated financial statements.

In performing an audit in accordance with US GAAS, we:

- Exercise professional judgement and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements.
- 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. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the consolidated financial statements.
- Conclude whether, in our judgement, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company’s ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required supplemental information

Accounting principles generally accepted in the United States of America require that the required supplemental information pertaining to *Short-Duration Contracts* disclosures labelled as “Unaudited” within Note 9 on pages 37 to 40 be presented to supplement the basic consolidated financial statements. Such information is the responsibility of management and, although not a part of the basic consolidated financial statements, is required by the Financial Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic consolidated financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplemental information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic consolidated financial statements, and other knowledge we obtained during our audit of the basic consolidated financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

PricewaterhouseCoopers Ltd.

Chartered Professional Accountants

Partner Reinsurance Company Ltd.
Consolidated Balance Sheets
(Expressed in thousands of U.S. dollars, except parenthetical share data)

	December 31, 2023	December 31, 2022
Assets		
Investments:		
Fixed maturities, at fair value (amortized cost: 2023, $5,133,395; 2022, $4,122,687)	**$ 4,641,933**	$ 3,546,346
Short-term investments, at fair value (amortized cost: 2023, $317,014; 2022, $171,721)	**306,464**	161,849
Equities, at fair value (cost: 2023, $479,876; 2022, $502,604)	**868,465**	832,712
Other invested assets	**1,843,722**	2,085,154
Total investments	**7,660,584**	6,626,061
Cash and cash equivalents	**335,432**	500,696
Accrued investment income	**34,789**	30,008
Reinsurance balances receivable (1)	**1,813,389**	1,630,812
Reinsurance recoverable on paid and unpaid losses	**781,246**	897,670
Prepaid reinsurance premiums	**13,532**	6,999
Funds held by reinsured companies (1)	**792,795**	750,844
Deferred acquisition costs (1)	**433,852**	408,924
Market risk benefit assets, at fair value (1)	**87,395**	78,928
Deposit assets	**58,990**	68,990
Intercompany loans and balances receivable (1)	**946,072**	1,256,207
Net tax assets	**432,037**	109
Goodwill	**26,014**	26,014
Intangible assets	**63,349**	65,668
Other assets	**48,254**	45,286
Total assets	**$ 13,527,730**	$ 12,393,216
Liabilities		
Non-life reserves (1)	**$ 5,242,912**	$ 5,386,054
Life and health reserves (1)	**1,801,728**	1,584,882
Market risk benefit liabilities, at fair value (1)	**3,037**	5,718
Unearned premiums (1)	**1,017,464**	965,377
Other reinsurance balances payable (1)	**181,538**	179,420
Intercompany loans and balances payable (1)	**79,399**	109,133
Accounts payable, accrued expenses and other	**128,075**	106,688
Total liabilities	**8,454,153**	8,337,272
Shareholder’s Equity		
Common shares (par value $1.00; issued: 2023 and 2022, 3,000 shares)	**3,000**	3,000
Additional paid-in capital	**1,643,886**	1,643,886
Accumulated other comprehensive loss	**(23,993)**	(9,994)
Retained earnings	**3,450,684**	2,419,052
Total shareholder's equity	**5,073,577**	4,055,944
Total liabilities and shareholder’s equity	**$ 13,527,730**	$ 12,393,216

(1) See Note 19 for additional information regarding related party transactions.

See accompanying Notes to Consolidated Financial Statements.

Partner Reinsurance Company Ltd.
Consolidated Statements of Operations and Comprehensive Income
(Expressed in thousands of U.S. dollars)

	For the year ended		
	December 31, 2023	December 31, 2022	December 31, 2021
Revenues			
Gross premiums written [1]	**$ 4,379,219**	$ 3,680,236	$ 3,653,774
Net premiums written [1]	**$ 3,854,906**	$ 3,273,360	$ 3,194,637
Increase in unearned premiums	**(36,783)**	(75,160)	(34,068)
Net premiums earned [1]	**3,818,123**	3,198,200	3,160,569
Net investment income [1]	**280,390**	132,308	123,599
Interest income on intercompany loans	**72,281**	20,174	20,174
Net realized and unrealized investment gains (losses)	**179,064**	(654,093)	238,652
Other income	**24,126**	20,854	14,937
Total revenues	**4,373,984**	2,717,443	3,557,931
Expenses			
Losses and loss expenses (liability remeasurement (gain) loss: 2023, $(6,468); 2022, $(11,935); 2021, $57,901) [1]	**2,283,428**	2,193,482	2,239,002
Market risk benefit gains [1]	**(4,876)**	(65,831)	(12,390)
Acquisition costs [1]	**746,651**	670,413	646,449
Other expenses	**33,727**	32,225	28,850
Amortization of intangible assets	**2,319**	2,530	1,517
Net foreign exchange losses (gains)	**119,945**	(153,773)	(204,689)
Total expenses	**3,181,194**	2,679,046	2,698,739
Income before taxes and interest in (losses) earnings of equity method investments	**1,192,790**	38,397	859,192
Income tax benefit (expense)	**435,171**	6,374	(3,230)
Interest in (losses) earnings of equity method investments	**(8,173)**	2,303	107,162
Net income	**$ 1,619,788**	$ 47,074	$ 963,124
Comprehensive income			
Net income	**$ 1,619,788**	$ 47,074	$ 963,124
Change in net unrealized losses on investments	—	—	(128)
Change in currency translation adjustment	**18,103**	(11,464)	(7,071)
Change in discount rate for liability for future policy benefits, net of tax	**(35,087)**	50,138	33,277
Change in instrument-specific credit risk for market risk benefits, net of tax	**2,985**	33,320	(614)
Comprehensive income	**$ 1,605,789**	$ 119,068	$ 988,588

(1) See Note 19 for additional information regarding related party transactions.

See accompanying Notes to Consolidated Financial Statements.

Partner Reinsurance Company Ltd.
Consolidated Statements of Shareholder's Equity
(Expressed in thousands of U.S. dollars)

	For the year ended		
	December 31, 2023	December 31, 2022	December 31, 2021
Common shares			
Balance at beginning and end of year	**$ 3,000**	$ 3,000	$ 3,000
Additional paid-in capital			
Balance, beginning and end of year	**$ 1,643,886**	$ 1,643,886	$ 1,643,886
Accumulated other comprehensive loss			
Balance, beginning of year	**$ (9,994)**	$ (81,988)	$ (41,819)
Currency translation adjustment			
Balance at beginning of year	**$ (60,480)**	$ (49,016)	$ (41,947)
Cumulative effect of adoption of accounting guidance (Note 3)	**—**	—	2
Change in foreign currency translation adjustment	**18,103**	(11,464)	(7,071)
Balance at end of year	**$ (42,377)**	$ (60,480)	$ (49,016)
Unrealized gain on investments			
Balance at beginning of year	**$ —**	$ —	$ 128
Change in unrealized gains on investments	**—**	—	(128)
Balance at end of year	**$ —**	$ —	$ —
Discount rate for liability for future policy benefit			
Balance at beginning of year	**$ 52,691**	$ 2,553	$ —
Cumulative effect of adoption of accounting guidance (Note 3)	**—**	—	(30,724)
Change in discount rate for liability for future policy benefits, net of tax	**(35,087)**	50,138	33,277
Balance at end of year (net of tax: 2023: $(3,244): 2022: $nil; 2021: $(2,963))	**$ 17,604**	$ 52,691	$ 2,553
Instrument-specific credit risk for market risk benefits			
Balance at beginning of year	**$ (2,205)**	$ (35,525)	$ —
Cumulative effect of adoption of accounting guidance (Note 3)	**—**	—	(34,911)
Change in instrument-specific credit risk for market risk benefits	**2,985**	33,320	(614)
Balance at end of year	**$ 780**	$ (2,205)	$ (35,525)
Balance, end of year	**$ (23,993)**	$ (9,994)	$ (81,988)
Retained earnings			
Balance, beginning of year	**$ 2,419,052**	$ 3,002,651	$ 2,522,197
Cumulative effect of adoption of accounting guidance (Note 3)	**—**	—	(132,670)
Net income	**1,619,788**	47,074	963,124
Dividends on common shares	**(575,000)**	(630,673)	(350,000)
Deemed dividends	**(13,156)**	—	—
Balance, end of year	**$ 3,450,684**	$ 2,419,052	$ 3,002,651
Total shareholder's equity	**$ 5,073,577**	$ 4,055,944	$ 4,567,549

See accompanying Notes to Consolidated Financial Statements.

Partner Reinsurance Company Ltd.
Consolidated Statements of Cash Flows
(Expressed in thousands of U.S. dollars)

	For the year ended		
	December 31, 2023	**December 31, 2022**	**December 31, 2021**
Cash flows from operating activities			
Net income	**$ 1,619,788**	$ 47,074	$ 963,124
Adjustments to reconcile net income to net cash provided by operating activities:			
Amortization of intangible assets	**2,319**	2,530	1,517
Market risk benefit gains	**(4,876)**	(65,831)	(12,390)
Amortization of deferred gains	**—**	—	(70,000)
Amortization of net (discount) premium on investments	**(19,995)**	5,243	7,153
Net realized and unrealized investment (gains) losses	**(179,064)**	654,093	(238,652)
Changes in:			
Reinsurance balances, net	**(156,513)**	(9,187)	(73,419)
Reinsurance recoverable on paid and unpaid losses, net of ceded premiums payable	**133,685**	(142,834)	(435,825)
Funds held by reinsured companies	**(84,730)**	98,304	(60,420)
Deferred acquisition costs	**(17,612)**	(3,841)	(26,350)
Net tax assets and liabilities	**(435,171)**	(5,712)	1,056
Non-life and life and health reserves	**(15,049)**	288,246	463,190
Unearned premiums, net of prepaid reinsurance premiums	**36,783**	75,160	34,068
Other net changes in operating assets and liabilities	**36,501**	(192,387)	(270,869)
Net cash provided by operating activities	**916,066**	750,858	282,183
Cash flows from investing activities			
Sales of fixed maturities	**682,633**	1,190,177	1,589,157
Redemptions of fixed maturities	**490,199**	236,147	542,980
Purchases of fixed maturities	**(2,095,405)**	(2,075,837)	(2,279,368)
Sales and redemptions of short-term investments	**413,985**	208,980	116,731
Purchases of short-term investments	**(547,981)**	(313,077)	(92,058)
Sales of equities	**195,970**	866,330	126,180
Purchases of equities	**(48,374)**	(75,665)	(134,676)
Net intercompany balances receivable	**(71,372)**	34,791	(209,035)
Sales of other invested assets	**472,544**	366,511	836,230
Purchases of other invested assets	**(382,379)**	(354,149)	(911,536)
Other, net	**10,000**	10,000	10,000
Net cash (used in) provided by investing activities	**(880,180)**	94,208	(405,395)
Cash flows from financing activities (1)			
Cash dividends paid to Parent	**(200,000)**	(520,032)	—
Payments on behalf of Parent	**—**	(9,938)	(127,441)
Net cash used in financing activities	**(200,000)**	(529,970)	(127,441)
Effect of foreign exchange rate changes on cash	**(1,150)**	(14,917)	(6,736)
(Decrease) increase in cash and cash equivalents	**(165,264)**	300,179	(257,389)
Cash and cash equivalents—beginning of year	**500,696**	200,517	457,906
Cash and cash equivalents—end of year	**$ 335,432**	$ 500,696	$ 200,517
Supplemental cash flow information:			
Taxes paid	**$ —**	$ 716	$ 3,033

(1) The Company declared non-cash dividends to its Parent of $388.2 million for the year ended December 31, 2023. Refer to Note 19 (b) and (e) for further details. For the year ended December 31, 2022 and 2021, the Company declared non-cash dividends to its Parent of $110.6 million and $350.0 million, which resulted in a reduction of intercompany loans and balances receivable.

See accompanying Notes to Consolidated Financial Statements.

1. Organization

Partner Reinsurance Company Ltd. (the Company) is a 100% owned subsidiary of PartnerRe Ltd. (the Parent) and commenced operations in November 1993.

On December 16, 2021, Exor announced that it had signed a definitive agreement with Covéa Coopérations S.A. (Covéa), under which Covéa would acquire the Parent's common shares. Preferred shares issued by Parent were not included in the proposed transaction. Consummation of this transaction occurred on July 12, 2022. The Parent's preferred shares continue to be traded on the New York Stock Exchange (NYSE). At December 31, 2023, and 2022, 99.9% of the Parent's total common shares were owned by Covéa Coopérations S.A.

The Company is licensed as a Class 4 and Class E insurer under the Insurance Act 1978 of Bermuda and related regulations, as amended (the Insurance Act) and is therefore authorized to carry on general and long-term insurance business in Bermuda. Non-life risks reinsured include agriculture, aviation/space, casualty, catastrophe, energy, engineering, financial risks, marine, motor, multiline, and property. Life and health risks reinsured include mortality, morbidity, longevity and financial reinsurance solutions.

The Company also enters into reinsurance contracts with subsidiaries of the Parent. As of December 31, 2023, this includes ongoing quota-share agreements with Partner Reinsurance Europe SE (PartnerRe Europe), Partner Reinsurance Asia Pte. Ltd (PartnerRe Asia), and PartnerRe Life Reinsurance Company of Canada (PartnerRe Canada) and stop loss agreements with PartnerRe Asia, Partner Reinsurance Company of the U.S. Canada Branch, Partner Reinsurance Company of the U.S., and PartnerRe Ireland Insurance dac. Refer to Note 19(a) for further details.

The consolidated financial statements of the Company include the financial position and results of operations of its wholly-owned subsidiary, Partner Reinsurance Life Company of Bermuda Ltd. (PartnerRe Life, or PRLCBL) which, upon approval from the Office of the Superintendent of Financial Institutions (OSFI) on February 15, 2022, was merged with the Company. The Company maintained an operating branch in Canada that was licensed to write life, accident and sickness business in Ontario, limited to reinsurance and was subject to regulation in Canada by OSFI. On September 16, 2022, the Branch canceled its Ontario Insurance license with Financial Services Regulatory Authority of Ontario, Canada. Refer to Note 19(f) for further details. The Company also maintains a representative office in Mexico.

2. Significant Accounting Policies

The Company's Consolidated Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States (U.S. GAAP). The Consolidated Financial Statements include the accounts of the Company and its subsidiaries. Intercompany accounts and transactions have been eliminated. Certain reclassifications have been made to prior period amounts to conform to the current year presentation.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. While management believes that the amounts included in the Consolidated Financial Statements reflect its best estimates and assumptions, actual results could differ from those estimates. The Company's principal estimates include:

- Non-life reserves;
- Life and health reserves;
- Reinsurance recoverable for unpaid losses;
- Gross and net premiums written and net premiums earned;
- Valuation and recoverability of deferred tax assets; and
- Fair value measurement of certain financial instrument assets.

The following are the Company’s significant accounting policies:

(a) Premiums

Gross premiums written and earned are based upon reports received from ceding companies, supplemented by the Company’s own estimates of premiums written and earned for which ceding company reports have not been received. The determination of premium estimates requires a review of the Company’s experience with cedants, familiarity with each market, an understanding of the characteristics of each line of business and management’s assessment of the impact of various other factors on the volume of business written and ceded to the Company. Premium estimates are updated as new information is received from cedants and differences between such estimates and actual amounts are recorded in the period in which the estimates are changed or the actual amounts are determined. Net premiums written and earned are presented net of ceded premiums.

Premiums related to non-life business are earned on a basis that is consistent with the risks covered under the terms of the reinsurance contracts, which is generally one to two years. Reinstatement premiums are recognized as written and earned at the time a loss event occurs, where coverage limits for the remaining life of the contract are reinstated under pre-defined contract terms. The accrual of reinstatement premiums is based on management’s estimate of losses and loss expenses associated with the loss event. Unearned premiums represent the portion of premiums written which is applicable to the unexpired risks under contracts in force.

Premiums related to traditional and limited payment long-duration contracts are recorded over the premium-paying period on the underlying policies. Premiums on contracts for which there is no significant mortality or critical illness risk are accounted for in a manner consistent with accounting for interest-bearing financial instruments and are not reported as revenues, but rather as direct deposits to the contract. Amounts assessed against annuity and universal life policyholders are recognized as revenue in the period assessed. Premiums related to life and health short-duration business are earned on a basis that is consistent with the risks covered under the terms of the reinsurance contracts, which is generally one to two years.

(b) Losses and Loss Expenses

Non-life reserves

Reserves for non-life business include amounts determined from loss reports on individual treaties (case reserves), additional case reserves when the Company’s loss estimate is higher than reported by the cedants (ACRs) and amounts for losses incurred but not yet reported to the Company (IBNR). Such reserves are estimated by management based upon reports received from ceding companies, supplemented by the Company’s own actuarial estimates of reserves for which ceding company reports have not been received, and based on the Company’s own historical experience. To the extent that the Company’s own historical experience is inadequate for estimating reserves, such estimates may be determined based upon industry experience and management’s judgment. The estimates are regularly reviewed and the ultimate liability may be materially in excess of, or less than, the amounts provided. Any adjustments are reflected in the periods in which they are determined, which may affect the Company’s operating results in future periods. See Note 9 for further details.

Life and health reserves

Traditional and limited payment long-duration contracts

For traditional and limited payment long-duration contracts, which includes long-term protection and longevity business, the Company accrues a liability for future policy benefits (LFPB) over time as revenue is recognized based on a net premium ratio. The net premium ratio is the proportion of present value of gross premiums required to provide for all benefits and certain expenses. The LFPB uses the Company's current best estimate assumption of future cash flows discounted at a rate that approximates a single A rated corporate bond yield. Contracts are generally grouped into cohorts by product type, issue year, geographical region, currency, and other factors.

Each quarter, the Company reviews its estimate of cash flows expected over the entire life of a group of contracts using actual historical experience and current future best estimate assumptions, and if the cash flows change, the LFPB is updated using a net premium ratio. The revised net premium ratio is calculated as of contract inception. This revised net premium ratio will derive a remeasurement gain or loss that is presented as a component of Losses and loss expenses within the Consolidated Statements of Operations. If the net premium ratio exceeds 100% for a given cohort, a corresponding adjustment is recognized immediately in net income. The calculated LFPB cannot be less than zero for a given cohort.

The net premium ratio is not updated for changes in discount rate assumptions, as the impact of changes in quarterly discount rates are recorded in Comprehensive income or loss. The current discount rate assumption for all contracts is derived from a yield curve based on upper-medium grade fixed income securities (single A rated credit). For unobservable discount rates, the Company uses estimates consistent with fair value guidance, maximizing the use of relevant, observable market prices and minimizing the use of unobservable inputs. The locked-in discount rate assumption is utilized for purposes of interest accretion recognized in Losses and loss expenses within the Consolidated Statements of Operations and for updating the net premium ratio. The locked-in discount rate assumption is based on the weighted average upper-medium grade fixed income yields during the first calendar year of the contract.

The most significant cash flow assumptions used are mortality, morbidity and persistency. The Company has elected to lock-in claims expense assumptions at contract inception and those assumptions are not subsequently reviewed or updated. See Note 10 for further information of the effects of changes in assumptions on the remeasurement of the LFPB.

Other long-duration contracts

Reserves for other long-duration contracts primarily include interest-sensitive life and investment-type contract liabilities, which are carried at the accumulated contract holder values.

Life and health short-duration contracts

Reserves for life and health short-duration contracts have been established based upon information reported by ceding companies, supplemented by the Company's actuarial estimates, which include mortality, morbidity, critical illness, and persistency with appropriate provision to reflect uncertainty.

See Note 10 for further details.

(c) Market Risk Benefits

Market risk benefits (MRBs) are contracts or contract features that both provide protection to the contract holder from other-than-nominal capital market risk and expose the Company to other-than-nominal capital market risk. MRBs include certain contract features that provide minimum guarantees to policyholders, such as guaranteed minimum death benefits (GMDB). MRBs can be in either an asset or a liability position, and are presented separately on the Consolidated Balance Sheets as the criteria for right of offset is not met. MRBs are measured at fair value using an option-based valuation model based on current net amounts at risk, market data, Company experience, and other factors. Consistent with a fair value income approach, all contractual cash flows specified within the GMDB treaties and expense cash flows that are consistent with the expected expense levels, are projected on a prospective basis. Risk neutral scenarios are used to project and discount cash flows. Changes in fair value related to MRBs are recognized as Market risk benefit gains (losses) except for the portion of the change in fair value due to a change in the instrument-specific credit risk, which is recognized in Other comprehensive income or loss, both within the Consolidated Statements of Operations and Comprehensive Income (Loss). MRBs are derecognized in the financial statements upon contract termination. At that point, the Company records any amounts (i.e. instrument-specific credit risk changes in MRBs) previously recorded in OCI in net income. See Note 11 for further details.

(d) Deferred Acquisition Costs

Deferred acquisition costs are comprised of primarily incremental brokerage fees, commissions and excise taxes, which vary directly with, and are related to, the successful acquisition of reinsurance contracts. All other acquisition related costs, including indirect costs, are expensed as incurred. Acquisition costs are shown net of commissions earned on ceded reinsurance.

Deferred acquisitions costs related to non-life contracts are amortized as the related premium is earned. The Company establishes a premium deficiency reserve to the extent the deferred acquisition costs are insufficient to cover the excess of expected losses and loss expenses, settlement costs and deferred acquisition costs over the related unearned premiums. Actual and anticipated losses and loss expenses, other costs, and investment income related to underlying premiums are considered in determining the recoverability of these deferred acquisition costs.

Deferred acquisition costs related to traditional and limited payment long-duration contracts are amortized over the expected term of the underlying contracts, on a constant level basis, at the cohort level. Acquisition costs related to unexpected contract terminations are written off. Assumptions used to amortize these acquisition costs are consistent with the related liability for future policy benefits. These acquisition costs are not evaluated for recoverability and are not subject to impairment testing.

Amortization of deferred acquisition costs is included in Acquisition costs within the Consolidated Statements of Operations.

(e) Reinsurance

The Company purchases retrocessional contracts to reduce its exposure to risk of losses on reinsurance assumed. Ceded premiums, which represent the cost of retrocessional protection purchased by the Company, are expensed over the coverage period. Prepaid reinsurance premiums represent the portion of premiums ceded applicable to the unexpired term of policies in force.

Reinsurance recoverable on paid and unpaid losses involves actuarial estimates consistent with those used to establish the associated liabilities for non-life and life and health reserves and are recorded net of a valuation allowance for estimated uncollectible recoveries.

Retroactive reinsurance reimburses a ceding company for liabilities incurred as a result of past insurable events covered under contracts subject to the reinsurance. Premiums payable for retroactive reinsurance coverage meeting the conditions of reinsurance accounting are reported as reinsurance recoverables. To the extent that recorded liabilities on an underlying reinsurance contract exceed premiums payable for retroactive coverage, a deferred gain is recognized in Accounts payable, accrued expenses and other on the Company's Consolidated Balance Sheets and amortized over the estimated remaining settlement period of the underlying contract. Any such amortization is included in Losses and loss expenses in the Consolidated Statements of Operations.

(f) Funds Held by Reinsured Companies

The Company writes certain business on a funds held basis. Under such contractual arrangements, the cedant retains the premiums that would have otherwise been paid to the Company and the Company is credited with investment income on these funds. The Company generally earns investment income on the funds held balances based upon a predetermined interest rate, either fixed contractually at the inception of the contract or based upon a recognized index (e.g. LIBOR, SOFR). However, in certain circumstances, the Company may receive an investment return based upon either the result of a pool of assets held by the cedant, generally used to collateralize the funds held balance, or the investment return earned by the cedant on its entire investment portfolio. In these arrangements, investment returns are typically reflected in Net investment income in the Company’s Consolidated Statements of Operations. In these arrangements, the Company is exposed, to a limited extent, to the underlying credit risk of the pool of assets inasmuch as the underlying policies may have guaranteed minimum returns. In such cases, an embedded derivative exists and its fair value is recorded by the Company as an increase or decrease to the funds held balance.

(g) Deposit Assets

In the normal course of its operations, the Company writes certain contracts that do not meet the risk transfer provisions of U.S. GAAP. The Company's deposit assets relate to receivables included as an element of certain life reinsurance agreements that do not meet risk transfer.

(h) Investments

The Company elects the fair value option for Fixed maturities, Short-term investments and Equities with changes in fair value recorded in Net realized and unrealized investment gains or losses in the Consolidated Statements of Operations. Short-term investments comprise securities with a maturity greater than three months but less than one year from the date of purchase.

The Company recognizes Other invested assets at fair value, except for those that are accounted for using the equity method of accounting. Other invested assets consist of equity investments in non-publicly traded companies such as limited liability companies and limited partnerships (or similar structures); privately placed corporate loans, notes and loans receivable and notes securitization; and derivative financial instruments. Non-publicly traded entities in which the Company has significant influence, including an ownership of more than 20% and less than 50% of the voting rights, and limited partnerships (or similar structures) in which the Company has more than a minor interest (typically more than 3% to 5%), are accounted for using either the equity method or the fair value option. Where the equity method is used, the Company's share of profits or losses of the investee are recorded in Interest in earnings or losses of equity method investees in the Consolidated Statements of Operations. The Company has not elected the fair value option for these equity method investees as the carrying values already approximate fair value. Where the fair value option is elected, the investment is recognized in the Consolidated Balance Sheets at fair value with changes in fair value recorded in Net realized and unrealized investment gains or losses in the Consolidated Statements of Operations. Refer to Note 2(n) below for significant accounting policy for derivatives.

The Company defines fair value as the price received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Company measures the fair value of financial instruments according to a fair value hierarchy that prioritizes the information used to measure fair value into three broad levels. The Company's policy is to recognize transfers between the hierarchy levels at the beginning of the period. Refer to Note 4 for the valuation techniques used by the Company.

The Company invests in various funds where the net asset value (NAV) is used as a basis for determining fair value. The Company applies the practical expedient relating to investments in certain entities that calculate NAV per share (or its equivalent) and therefore measure the fair value of these fund investments based on that NAV per share, or its equivalent. Refer to Note 4 for the valuation methods and assumptions used by the Company.

Net investment income includes interest and dividend income, amortization of premiums and discounts on fixed maturities and short-term investments, and is net of investment expenses and withholding taxes. Investment income is recognized when earned and accrued to the balance sheet date. Realized gains or losses on the disposal of investments are determined on a first-in, first-out basis. Investment purchases and sales are recorded on a trade-date basis.

(i) Cash and Cash Equivalents

Cash equivalents are carried at fair value and include fixed income securities that, from the date of purchase, have a maturity of three months or less.

(j) Goodwill

Goodwill represents the excess of the purchase price over the fair value of net assets acquired in a historical acquisition by PartnerRe Europe, which was re-allocated from PartnerRe Europe to the Company during 2012. The Company assesses the appropriateness of its valuation of goodwill on an annual basis (as of December 31) or more frequently if events or changes in circumstances indicate that the carrying amount may not be recoverable. If, as a result of the assessment, the Company determines that the value of its goodwill is impaired, goodwill will be written down in the period in which the determination is made.

(k) Intangible Assets

Intangible assets represent the fair value adjustments related to value of life business acquired (life VOBA). This intangible asset is being amortized over its expected life of 100 years and the amortization expense is recorded in the Consolidated Statement of Operations. Refer to Note 7.

(l) Income Taxes

Certain subsidiaries of the Company operate in jurisdictions where they are subject to taxation. Current and deferred income taxes are charged or credited to Net income or loss or, in certain cases, to Accumulated other comprehensive income or loss, based upon enacted tax laws and rates applicable in the relevant jurisdiction in the period in which the tax becomes accruable or realizable. Deferred income taxes are provided for all temporary differences between the bases of assets and liabilities used in the Consolidated Balance Sheets and those used in the various jurisdictional tax returns. When management's assessment indicates that it is more likely than not that deferred tax assets will not be realized, a valuation allowance is recorded against the deferred tax assets. Where appropriate, the valuation allowance assessment considers tax planning strategies.

The Company recognizes a tax benefit relating to uncertain tax positions only where the position is more likely than not to be sustained assuming examination by tax authorities. A liability is recognized for any tax benefit (along with any interest and penalty, if applicable) claimed in a tax return in excess of the amount recognized in the financial statements under U.S. GAAP. Any changes in amounts recognized are recorded in the period in which they are determined.

In the event that there is a change in current tax law, the impact of such change is recorded in Income tax expense or benefit within the Consolidated Statements of Operations in the period of enactment.

(m) Foreign Exchange

In recording foreign currency transactions, revenue and expense items in a currency other than the functional currency are converted into the functional currency at the average rates of exchange for the period. Monetary assets and liabilities originating in currencies other than the functional currency are remeasured into the functional currency at the rates of exchange in effect at the balance sheet dates. The resulting foreign exchange transaction gains or losses are included in Net foreign exchange gains or losses in the Consolidated Statements of Operations. Non-monetary assets and liabilities denominated in foreign currency are not subsequently remeasured.

The reporting currency of the Company is the U.S. dollar. The national currencies of the Company's subsidiaries and branch is generally their functional currencies. The Company's wholly owned subsidiary, Partner Reinsurance Life Company of Bermuda Ltd. and the Canada branch, designated the Canadian dollar as the functional currency prior to ceasing operation as an entity in 2022. Refer to Note 19(f) for further details. In translating the financial statements of those subsidiaries or branch whose functional currency is other than the U.S. dollar, assets and liabilities are converted into U.S. dollars using the rates of exchange in effect at the balance sheet dates, and revenues and expenses are converted using the average foreign exchange rates for the period. The effect of translation adjustments are reported in the Consolidated Balance Sheets as Currency translation adjustment, a separate component of Accumulated other comprehensive income or loss. The change in currency translation adjustment is reflected in Other comprehensive income or loss.

(n) Derivatives

The Company's investment strategy allows for the use of certain derivative instruments, subject to strict limitations. The Company may use derivative financial instruments such as foreign exchange forward contracts, foreign currency option contracts, futures contracts, to-be-announced mortgage-backed securities (TBAs), total return swaps, interest rate swaps, insurance-linked securities, and credit default swaps for the purpose of managing overall currency risk, market exposures and portfolio duration, for hedging certain investments, or for enhancing investment performance that would be allowed under the Company's investment policy if implemented in other ways.

On the date the Company enters into a derivative contract, management determines whether or not the derivative is to be used and designated as a hedge of an identified underlying risk exposure (a designated hedge). The Company's derivative instruments are recorded in Other invested assets in the Consolidated Balance Sheets at fair value, with gains and losses associated with changes in fair value recognized in either Net realized and unrealized investment gains or losses or Net foreign exchange gains or losses in the Consolidated Statements of Operations, or in Other comprehensive income or loss, depending on the nature and designation of the derivative instrument. Refer to Note 6.

The Company formally documents all relationships between designated hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking various hedge transactions. In this documentation, the Company specifically identifies the asset or liability that has been designated as a hedged item and states how the hedging instrument is expected to hedge the risks related to the hedged item. The Company formally measures effectiveness of its designated hedging relationships both at the hedge inception and on an ongoing basis.

The Company will discontinue hedge accounting prospectively if it is determined that the derivative is no longer effective in hedging the exposure to variability in expected future cash flows that is attributable to the risk it was meant to hedge; if the derivative instrument expires, is sold, or is otherwise terminated; or if the Company removes the designation of the hedge. To the extent that the Company discontinues hedge accounting because, based on management's assessment, the derivative no longer qualifies as an effective hedge, or the Company otherwise de-designates the hedge, the derivative will continue to be carried in the Consolidated Balance Sheet at its fair value, with changes in its fair value recognized in in the Consolidated Statements of Operations, or in Other comprehensive income or loss, depending on the type of derivative held.

(o) Variable Interest Entities

The Company is involved in the normal course of business with variable interest entities (VIEs). An assessment is performed as of the date the Company becomes initially involved in the VIE followed by a reassessment upon certain events related to its involvement in the VIE. The Company consolidates a VIE when it is the primary beneficiary having a controlling financial interest as a result of having the power to direct the activities that most significantly impact the economic performance of the VIE and the obligation to absorb losses, or right to receive benefits, that could potentially be significant to the VIE.

(p) Recent Accounting Pronouncements

Recently adopted

In August 2018, the Financial Accounting Standards Board's (the "FASB") issued an accounting standard update with the objective of making targeted improvements to the existing recognition, measurement, presentation and disclosure requirements for long-duration contracts issued by an insurance entity. The Company adopted FASB targeted improvements to the accounting for long-duration contracts (LDTI) on January 1, 2023. The updated guidance has changed how the Company accounts for its long-duration insurance contracts. Refer to Note 3 for the impact of adoption. In accordance with the transition guidance, prior period consolidated financial statements and disclosures presented herein have been adjusted to reflect LDTI.

Not yet adopted

Reference Rate Reform

In March 2020, the FASB issued guidance which provides optional expedients and exceptions for applying U.S. GAAP to modification of contracts, hedging relationships and other transactions that reference the London Interbank Offered Rate (LIBOR) or another reference rate expected to be discontinued because of reference rate reform. Along with the optional expedients, the amendments include a general principle that permits an entity to consider contract modifications due to reference reform to be an event that does not require contract re-measurement at the modification date or reassessment of a previous accounting determination. In December 2022, the sunset date of this guidance was deferred to December 31, 2024, and the guidance may be elected over time as reference rate reform activities occur. The Company is currently evaluating the impact of adopting this guidance on its Consolidated Financial Statements and disclosures.

Fair Value Measurement

In June 2022, the FASB issued updated guidance to address diversity in practice by clarifying that a contractual sale restriction should not be considered in the measurement of the fair value of an equity security. It also requires entities with investments in equity securities subject to contractual sale restrictions to disclose certain qualitative and quantitative information about such securities. For non public business entities, the guidance is effective for fiscal years beginning after December 15, 2024, with early adoption permitted. The update applies prospectively, with any adjustments resulting from adoption recognized in earnings on the date of adoption. The Company is currently evaluating the impact of adopting this guidance on its Consolidated Financial Statements and disclosures.

Income Tax Disclosures

In December 2023, the FASB issued guidance to improve income tax disclosures. The standard requires disaggregated information about a company's effective tax rate reconciliation as well as information on income taxes paid. For non public business entities, the guidance is effective for fiscal years beginning after December 15, 2025 with the option to apply the standard retrospectively, and early adoption permitted. The Company is currently evaluating the impact of adopting this guidance on its Consolidated Financial Statement disclosures.

3. Adoption of Accounting Pronouncement

The Company adopted the LDTI guidance on January 1, 2023 for its long-duration contracts, using the modified retrospective method for all topics except for market risk benefits, which was adopted using the full retrospective method, with a transition date of January 1, 2021 (Transition Date). The guidance changes how insurers account for long-duration contracts, including recognition, measurement, presentation and disclosure requirements.

The impact of adoption on the Transition Date was a decrease to Accumulated Other comprehensive income (AOCI) of $65.6m million net of tax, due to the update in the discount rate used to measure the liability for future policy benefits and changes in fair value of the Company's market risk benefits related to GMDB products attributable to changes in the instrument-specific credit risk. Retained earnings decreased by $132.7 million, net of tax, as of the Transition Date, resulting from valuation impacts to the liability for future policy benefits related to cohorts with a net premium ratio greater than 100% at the Transition Date, partially offset by a favorable movement from the fair value accounting for GMDB products.

Before the adoption of the LDTI guidance, VOBA was amortized consistent with DAC. At transition, the Company has retained its legacy amortization method for VOBA, which is based on projected premiums and not adopt a method that amortizes VOBA on a constant level basis that approximates straight-line amortization, as allowed under the guidance. The Company continues to assess VOBA for annual impairment. Refer to Note 2(k) for additional disclosures on intangible assets.

Impact of Adoption

The table below presents the effect of transition adjustments on shareholder's equity as of January 1, 2021 due to adoption of the LDTI guidance (in thousands of U.S. dollars):

	January 1, 2021		
	Retained earnings	Accumulated other comprehensive loss	Total
Life and health reserves [1]	$ (137,578)	$ (31,115)	$ (168,693)
Market risk benefits [1]	4,857	(38,084)	(33,227)
Tax impact of related LDTI adjustments and other	51	3,566	3,617
Total decrease to shareholders' equity	$ (132,670)	$ (65,633)	$ (198,303)

(1) GMDB reserves of $13.3 million were included within Life and health reserves on the Consolidated Balance Sheets prior to adoption of LDTI, and were subsequently reclassified to Market risk benefit assets and liabilities upon adoption of the new guidance.

The table below summarizes the balance of and changes in the traditional and limited payment long-duration life and health reserves on January 1, 2021 due to adoption of the LDTI guidance (in thousands of U.S. dollars):

	Long-Term Protection	Longevity
Balance, beginning of year, January 1, 2021 pre-adoption	$ 649,397	$ 243,901
Change in discount rate assumptions	16,064	18,225
Change in cash flow assumptions and effect of net premiums exceeding gross premiums	140,664	(3,506)
Adjusted balance, beginning of year, January 1, 2021	$ 806,125	$ 258,620

The table below summarizes the balance of and changes in the net liability position of market risk benefits on January 1, 2021 due to adoption of the LDTI guidance (in thousands of U.S. dollars):

	MRB, net liability position
Balance, beginning of year, January 1, 2021 pre-adoption [1]	$ (13,327)
Adjustment for the difference between carrying amount and fair value, except for the difference due to instrument-specific credit risk	4,857
Adjustment for the cumulative effect of changes in the instrument-specific credit risk since issuance	(38,084)
Balance, beginning of year January 1, 2021	$ (46,554)

(1) GMDB reserves were included within Life and health reserves on the Consolidated Balance Sheets prior to adoption of LDTI, and were subsequently reclassified to Market risk benefit assets and liabilities upon adoption of the new guidance.

The following is a reconciliation of market risk benefit assets (liabilities) to the Consolidated Balance Sheet at January 1, 2021 (in thousands of US dollars):

	GMDB
Market risk benefit assets at fair value	$ 91,842
Market risk benefit liabilities, at fair value	(138,396)
Market risk benefit, net, January 1, 2021	$ (46,554)

The impact of LDTI adoption on the applicable financial statement lines of the Company's Consolidated Balance Sheet effective as of January 1, 2021 was as follows (in thousands of U.S. dollars):

	Pre-adoption, January 1, 2021	LDTI Impact	Post-adoption, January 1, 2021
Deferred acquisition costs	$ 418,627	$ 53	$ 418,680
Market risk benefit assets, at fair value	—	91,842	91,842
Total assets	$ 12,065,285	$ 91,895	$ 12,157,180
Life and health reserves	$ 1,571,226	$ 155,366	$ 1,726,592
Market risk benefit liabilities, at fair value	—	138,396	138,396
Net tax liabilities	4,591	(3,564)	1,027
Total liabilities	7,938,021	290,198	8,228,219
Accumulated other comprehensive loss	(41,819)	(65,633)	(107,452)
Retained earnings	2,522,197	(132,670)	2,389,527
Total shareholder's equity	4,127,264	(198,303)	3,928,961
Total liabilities and shareholder's equity	$ 12,065,285	$ 91,895	$ 12,157,180

Impact to Previously Reported Amounts

The following represents the effects of LDTI adoption on the applicable financial statement lines of the Company's Consolidated Balance Sheet as of December 31, 2022 (in thousands of U.S. dollars):

	As of December 31, 2022		
	As Previously Reported	LDTI Impact	As Adjusted for LDTI
Reinsurance balances receivable	$ 1,547,772	$ 83,040	$ 1,630,812
Deferred acquisition costs	$ 370,494	$ 38,430	$ 408,924
Market risk benefit assets, at fair value	—	78,928	78,928
Total assets	$ 12,192,818	$ 200,398	$ 12,393,216
Life and health reserves	$ 1,464,147	$ 120,735	$ 1,584,882
Market risk benefit liabilities, at fair value	—	5,718	5,718
Other reinsurance balances payable	169,715	9,705	179,420
Total liabilities	8,201,114	136,158	8,337,272
Accumulated other comprehensive (loss) income	(60,809)	50,815	(9,994)
Retained earnings	2,405,627	13,425	2,419,052
Total shareholder's equity	3,991,704	64,240	4,055,944
Total liabilities and shareholder's equity	$ 12,192,818	$ 200,398	$ 12,393,216

The following represents the effects of LDTI adoption on the applicable financial statement lines of the Company's Consolidated Statements of Operations and Comprehensive Income for the years ended December 31, 2022 and 2021 (in thousands of U.S. dollars):

	For the Year Ended December 31, 2022		
	As Previously Reported	LDTI Impact	As Adjusted for LDTI
Expenses			
Losses and loss expenses	$ 2,225,558	$ (32,076)	$ 2,193,482
Market risk benefit gains	—	(65,831)	(65,831)
Acquisition costs	713,180	(42,767)	670,413
Net foreign exchange gains	(144,611)	(9,162)	(153,773)
Total expenses	2,828,882	(149,836)	2,679,046
(Loss) income before taxes and interest in losses of equity method investments	(111,439)	149,836	38,397
Income tax benefit	6,359	15	6,374
Net (loss) income	$ (102,777)	$ 149,851	$ 47,074
Comprehensive (loss) income			
Net (loss) income	$ (102,777)	$ 149,851	$ 47,074
Change in currency translation adjustment	(11,507)	43	(11,464)
Changes in discount rate for liability for future policy benefits, net of tax	—	50,138	50,138
Changes in instrument-specific credit risk for market risk benefits, net of tax	—	33,320	33,320
Comprehensive (loss) income	$ (114,284)	$ 233,352	$ 119,068

	For the Year Ended December 31, 2021		
	As Previously Reported	LDTI Impact	As Adjusted for LDTI
Expenses			
Losses and loss expenses	$ 2,231,709	$ 7,293	$ 2,239,002
Market risk benefit gains	—	(12,390)	(12,390)
Acquisition costs	641,473	4,976	646,449
Net foreign exchange (gains) losses	(208,551)	3,862	(204,689)
Total expenses	2,694,998	3,741	2,698,739
Income (loss) before taxes and interest in earnings of equity method investments	862,933	(3,741)	859,192
Income tax expense	(3,215)	(15)	(3,230)
Net income (loss)	$ 966,880	$ (3,756)	$ 963,124
Comprehensive income			
Net income (loss)	$ 966,880	$ (3,756)	$ 963,124
Change in currency translation adjustment	(7,355)	284	(7,071)
Changes in discount rate for liability for future policy benefits, net of tax	—	33,277	33,277
Changes in instrument-specific credit risk for market risk benefits, net of tax	—	(614)	(614)
Comprehensive income	$ 959,397	$ 29,191	$ 988,588

The following represents the effects of LDTI adoption on the applicable financial statement lines of the Company's Consolidated Statements of Cash Flows for the years ended December 31, 2022 and 2021 (in thousands of U.S. dollars):

	For the Year Ended December 31, 2022		
	As Previously Reported	LDTI Impact	As Adjusted for LDTI
Cash flows from operating activities			
Net (loss) income	$ (102,777)	$ 149,851	$ 47,074
Adjustments to reconcile net (loss) income to net cash provided by operating activities:			
Market risk benefit gains	—	(65,831)	(65,831)
Loss recognition	41,900	(41,900)	—
Changes in:			
Deferred acquisition costs	(2,974)	(867)	(3,841)
Net tax assets and liabilities	(5,697)	(15)	(5,712)
Non-life and life and health reserves	320,322	(32,076)	288,246
Other net changes in operating assets and liabilities	(183,225)	(9,162)	(192,387)
Net cash provided by operating activities	$ 750,858	$ —	$ 750,858

	For the Year Ended December 31, 2021		
	As Previously Reported	LDTI Impact	As Adjusted for LDTI
Cash flows from operating activities			
Net income	$ 966,880	$ (3,756)	$ 963,124
Adjustments to reconcile net income to net cash provided by operating activities:			
Market risk benefit gains	—	(12,390)	(12,390)
Changes in:		—	
Deferred acquisition costs	(31,326)	4,976	(26,350)
Net tax assets and liabilities	1,041	15	1,056
Non-life and life and health reserves	455,897	7,293	463,190
Other net changes in operating assets and liabilities	(274,731)	3,862	(270,869)
Net cash provided by operating activities	$ 282,183	$ —	$ 282,183

4. Fair Value

(a) Assets and Liabilities Measured at Fair Value

The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value by maximizing the use of observable inputs and minimizing the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing an asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about what market participants would use in pricing the asset or liability based on the best information available in the circumstances. The level in the hierarchy within which a given fair value measurement falls is determined based on the lowest level input that is significant to the measurement.

The Company determines the appropriate level in the hierarchy for each asset and liability that it measures at fair value. In determining fair value, the Company uses various valuation approaches, including market, income and cost approaches. The hierarchy is broken down into three levels based on the observability of inputs as follows:

- Level 1 inputs—Unadjusted, quoted prices in active markets for identical assets or liabilities that the Company has the ability to access.

  The Company's assets and liabilities that it measures at fair value using Level 1 inputs generally include equities listed on a major exchange.

- Level 2 inputs—Quoted prices in active markets for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in inactive markets and significant directly or indirectly observable inputs, other than quoted prices, used in industry accepted models.

  The Company's assets and liabilities that it measures at fair value using Level 2 inputs generally include: U.S. government issued bonds; U.S. government sponsored enterprises bonds; certain U.S. state, territory and municipal entities bonds; non-U.S. sovereign government, supranational and government related bonds; investment grade and high yield corporate bonds; mortgage-backed and certain asset-backed securities; short-term investments; certain preferred equities; certain privately placed corporate loan; and certain derivative assets and liabilities

- Level 3 inputs—Unobservable inputs.

  The Company's assets and liabilities that it measures at fair value using Level 3 inputs generally include: inactively traded fixed maturities including special purpose financing asset-backed bonds; unlisted equity securities; certain privately placed corporate loans, notes and loans receivable and notes securitizations; certain real estate company investments included in Other invested assets; certain fund investments and certain other derivatives, including weather derivatives; and longevity insurance-linked securities included in Other invested assets; and market risk benefit assets and liabilities.

At December 31, 2023 and 2022, the Company's assets and liabilities measured at fair value were classified between Levels 1, 2 and 3 as follows (in thousands of U.S. dollars):

December 31, 2023	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Fair value based on NAV practical expedient	Total
Assets (liabilities)					
Fixed maturities					
U.S. government and government sponsored enterprises	$ —	$ 475,809	$ —	$ —	$ 475,809
U.S. states, territories and municipalities	—	591	—	—	591
Non-U.S. sovereign government, supranational and government related	—	558,491	—	—	558,491
Corporate bonds	—	1,692,884	—	—	1,692,884
Asset-backed securities	—	—	15,022	—	15,022
Residential mortgage-backed securities	—	1,899,136	—	—	1,899,136
Fixed maturities	$ —	$4,626,911	$ 15,022	$ —	$4,641,933
Short-term investments	$ —	$ 306,464	$ —	$ —	$ 306,464
Equities					
Real estate	$ 13,735	$ —	$ —	$ —	$ 13,735
Consumer non-cyclical	652	—	8,574	—	9,226
Diversified	—	—	4,759	—	4,759
Consumer cyclical	—	—	28	—	28
Energy	—	—	1,698	—	1,698
Industrials	4	—	6	—	10
Insurance	—	140	—	—	140
Fund investments	—	—	—	838,869	838,869
Equities	$ 14,391	$ 140	$ 15,065	$ 838,869	$ 868,465
Other invested assets					
Derivative assets					
Foreign exchange forward contracts	$ —	$ 6,056	$ —	$ —	$ 6,056
Insurance-linked securities	—	—	7,235	—	7,235
Other					
Corporate loans (1)	—	523,981	66,371	—	590,352
Real estate company investment	—	—	471,156	—	471,156
Fund investments	—	—	38,669	685,132	723,801
Derivative liabilities					
Foreign exchange forward contracts	—	(24,422)	—	—	(24,422)
Other invested assets	$ —	$ 505,615	$ 583,431	$ 685,132	$1,774,178
Total investments measured at fair value	$ 14,391	$5,439,130	$ 613,518	$1,524,001	$7,591,040
Market risk benefits, net (2)	$ —	$ —	$ 84,358	$ —	$ 84,358
Net assets measured at fair value	$ 14,391	$5,439,130	$ 697,876	$1,524,001	$7,675,398

(1) Corporate loans include a portfolio of third-party, individually managed privately issued corporate loans that are managed under an externally managed mandate with a fair value of $523.9 million and $671.0 million at December 31, 2023 and 2022, respectively. The mandate primarily invests in U.S. floating rate, first lien, senior secured broadly syndicated loans with a focus on facility sizes greater than $300 million. Corporate loans also include $66.3 million and $64.0 million of other privately issued corporate loans at December 31, 2023 and 2022, respectively.
(2) Refer to Note 11 for details on the changes in the MRBs measured at fair value for the years ended December 31, 2023 and 2022.

December 31, 2022	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Fair value based on NAV practical expedient	Total
Assets (liabilities)					
Fixed maturities					
U.S. government and government sponsored	$ —	$ 440,452	$ —	$ —	$ 440,452
U.S. states, territories and municipalities	—	996	—	—	996
Non-U.S. sovereign government, supranational and government related	—	527,792	—	—	527,792
Corporate bonds	—	1,351,847	—	—	1,351,847
Asset-backed securities	—	3,887	15,930	—	19,817
Residential mortgage-backed securities	—	1,205,442	—	—	1,205,442
Fixed maturities	$ —	$3,530,416	$ 15,930	$ —	$3,546,346
Short-term investments	$ —	$ 161,849	$ —	$ —	$ 161,849
Equities					
Real estate	$ 21,739	$ —	$ —	$ —	$ 21,739
Consumer non-cyclical	—	—	10,081	—	10,081
Diversified	—	—	4,439	—	4,439
Consumer cyclical	—	—	28	—	28
Energy	—	—	1,514	—	1,514
Industrials	21	—	51	—	72
Insurance	—	42	—	—	42
Fund investments	—	—	—	794,797	794,797
Equities	$ 21,760	$ 42	$ 16,113	$ 794,797	$ 832,712
Other invested assets					
Derivative assets					
Foreign exchange forward contracts	$ —	$ 3,468	$ —	$ —	$ 3,468
Insurance-linked securities	—	—	6,657	—	6,657
Other					
Corporate loans	—	638,600	96,418	—	735,018
Notes and loan receivables and notes securitization	—	—	1,252	—	1,252
Real estate company investment	—	—	491,602	—	491,602
Fund investments	—	—	30,266	739,550	769,816
Derivative liabilities					
Foreign exchange forward contracts	—	(16,743)	—	—	(16,743)
Other invested assets	$ —	$ 625,325	$ 626,195	$ 739,550	$1,991,070
Total investments measured at fair value	$ 21,760	$4,317,632	$ 658,238	$1,534,347	$6,531,977
Market risk benefits, net	$ —	$ —	$ 73,210	$ —	$ 73,210
Net assets measured at fair value	$ 21,760	$4,317,632	$ 731,448	$1,534,347	$6,605,187

Other invested assets included in the fair value tables above at December 31, 2023 and 2022, exclude investments that are accounted for using the equity method of accounting of of $69.5 million and $94.1 million, respectively (see Note 5(f) for further details).

At December 31, 2023 and 2022, the carrying value of accrued investment income approximated fair value due to its short-term nature.

At December 31, 2023 and 2022, the fair values of financial instrument assets recorded in the Consolidated Balance Sheets not described above approximate their carrying values.

The reconciliations of the beginning and ending balances for investments measured at fair value using Level 3 inputs for the years ended December 31, 2023 and 2022, were as follows (in thousands of U.S. dollars):

For the year ended December 31, 2023	Balance at beginning of year	(Losses) gains included in net income	Purchases	Settlements and sales [1]	Net transfers into (out of) Level 3	Balance at end of year
Fixed maturities						
Asset-backed securities	$ 15,930	$ —	$ —	$ (908)	$ —	$ 15,022
Fixed maturities	$ 15,930	$ —	$ —	$ (908)	$ —	$ 15,022
Equities						
Consumer non-cyclical	$ 10,081	$ (1,507)	$ —	$ —	$ —	$ 8,574
Diversified	4,439	322	—	(2)	—	4,759
Consumer cyclical	28	—	—	—	—	28
Energy	1,514	184	—	—	—	1,698
Industrials	51	(32)	—	(13)	—	6
Equities	$ 16,113	$ (1,033)	$ —	$ (15)	$ —	$ 15,065
Other invested assets						
Derivatives, net	$ 6,657	$ 577	$ —	$ 1	$ —	$ 7,235
Corporate loans	96,418	2,695	40	(343)	(32,439)	66,371
Notes and loan receivables and notes securitization	1,252	35	—	(1,287)	—	—
Real estate company investment	491,602	(20,446)	—	—	—	471,156
Fund investments	30,266	8,403	—	—	—	38,669
Other invested assets	$ 626,195	$ (8,736)	$ 40	$ (1,629)	$ (32,439)	$ 583,431
Total	$ 658,238	$ (9,769)	$ 40	$ (2,552)	$ (32,439)	$ 613,518

(1) Settlements and sales of Fixed maturities, Equities and Other invested assets include sales of $nil, $nil, and 1.5 million, respectively. Sales of Other invested assets of 1.5 million included sales of corporate loans of $0.2 million, notes and loan receivables and notes securitization of $1.3 million.

For the year ended December 31, 2022	Balance at beginning of year	(Losses) gains included in net income	Purchases	Settlements and sales [1]	Net transfers into (out of) Level 3	Balance at end of year
Fixed maturities						
Asset-backed securities	$ 16,764	$ —	$ —	$ (834)	$ —	$ 15,930
Fixed maturities	$ 16,764	$ —	$ —	$ (834)	$ —	$ 15,930
Equities						
Consumer non-cyclical	$ 10,081	$ —	$ —	$ —	$ —	$ 10,081
Diversified	5,000	(223)	—	(338)	—	4,439
Consumer cyclical	1,394	(1,366)	—	—	—	28
Energy	2,368	(854)	—	—	—	1,514
Industrials	117	6	—	(72)	—	51
Equities	$ 18,960	$ (2,437)	$ —	$ (410)	$ —	$ 16,113
Other invested assets						
Derivatives, net	$ 4,737	$ 1,927	$ —	$ (7)	$ —	$ 6,657
Corporate loans	91,258	(5,544)	11,792	(9,412)	8,324	96,418
Notes and loan receivables and notes securitization	4,380	(582)	—	(2,546)	—	1,252
Real estate company investment	560,687	(69,085)	—	—	—	491,602
Fund investments	2,907	36	30,285	(2,962)	—	30,266
Other invested assets	$ 663,969	$ (73,248)	$ 42,077	$ (14,927)	$ 8,324	$ 626,195
Total	$ 699,693	$ (75,685)	$ 42,077	$ (16,171)	$ 8,324	$ 658,238

(1) Settlements and sales of Fixed maturities, Equities and Other invested assets include sales of $nil, $0.4 million, and $6.8 million, respectively. Sales of Other invested assets of $6.8 million included sales of corporate loans of $3.9 million, notes and loan receivables and notes securitization of $2.5 million, and derivatives of $0.4 million.

During the year ended December 31, 2023, there were $32.4 million transferred out from corporate loans Level 3 to Level 2 due to the availability of quoted prices for similar securities in active markets. During the year ended December 31, 2022, there were $8.3 million transferred from corporate loans Level 2 to Level 3 due to the unavailability of quoted prices for similar securities in active markets.

The significant unobservable inputs used in the valuation of financial instruments measured at fair value using Level 3 inputs at December 31, 2023 and 2022 were as follows (fair value in thousands of U.S. dollars):

December 31, 2023	Fair value	Valuation techniques	Unobservable inputs	Range (Weighted average [1])
Other invested assets				
Insurance-linked securities - longevity swaps	$ 7,235	Discounted cash flow	Credit spreads	6.0% (6.0%)
Real estate company investment	471,156	Income capitalization	Estimated rental value (per sq ft)	\$96 – \$102 (\$100)
			Net initial yield	3.6% – 5.4% (4.8%)
			Reversionary yield	5.0% – 6.4% (5.7%)
		Comparable method	Sale value (per sq ft)	\$3,072 – \$5,848 (\$5,171)
Market risk benefits, net	84,358	Option pricing techniques	Mortality rates	0.02% – 100.0% (0.5%)
			Lapse rates	3.1% – 25.0% (5.0%)
			Equity implied long-term volatility	18.9% – 28.7% (22.5%)
			Swaption implied long-term volatility	54.6 – 77.7% (76.5%)

December 31, 2022	Fair value	Valuation techniques	Unobservable inputs	Range (Weighted average [1])
Other invested assets				
Insurance-linked securities - longevity swaps	$ 6,657	Discounted cash flow	Credit spreads	5.7% (5.7%)
Real estate company investment	491,602	Income capitalization	Estimated rental value (per sq ft)	\$84 – \$90 (\$87)
			Net initial yield	2.2% – 4.6% (3.9%)
			Reversionary yield	4.6% – 5.3% (4.9%)
		Comparable method	Sale value (per sq ft)	\$1,617 – \$5,459 (\$4,836)
Market risk benefits, net	73,210	Option pricing techniques	Mortality rates	0.02% – 100.0% (0.5%)
			Lapse rates	3.2% – 25.7% (8.5%)
			Equity implied long-term volatility	21.6% – 29.7% (24.6%)
			Swaption implied long-term volatility	60.0% – 85.5% (82.8%)

(1) *Unobservable inputs were weighted by the relative fair value of the instruments.*

The tables above do not include financial instruments that are measured using unobservable inputs (Level 3) where the unobservable inputs were obtained from external sources and used without adjustment. These financial instruments include asset-backed securities (included within Fixed maturities), equities (included within Equities), certain notes and loans receivables and certain fund investments (included within Other invested assets), certain privately placed corporate loans (included within Other invested assets), and certain derivatives.

Changes in the fair value of the Company's assets and liabilities subject to the fair value option during the years ended December 31, 2023, 2022 and 2021 were as follows (in thousands of U.S. dollars):

	2023	2022	2021
Fixed maturities and short-term investments	**$ 85,846**	$ (482,323)	$ (232,172)
Equities	**81,989**	(471,494)	178,594
Other invested assets	**(84,094)**	(176,912)	135,862
Total included in net unrealized and unrealized investment gains (losses)	**$ 83,741**	$ (1,130,729)	$ 82,284

The change in the fair value of Other invested assets subject to the fair value option does not include certain derivatives.

The following methods and assumptions were used by the Company in estimating the fair value of each class of assets and liabilities recorded in the Consolidated Balance Sheets. There have been no material changes in the Company's valuation techniques during the periods presented.

Fixed maturities

- *U.S. government and government sponsored enterprises*—consists primarily of bonds issued by the U.S. Treasury and debt securities issued by government sponsored enterprises and federally owned or established corporations. These securities are generally priced by independent pricing services. The independent pricing services may use actual transaction prices for securities that have been actively traded. For securities that have not been actively traded, each pricing source has its own proprietary method to determine the fair value, which may incorporate option adjusted spreads (OAS), interest rate data and market news. The Company generally classifies these securities in Level 2.
- *U.S. states, territories and municipalities*— consists primarily of bonds issued by U.S. states, territories and municipalities. The securities are generally priced by independent pricing services using the techniques described for U.S. government and government sponsored enterprises above. The Company generally classifies these securities in Level 2.
- *Non-U.S. sovereign government, supranational and government related*—consists primarily of bonds issued by non-U.S. national governments and their agencies, non-U.S. regional governments and supranational organizations. These securities are generally priced by independent pricing services using the techniques described for U.S. government and government sponsored enterprises above. The Company generally classifies these securities in Level 2.
- *Corporate*—consists primarily of bonds issued by U.S. and foreign corporations covering a variety of industries and issuing countries. Corporate securities also include real estate investment trusts, catastrophe bonds, longevity and mortality bonds and government guaranteed corporate debt. These securities are generally priced by independent pricing services and brokers. The pricing provider incorporates information including credit spreads, interest rate data and market news into the valuation of each security. The Company generally classifies these securities in Level 2. When a corporate security is inactively traded or the valuation model uses unobservable inputs, the Company classifies the security in Level 3.
- *Asset-backed securities*—consists of special purpose financing securities. Where possible, these asset-backed securities are generally priced by independent pricing services and brokers. The pricing provider applies dealer quotes and other available trade information, prepayment speeds, yield curves and credit spreads to the valuation. The Company generally classifies these securities in Level 2. Special purpose financing securities are generally inactively traded and are priced based on valuation models using unobservable inputs (credit spreads). The Company generally classifies these securities in Level 3. A significant increase (decrease) in credit spreads in isolation could result in a significantly lower (higher) fair value measurement.
- *Residential mortgage-backed securities*—primarily consists of bonds issued by the Government National Mortgage Association, the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, as well as private, non-agency issuers. These residential mortgage-backed securities are generally priced by independent pricing services and brokers. When current market trades are not available, the pricing

provider or the Company will employ proprietary models with observable inputs including other trade information, prepayment speeds, yield curves and credit spreads. The Company generally classifies these securities in Level 2.

In general, the methods employed by the independent pricing services to determine the fair value of the securities that have not been actively traded primarily involve the use of "matrix pricing" in which the independent pricing source applies the credit spread for a comparable security that has traded recently to the current yield curve to determine a reasonable fair value. The Company generally uses one pricing source per security and uses a pricing service ranking to consistently select the most appropriate pricing service in instances where it receives multiple quotes on the same security. When fair values are unavailable from these independent pricing sources, quotes are obtained directly from broker-dealers who are active in the corresponding markets. Most of the Company's fixed maturities are priced from the pricing services or dealer quotes. The Company will typically not make adjustments to prices received from pricing services or dealer quotes; however, in instances where the quoted external price for a security uses significant unobservable inputs, the Company will classify that security as Level 3. The methods used to develop and substantiate the unobservable inputs used are based on the Company's valuation policy and are dependent upon the facts and circumstances surrounding the individual investments which are generally transaction specific. The Company's inactively traded fixed maturities are classified as Level 3. For all fixed maturity investments, the bid price is used for estimating fair value.

Short-term investments

Short-term investments are valued in a manner similar to the Company's fixed maturity investments and are generally classified in Level 2.

Equities

Equity securities include U.S. and foreign common and preferred stocks, real estate investment trusts and certain fund investments. Publicly traded equities are generally classified in Level 1 as the Company uses prices received from independent pricing sources based on quoted prices in active markets. Equities classified as Level 2 are preferred equities. Equities classified as Level 3 are generally inactively traded common stocks. For these investments, the Company utilizes prices from third-party sources without adjustment. Fund investments are valued using net asset valuations as a practical expedient as discussed in further detail below.

Other invested assets

The Company's foreign exchange forward contracts and certain privately placed corporate loans are generally classified as Level 2 within the fair value hierarchy and are priced by independent pricing services.

Included in the Company's Level 3 classification, in general, are certain derivatives, such as weather derivative and insurance-linked securities; certain privately placed corporate loans; notes and loan receivables and note securitizations; certain fund investments; and a real estate company investment. For Level 3 instruments, the Company will generally (i) receive a price based on a manager's or trustee's valuation for the asset; (ii) develop an internal discounted cash flow model to measure fair value; (iii) use market return information, adjusted if necessary and weighted using management's judgment, from comparable selected publicly traded equity funds in a similar region and of a similar size, or (iv) receive the valuation information and techniques used by real estate company investments. Where the Company receives prices from the manager or trustee, these prices are based on the manager's or trustee's estimate of fair value for the assets and are generally audited on an annual basis. Where the Company develops its own discounted cash flow models, the inputs will be specific to the asset in question, based on appropriate historical information, adjusted as necessary, and using appropriate discount rates. When the Company utilizes significant unobservable inputs including market return information, information is weighted using managements' judgement, obtained from comparable selected publicly traded companies in the same industry, in a similar region and of similar size and effective yields. Significant increases (decreases) in these inputs in isolation could result in a significantly higher (lower) fair value measurement for an asset. When the Company uses the valuation information and techniques used by real estate company investments, it independently evaluates the valuation techniques being utilized by the entity to ensure techniques are consistent with U.S. GAAP. Valuation techniques include the income capitalization technique or the comparable method and are based on the properties' highest and best use, with typical market based assumptions, such as estimated rental values, net initial yield, reversionary yield and sales values. A significant increase (decrease) in estimated rental values, reversionary yield and/or sales values could result in a significantly higher (lower) fair value measurement for an asset, while a significant increase (decrease) in net initial yield could result in a significantly lower (higher) fair value measurement for an asset.

Significant unobservable inputs used in the fair value measurement of Other invested assets classified as Level 3 also include credit spreads. Significant increases (decreases) in this input in isolation could result in a significantly lower (higher) fair value measurement.

Fund investments included in Other invested assets are generally valued using net asset valuations as a practical expedient as discussed in further detail below.

As part of the Company’s modeling to determine the fair value of an investment, other than for those measured using net asset valuations as a practical expedient, the Company also uses credit risk as an input to models, however, the majority of the Company’s counterparties are investment grade rated institutions and the failure of any one counterparty would not have a significant impact on the Company’s Consolidated Financial Statements.

Market risk benefit assets and liabilities

MRBs are classified as Level 3 fair value measurements as the fair value is measured using an option-based valuation model based on certain unobservable inputs. The most significant unobservable inputs underlying the valuation of MRBs includes long-term implied volatility, mortality rates and lapse rates.

Unobservable inputs for mortality rates are base mortality and mortality improvements assumptions. Base mortality assumptions differ by treaty and are derived from experience. Improvement mortality assumptions are based on the CMI Mortality Projections Model which is a publicly available tool from the UK Institute and Faculty of Actuaries. The net MRB asset increases as base mortality decreases and improvement mortality increases.

Unobservable inputs for lapse rates refer to the assumptions reflecting the ability of the policyholders to actively manage their savings by withdrawing deposits on an in-force contract, either fully or partially. These assumptions are defined at treaty, age and policy duration level. These rates are derived from treaty experience of the policyholders' behaviors and updated on an annual basis. Increases in lapse rates will have a volume effect on the net MRB reserve, generally reducing the net asset (increasing the net liability).

Unobservable inputs for equity long-term implied volatilities refer to the value towards which the equity implied volatilities converge beyond the last liquid point. An increase in long-term equity implied volatility means higher long-term projected equity risk and a higher probability of triggering the guaranteed minimum death benefit. This will generally lead to a decrease of the net MRB asset.

Unobservable inputs for swaption long-term implied volatilities refer to the value towards which the swaption implied volatilities converge beyond the last liquid point. An increase in long-term swaption implied volatility means higher long-term projected interest rates risk and a higher probability of triggering the guaranteed minimum death benefit. This will generally lead to a decrease of the net MRB asset.

Measuring the Fair Value of Investments Using Net Asset Valuations as the Practical Expedient

The table below reflects the Company's portfolio of investments measured using net asset valuations as the practical expedient at December 31, 2023 and 2022 (in thousands of US dollars):

	At December 31, 2023		At December 31, 2022			
	Carrying Value [(1)]	Remaining Unfunded Commitment	Carrying Value [(1)]	Remaining Unfunded Commitment	Redemption Frequency	Redemption Notice Period
Public equity funds	**$ 638,038**	**$ —**	$ 583,604	$ —	See below	See below
Private equity funds	**302,901**	**37,771**	291,753	50,744	See below	See below
Private credit funds	**200,831**	**67,124**	211,193	21,200	See below	See below
Multi-strategy funds	**382,231**	**42,098**	447,797	56,464	See below	See below
Total fund investments	**$ 1,524,001**	**$ 146,993**	$ 1,534,347	$ 128,408		

(1) The table above only reflects the Company's investments valued at fair value based on the NAV practical expedient, which includes fund investments of $838.9 million included in Equities and $685.1 million included in Other invested assets at December 31, 2023 and fund investments of $794.8 million included in Equities and $739.6 million included in Other invested assets at December 31, 2022.

Investment Strategies and redemption terms and conditions of the various funds included in the above table are as follows:

Public Equity Funds— The Company's investments in public equity funds include long/short funds and also funds invested in geographically diverse regions such as Asia seeking higher risk-adjusted returns, that primarily invest in public equities. The Company generally has the right to redeem these funds during a quarterly redemption period with 30 - 60 days' prior notice, some of which are subject to redemption thresholds and redemption fees. During 2022, the Company agreed it would not sell certain investments for a three year period. The carrying value of these investments amount to $575.0 million and $421.8 million at December 31, 2023 and 2022, respectively.

Private Equity Funds— The Company's investments in private equity funds include limited partnerships or similar interests that invest in private equity assets. The Company generally has no right to redeem its interest in any of these private equity funds in advance of dissolution of the applicable limited partnerships. Instead, distributions are received by the Company in connection with the exit from the underlying private equity investments of the fund. It is estimated that the majority of the underlying assets of the limited partnerships would liquidate over 5 to 10 years from inception of the limited partnership.

Private Credit Funds— The Company's investments in private credit funds include funds and limited partnerships or similar interests that invest in private credit instruments, including senior secured bank loan funds, secondaries, and mezzanine investments. The Company generally has no right to redeem its interest in any of these private credit funds in advance of dissolution of the applicable limited partnerships. Instead, distributions are received by the Company in connection with the liquidation or maturity of the underlying private credit assets of the fund. It is estimated that the majority of the underlying assets of the limited partnerships would liquidate over 5 to 10 years from inception of the limited partnership.

Multi-Strategy Funds— The Company's investments in multi-strategy funds include limited partnerships or similar interests that invest across diverse asset classes, including equities, bonds, credit markets, and real estate. For one multi-strategy fund with a carrying value of $235 million and $314.1 million at December 31, 2023 and 2022, respectively, the Company does have quarterly redemption rights subject to a 60 day notice period, gate policy and 36 month lock-up period which ends in 2024. The Company generally has no right to redeem its interest in any of the remaining multi-strategy limited partnership funds in advance of dissolution. Instead, distributions are received by the Company in connection with the liquidation or maturity of the underlying assets of the fund. It is estimated the majority of the underlying assets of the limited partnerships would liquidate over 5 to 10 years from inception of the limited partnership.

The fair values of these public equity, private equity, private credit and multi-strategy funds are estimated using net asset valuations as advised by external fund managers or third party administrators. NAV's are based on the manager's or administrator's valuation of the underlying assets of the fund in accordance with the fund's governing documents and in accordance with U.S. GAAP. For NAV fund valuations, valuation statements are typically released on a reporting lag and accordingly, the Company estimates the value of these funds using the most recent fund valuations as adjusted for capital calls, redemptions, drawdowns and distributions. NAV estimates may not be available from all fund managers, therefore the Company typically has a reporting lag in its fair value measurements of these funds.

The fair values of these funds are measured using the NAV practical expedient, therefore the fair values of these funds have not been categorized within the fair value hierarchy.

(b) Fair Value of Financial Instrument Liabilities

At December 31, 2023 and 2022, the carrying values of financial instrument liabilities recorded in the Consolidated Balance Sheets approximate their fair values.

Disclosures about the fair value of financial instrument liabilities exclude insurance contracts. GMDB liabilities classified as MRBs have been described above under Market risk benefit assets and liabilities.

5. Investments

(a) Net Realized and Unrealized Investment Gains (Losses)

The components of the net realized and unrealized investment gains (losses) for the years ended December 31, 2023, 2022 and 2021 were as follows (in thousands of U.S. dollars):

	2023	2022	2021
Net realized investment (losses) gains on fixed maturities and short-term investments	**$ (5,706)**	$ (22,467)	$ 31,435
Net realized investment gains on equities	**98,033**	491,993	20,986
Net realized gains on other invested assets	**2,751**	4,270	99,579
Net realized gains	**$ 95,078**	$ 473,796	152,000
Change in net unrealized investment gains (losses) on fixed maturities and short-term investments	**$ 85,846**	$ (482,323)	(232,172)
Change in net unrealized investment gain (losses) on equities	**81,989**	(471,494)	178,594
Change in net unrealized (losses) gains on other invested assets	**(83,849)**	(174,072)	140,230
Net unrealized gain (losses)	**$ 83,986**	$ (1,127,889)	86,652
Net realized and unrealized investment gains (losses)	**$ 179,064**	$ (654,093)	238,652

(b) Net Investment Income

The components of net investment income for the years ended December 31, 2023, 2022 and 2021 were as follows (in thousands of U.S. dollars):

	2023	2022	2021
Fixed maturities	**$ 147,727**	$ 90,833	$ 91,728
Short-term investments and cash and cash equivalents	**29,533**	8,688	2,242
Other invested assets	**90,440**	50,175	43,955
Equities, funds held and other (1)	**48,105**	16,362	19,403
Investment expenses	**(35,415)**	(33,750)	(33,729)
Net investment income	**$ 280,390**	$ 132,308	$ 123,599

(1) The Company generally earns investment income on funds held by reinsured companies, including the quota-share agreement with PartnerRe Europe (see Note 19), based upon a predetermined interest rate, either fixed contractually at

the inception of the contract or based upon a recognized index. Interest rates ranged from 0.2% to 7.5% for the year ended December 31, 2023, from 0.1% to 10.9% for the year ended December 31, 2022 and from 0.3% to 7.3% for the year ended December 31, 2021.

(c) Pledged and Restricted Assets

At December 31, 2023 and 2022, approximately $17.6 million and $69.6 million, respectively, of cash and cash equivalents and approximately $2,775.4 million and $2,430.5 million, respectively, of securities were deposited, pledged, held in trust or escrow accounts in favor of ceding companies, intercompany agreements, and other counterparties or government authorities to comply with reinsurance contract provisions and insurance laws.

The Company operates a multi-beneficiary U.S. reinsurance trust (the trust) to enable its U.S. cedants to take statutory financial statement credit without the need to post contract-specific security. The trust is required to maintain sufficient assets to support both its liabilities related to some of its U.S. cedants, for contracts incepting after June 2010, and a minimum surplus of $20.0 million. At December 31, 2023 and 2022, assets held by the trust exceeded liabilities and minimum surplus by $217.0 million and $70.2 million, respectively. The Company is currently approved to utilize the trust in all U.S. jurisdictions. Effective September 6, 2022, the Company was approved as a reciprocal reinsurer, eliminating the collateral requirements referenced above for any new business assumed from U.S. cedants.

(d) Receivable for Securities Sold and Payable for Securities Purchased

At December 31, 2023 and 2022, receivables for securities sold of $44.8 million and $35.9 million, respectively, were recorded within Other assets. At December 31, 2023 and 2022, payables for securities purchased of $98.9 and $93.9 million, respectively, were recorded within Accounts payable, accrued expenses and other in the Consolidated Balance Sheets.

(e) Variable Interest Entities

The Company holds variable interests in VIEs including certain limited liability companies for partnerships, fixed maturity investments and asset-backed securities. The holdings in these VIEs are reported within Fixed maturities and Other invested assets in the Company's Consolidated Balance Sheets. The Company's involvement in these entities is, for the most part, passive in nature. The Company's maximum exposure to loss with respect to these investments is limited to the amounts invested in and advanced to the VIEs, and any unfunded commitments. As at December 31, 2023 and 2022, the Company did not have material consolidated VIEs.

(f) Other Invested Assets

At December 31, 2023 and 2022, the Company had carrying values of $1,092.6 million and $1,171.5 million respectively, of investments that were either accounted for under the equity method of accounting or would have been accounted for under the equity method if the Company had not chosen to apply the fair value option.

At December 31, 2023 and 2022, the Company held a 36% shareholding in the privately held United Kingdom real estate investment and development group, Almacantar Group Limited (Almacantar). The investment is accounted for under the fair value option and included within Other invested assets in the Consolidated Balance Sheets. At December 31, 2023 and 2022, the total carrying value of this investment was $471.2 million and $491.6 million, respectively.

At December 31, 2023 and 2022, the Company's equity method investments are comprised primarily of passive investment interests focusing in the real estate sector. The Company had equity method investments of $69.5 million and $94.1 million, respectively, included within Other invested assets in the Consolidated Balance Sheets. Dividends on equity method investments were $2.5 million and $2.1 million for the years ended December 31, 2023 and 2022, respectively.

6. Derivatives

The Company's objectives for holding or issuing derivatives are as follows:

Foreign Exchange Forward Contracts—The Company utilizes foreign exchange forward contracts as part of its overall currency risk management and investment strategies.

Insurance-linked Securities—The Company enters into various derivatives for which the underlying risks reference parametric weather risks, pandemic outbreaks and mortality, in addition to longevity total return swaps for which the underlying risks reference longevity risks.

Total Return and Interest Rate Swaps—The Company enters into total return swaps referencing certain investments in Other invested assets. The Company enters into interest rate swaps to mitigate the interest rate risk on certain of the total return swaps and certain fixed maturity investments.

To-Be-Announced Mortgage-Backed Securities (TBAs)—The Company utilizes TBAs as part of its overall investment strategy and to enhance investment performance.

There were no derivatives designated as hedges for the years ended December 31, 2023 and 2022. The net fair values of derivatives included in Other invested assets within the Company's Consolidated Balance Sheets and the related net notional exposures at December 31, 2023 and 2022 were as follows (in thousands of U.S. dollars):

December 31, 2023	Asset derivatives at fair value	Liability derivatives at fair value	Net derivatives	
			Fair value	Net notional exposure
Derivatives not designated as hedges				
Foreign exchange forward contracts	**$ 6,056**	**$ (24,422)**	**$ (18,366)**	**$ 1,271,257**
Insurance-linked securities [1]	**7,235**	**—**	**7,235**	**9,700**
Total derivatives not designated as hedges	**$ 13,291**	**$ (24,422)**	**$ (11,131)**	

December 31, 2022	Asset derivatives at fair value	Liability derivatives at fair value	Net derivatives	
			Fair value	Net notional exposure
Derivatives not designated as hedges				
Foreign exchange forward contracts	$ 3,468	$ (16,743)	$ (13,275)	$ 1,223,134
Insurance-linked securities [1]	6,657	—	6,657	18,266
Total derivatives not designated as hedges	$ 10,125	$ (16,743)	$ (6,618)	

(1) Insurance-linked securities include longevity swaps for which the notional amounts are not reflective of the overall potential exposure of the swaps. The net notional exposure above included the Company's best estimate of the present value of future expected claims.

The gains and losses in the Consolidated Statements of Operations for derivatives not designated as hedges for the years ended December 31, 2023, 2022 and 2021 were as follows (in thousands of U.S. dollars):

	2023	2022	2021
Foreign exchange forward contracts	**$ (56,407)**	$ 89,582	$ 103,859
Total included in net foreign exchange (losses) gains	**$ (56,407)**	$ 89,582	$ 103,859
Insurance-linked securities	**$ (1,755)**	$ 2,049	$ 2,807
Total return swaps	**(5)**	934	1,430
Interest rate swaps	**—**	225	378
TBAs	**425**	—	(22)
Other	**—**	—	(223)
Total included in net realized and unrealized investment gains (losses)	**$ (1,335)**	$ 3,208	$ 4,370
Total (losses) gains on derivatives not designated as hedges	**$ (57,742)**	$ 92,790	$ 108,229

Offsetting of Derivatives

The gross and net fair values of derivatives that are subject to offsetting in the Consolidated Balance Sheets at December 31, 2023 and 2022 were as follows (in thousands of U.S. dollars):

				Gross amounts not offset in the balance sheet		
December 31, 2023	**Gross amounts recognized (1)**	**Gross amounts offset in the balance sheet**	**Net amounts of assets / liabilities presented in the balance sheet**	**Financial instruments**	**Cash collateral received / pledged**	**Net amount**
Total derivative assets	**$ 13,291**	**$ —**	**$ 13,291**	**$ —**	**$ (19,938)**	**$ (6,647)**
Total derivative liabilities	**$ (24,422)**	**$ —**	**$ (24,422)**	**$ —**	**$ 16,220**	**$ (8,202)**
December 31, 2022						
Total derivative assets	$ 10,125	$ —	$ 10,125	$ —	$ (22,186)	$ (12,061)
Total derivative liabilities	$ (16,743)	$ —	$ (16,743)	$ —	$ 15,978	$ (765)

(1) *Amounts include all derivative instruments, irrespective of whether there is a legally enforceable master netting arrangement in place.*

7. Goodwill and Intangible Assets

The Company's goodwill was re-allocated to the Company from PartnerRe Europe during 2012. The Company's intangible asset relates to life VOBA from the Parent's acquisition of Aurigen Capital Limited (Aurigen Capital) in 2017. Aurigen Capital owned 100% of Aurigen Reinsurance Limited (ARL). In 2018, Aurigen Capital merged into the Parent, with the Parent being the sole survivor. The Parent's share interest in ARL was transferred to the Company and ARL was then merged into PartnerRe Life, with PartnerRe Life being the sole survivor, resulting in the Company's recognition of life VOBA.

The Company's goodwill and intangible assets were as follows at December 31, 2023, 2022 and 2021 (in thousands of U.S. dollars):

	Goodwill	**Intangible assets**
Balance at December 31, 2020	$ 26,014	$ 69,715
Intangible assets amortization	n/a	(1,517)
Balance at December 31, 2021	$ 26,014	$ 68,198
Intangible assets amortization	n/a	(2,530)
Balance at December 31, 2022	$ 26,014	$ 65,668
Intangible assets amortization	**n/a**	**(2,319)**
Balance at December 31, 2023	**$ 26,014**	**$ 63,349**

n/a: Not applicable

As of December 31, 2023, the gross carrying amount and accumulated amortization of the Company's intangible assets were $82.2 million and $18.8 million, respectively. As of December 31, 2022, the gross carrying amount and accumulated amortization were $82.2 million and $16.5 million, respectively. The life VOBA is a definite-lived intangible assets that is being amortized over 100 years from the date of acquisition of Aurigen Capital by PartnerRe Ltd. on April 3, 2017.

The estimated future amortization expense related to the Company's definite-lived intangible assets is as follows (in thousands of U.S. dollars):

Year	Intangible assets
2024	$ 2,296
2025	2,070
2026	1,892
2027	2,238
2028	2,247
Thereafter	52,606
Total	$ 63,349

8. Deferred Acquisition Costs

Deferred acquisition costs comprises capitalized costs of $256.8 million and $244.0 million related to Non-life business and $177.0 million and $164.9 million related to Life and health business at December 31, 2023 and 2022, respectively.

The reconciliation of beginning and ending balances of deferred acquisition costs for the Company's traditional and limited payment long-duration contract business for the years ended December 31, 2023, 2022 and 2021 was as follows (in thousands of dollars):

	2023	2022	2021
Long-Term Protection			
Balance at beginning of year	**$ 164,898**	$ 196,136	$ 173,889
Capitalizations	**23,372**	25,989	44,292
Amortization expense	**(15,247)**	(17,789)	(19,095)
Foreign exchange and other	**3,998**	(39,438)	(2,950)
Balance at end of year	**$ 177,021**	$ 164,898	$ 196,136

9. Non-life Reserves

Non-life reserves are categorized into three types of reserves: case reserves, ACRs and IBNR reserves. Case reserves represent unpaid losses reported by the Company's cedants and recorded by the Company. ACRs are established for particular circumstances where, on the basis of individual loss reports, the Company estimates that the particular loss or collection of losses covered by a treaty may be greater than those advised by the cedant. IBNR reserves represent a provision for claims that have been incurred but not yet reported to the Company, as well as future loss development on losses already reported, in excess of the case reserves and ACRs. See also Note 2(b).

The Company's gross liability for non-life reserves at December 31, 2023 and 2022 was as follows (in thousands of U.S. dollars):

	2023	2022
Case reserves	**$ 2,421,357**	$ 2,432,136
ACRs	**89,052**	69,869
IBNR reserves	**2,732,503**	2,884,049
Non-life reserves	**$ 5,242,912**	$ 5,386,054

The reconciliation of the beginning and ending gross and net liability for non-life reserves for the years ended December 31, 2023, 2022 and 2021 was as follows (in thousands of U.S. dollars):

	2023	2022	2021
Gross liability at beginning of year	**$ 5,386,054**	$ 5,228,895	$ 4,987,829
Reinsurance recoverable at beginning of year	**877,537**	683,658	288,481
Net liability at beginning of year	**4,508,517**	4,545,237	4,699,348
Net incurred losses related to:			
Current year	**1,106,753**	1,471,466	1,482,775
Prior years	**(73,701)**	(143,946)	(95,048)
	1,033,052	1,327,520	1,387,727
Net paid losses related to:			
Current year	**(168,847)**	(167,638)	(122,032)
Prior years	**(940,207)**	(1,014,889)	(1,196,529)
	(1,109,054)	(1,182,527)	(1,318,561)
Retroactive reinsurance recoverable adjustment	**(21,928)**	(8,427)	(88,432)
Effects of foreign exchange rate changes and other	**82,228**	(173,286)	(134,845)
Net liability at end of year	**4,492,815**	4,508,517	4,545,237
Reinsurance recoverable at end of year	**750,097**	877,537	683,658
Gross liability at end of year	**$ 5,242,912**	$ 5,386,054	$ 5,228,895

Prior Years' Reserve Development

For the year ended December 31, 2023, the Company reported net favourable loss development for prior accident years resulting from favorable loss emergence in both the P&C and Specialty segments. The favorable loss emergence within the P&C segment was across multiple accident years, mainly driven by property and casualty lines. The favorable loss emergence within the Specialty segment was across multiple accident years, predominantly from the financial risks, agriculture, and multiline business, which was partially offset by adverse loss emergence in the aviation and marine business.

For the year ended December 31, 2022, the Company reported net favourable loss development for prior accident years resulting from favorable loss emergence in both the P&C and Specialty segments and a reduction in unallocated loss adjustment expenses. The favorable loss emergence within the P&C segment was across multiple accident years, mainly driven by the motor, catastrophe, and casualty business. The favorable loss emergence within the Specialty segment was across multiple accident years, predominantly from the financial risks, engineering, marine, and property business, which was partially offset by adverse loss emergence in the aviation business.

Retroactive Reinsurance Recoverable

During the second quarter of 2021, the Company entered into a loss portfolio transfer and adverse development cover agreement related to prior underwriting years on the Company's U.S. casualty and auto business within the P&C segment. Premium paid for the loss portfolio transfer and adverse development cover agreement, resulted in a cash transfer for the premium at inception of the agreement, and a reinsurance recoverable of $118.3 million and $96.9 million at December 31, 2023 and 2022, respectively. As a result of adverse prior years reserve development ceded under this agreement, a deferred gain of $22.7 million and $10.7 million was recorded in Accounts payable, accrued expense and other in the Consolidated Balance Sheet at December 31, 2023 and 2022, respectively. This transaction is presented retrospectively in the net loss and loss expenses incurred development table for the casualty business below. Reinsurance recoveries under this transaction are attributed to calendar year and accident year based on the underlying distribution of losses subject to the agreement.

Asbestos and Environmental Claims

The Company's net non-life reserves at December 31, 2023 and 2022 included $21.7 million and $22.3 million, respectively, related to asbestos and environmental claims. The gross liability for such claims at December 31, 2023 and 2022 was $23.4 million and $22.3 million, respectively.

Ultimate loss estimates for such claims cannot be estimated using traditional reserving techniques and there are significant uncertainties in estimating the Company's potential losses for these claims. In view of the legal and tort environment that affect the development of such claims, the uncertainties inherent in estimating asbestos and environmental claims are not likely to be resolved in the near future. There can be no assurance that the reserves established by the Company will not be adversely affected by development of other latent exposures, and further, there can be no assurance that the reserves established by the Company will be adequate. The Company does, however, actively evaluate potential exposure to asbestos and environmental claims and establishes additional reserves as appropriate. The Company believes that it has made a reasonable provision for these exposures and is unaware of any specific issues that would materially affect its unpaid losses and loss expense reserves related to this exposure.

Non-life Reserving methods

The reserving methods commonly employed by the Company are summarized as follows:

Chain Ladder (CL) Development Methods (Reported or Paid)

These methods use the underlying assumption that losses reported (paid) for each underwriting year at a particular development stage follow a stable pattern. The CL development method assumes that on average, every underwriting year will display the same percentage of ultimate liabilities reported by the Company's cedants at 24 months after the inception of the underwriting year. The percentages reported (paid) are established for each development stage after examining historical averages from the loss development data. These are sometimes supplemented by external benchmark information. Ultimate liabilities are estimated by multiplying the actual reported (paid) losses by the reciprocal of the assumed reported (paid) percentage. Reserves are then calculated by subtracting paid claims from the estimated ultimate liabilities.

Expected Loss Ratio (ELR) Method

This method estimates ultimate losses for an underwriting year by applying an estimated loss ratio to the earned premium for that underwriting year. Although the method is insensitive to actual reported or paid losses, it can often be useful at the early stages of development when very few losses have been reported or paid, and the principal sources of information available to the Company consist of information obtained during pricing and qualitative information supplied by the cedant. However, the lack of sensitivity to reported or paid losses means that the method is usually inappropriate at later stages of development.

Bornhuetter-Ferguson (B-F) Methods (Reported or Paid)

These methods aim to address the variability at early stages of development and incorporates external information such as pricing. The B-F methods are more sensitive to reported and paid losses than the ELR method, and can be seen as a blend of the ELR and CL development methods. Unreported (unpaid) claims are calculated using an expected reporting (payment) pattern and an externally determined estimate of ultimate liabilities (usually determined by multiplying an a priori loss ratio with estimates of premium volume). The accuracy of the a priori loss ratio is a critical assumption in this method. Usually a priori loss ratios are initially determined on the basis of pricing information, but may also be adjusted to reflect other information that subsequently emerges about underlying loss experience.

Loss Event Specific Method

The ultimate losses estimated under this method are derived from estimates of specific events based on reported claims, client and broker discussions, review of potential exposures, market loss estimates, modeled analysis and other event specific criteria.

Method Weights

In determining the loss reserves, the Company often relies on a blend of the results from two or more methods (e.g., weighted averages). The judgment as to which of the above method(s) is most appropriate for a particular underwriting year and reserving cell could change over time as new information emerges regarding underlying loss activity and other data issues. Furthermore, as each line is typically composed of several reserving cells, it is likely that the reserves for the line will be dependent on several reserving methods. This is because reserves for a line are the result of aggregating the reserves for each constituent reserving cell and that a different method could be selected for each reserving cell.

The principal reserving methods used for each of the Specialty business and P&C business were ELR, Reported/Paid B-F, and Reported/Paid CL, with the exception of catastrophe risks within the P&C business where the principal reserving methods used were ELR based on exposure analysis and loss event specific methods.

Non-life net incurred and paid losses and loss expense development

The net incurred and paid losses and loss expenses development by accident year for each of the years ended December 31, 2014 through 2023, and the total of IBNR plus expected development on reported claims included within the net incurred claims amounts, as at each of the years ended December 31, 2014 through 2023, are presented in the tables below (in thousands of U.S. dollars). The tables below reflect losses incurred and paid losses translated to U.S. dollars at the exchange rate as of the balance sheet date whereas the losses and loss expenses in the Consolidated Statement of Operations reflected losses incurred at the average exchange rate for the period.

The reconciliation of the net incurred and paid claims development information above to the Non-life reserves in the Consolidated Balance Sheet at December 31, 2023 was as follows (in thousands of U.S. dollars):

	December 31, 2023
Total outstanding liability for unpaid claims	
Property	$ 874,850
Casualty	1,572,922
Specialty	2,008,495
Total outstanding liabilities for unpaid claims	**$ 4,456,267**
Other liabilities [(1)]	$ 36,548
Net liability at end of year	**$ 4,492,815**
Reinsurance recoverable on unpaid claims	
Property	$ 619,103
Casualty	112,331
Specialty	18,663
Reinsurance recoverable at end of year	**$ 750,097**
Gross liability at end of year	**$ 5,242,912**

[(1)] *Other liabilities included in the reconciliation relate primarily to unallocated loss expenses.*

NET INCURRED LOSSES AND LOSS EXPENSES DEVELOPMENT TABLE - NON-LIFE

	For the year ended December 31,										December 31, 2023
Accident year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Total of IBNR plus expected development on reported claims**
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)		
2014	$1,117,841	$1,129,361	$1,061,114	$1,052,209	$1,050,743	$1,048,620	$1,036,083	$1,032,600	$1,020,970	$ 1,057,557	$ 19,339
2015		1,150,906	1,194,358	1,156,666	1,153,729	1,153,912	1,139,183	1,132,395	1,123,380	1,061,595	33,276
2016			1,112,685	1,150,861	1,117,443	1,117,057	1,116,806	1,128,313	1,125,470	1,120,041	36,189
2017				1,552,738	1,674,063	1,615,969	1,591,248	1,598,238	1,597,841	1,623,340	84,808
2018					1,359,136	1,546,635	1,564,987	1,560,823	1,582,531	1,412,424	100,782
2019						1,217,386	1,431,755	1,394,957	1,398,016	1,492,285	127,920
2020							1,682,219	1,505,352	1,449,095	1,280,167	226,800
2021								1,255,804	1,211,714	1,507,923	498,247
2022									1,375,547	1,371,153	641,621
2023										**1,106,822**	**387,765**
Total										**$ 13,033,307**	**$ 2,156,747**

NET PAID LOSSES AND LOSS EXPENSES DEVELOPMENT TABLE - NON-LIFE

	For the year ended December 31,									
Accident year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	
2014	$ 161,397	$ 597,127	$ 734,585	$ 828,259	$ 883,441	$ 923,248	$ 955,533	$ 973,994	$ 986,586	$ 1,001,823
2015		141,113	517,510	701,098	807,796	871,450	915,211	946,331	968,569	982,377
2016			144,701	562,550	727,861	853,173	912,428	950,570	986,328	1,019,205
2017				260,397	883,318	1,092,298	1,251,119	1,305,124	1,357,599	1,417,444
2018					140,776	657,355	955,714	1,118,587	1,196,720	1,248,398
2019						225,522	672,870	941,669	1,067,129	1,178,045
2020							189,732	546,306	741,625	845,165
2021								158,222	510,517	734,828
2022									167,638	445,342
2023										**168,909**
Total										**$ 9,041,536**

Net reserves for Accident Years and exposures included in the triangles	$ 3,991,771
All outstanding liabilities before Accident Year 2014, net of reinsurance	464,496
Total outstanding net liabilities for unpaid claims	**$ 4,456,267**

AVERAGE ANNUAL PERCENTAGE PAYOUT OF INCURRED CLAIMS BY AGE, NET OF REINSURANCE - NON-LIFE (unaudited)

Years	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Non-life	14%	31%	15%	10%	5%	4%	3%	2%	1%	1%

NET INCURRED LOSSES AND LOSS EXPENSES DEVELOPMENT TABLE - PROPERTY

	For the year ended December 31,										December 31, 2023
Accident year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Total of IBNR plus expected development on reported claims**
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)		
2014	$ 232,366	$ 227,195	$ 215,080	$ 213,598	$ 210,985	$ 210,220	$ 209,088	$ 209,051	$ 207,841	$ 213,143	$ 201
2015		262,997	263,590	250,979	243,540	242,115	239,707	242,317	242,071	232,361	1,020
2016			308,448	303,495	279,339	269,911	267,519	268,417	268,853	274,348	2,714
2017				695,655	705,426	647,603	624,384	619,490	617,847	616,037	8,605
2018					517,976	496,753	493,102	476,335	469,416	445,733	8,743
2019						386,512	412,011	364,449	347,156	335,433	3,256
2020							569,843	570,892	550,317	483,441	55,236
2021								515,314	480,072	573,992	182,689
2022									567,027	473,992	296,359
2023										**116,397**	**144,804**
Total										**$ 3,764,877**	**$ 703,627**

NET PAID LOSSES AND LOSS EXPENSES DEVELOPMENT TABLE - PROPERTY

	For the year ended December 31,									
Accident year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	
2014	$ 40,778	$ 152,945	$ 186,257	$ 200,322	$ 204,874	$ 207,704	$ 209,627	$ 210,418	$ 210,534	$ 211,533
2015		37,299	153,084	200,333	215,018	220,387	223,148	227,021	227,859	228,475
2016			55,015	197,909	234,095	251,350	258,215	262,064	263,358	265,254
2017				162,028	494,333	551,254	579,574	583,081	585,547	593,353
2018					35,949	310,702	391,256	414,210	422,361	426,898
2019						27,298	226,066	284,054	299,791	313,375
2020							52,448	246,159	330,316	369,239
2021								45,186	228,164	324,672
2022									38,202	127,199
2023										**46,813**
Total										**$ 2,906,811**
Net reserves for Accident Years and exposures included in the triangles										$ 858,066
All outstanding liabilities before Accident Year 2014, net of reinsurance										16,784
Total outstanding net liabilities for unpaid claims										**$ 874,850**

AVERAGE ANNUAL PERCENTAGE PAYOUT OF INCURRED CLAIMS BY AGE, NET OF REINSURANCE - PROPERTY (unaudited)

Years	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Property	13%	42%	15%	6%	2%	1%	1%	—%	—%	—%

NET INCURRED LOSSES AND LOSS EXPENSES DEVELOPMENT TABLE - CASUALTY

	For the year ended December 31,										December 31, 2023
Accident year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Total of IBNR plus expected development on reported claims**
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)		
2014	$ 307,836	$ 337,593	$ 325,874	$ 323,695	$ 327,965	$ 327,082	$ 320,436	$ 317,888	$ 313,292	$ 295,760	$ 11,910
2015		279,719	316,269	308,887	318,951	316,544	314,279	307,734	301,974	308,546	20,443
2016			270,088	308,538	308,665	311,862	316,048	324,750	323,138	318,655	22,455
2017				293,991	356,944	361,500	362,525	367,831	367,564	376,490	46,795
2018					327,246	382,568	383,491	383,354	383,287	305,958	53,766
2019						248,818	286,332	287,652	286,671	278,449	63,824
2020							245,632	245,524	243,748	175,100	102,022
2021								197,658	197,616	265,628	139,475
2022									178,410	225,253	136,756
2023										**319,684**	**82,314**
Total										**$ 2,869,523**	**$ 679,760**

NET PAID LOSSES AND LOSS EXPENSES DEVELOPMENT TABLE - CASUALTY

	For the year ended December 31,									
Accident year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	
2014	$ 29,143	$ 81,018	$ 118,945	$ 151,405	$ 180,930	$ 204,375	$ 228,158	$ 242,583	$ 250,901	$ 262,703
2015		32,601	80,421	125,594	157,600	194,480	221,257	240,590	255,154	265,978
2016			9,039	56,410	98,122	146,983	181,815	206,523	231,677	259,966
2017				28,593	77,566	116,512	156,673	187,170	218,167	267,239
2018					34,038	99,803	147,599	183,382	221,505	253,506
2019						37,625	94,450	130,273	157,520	168,326
2020							35,487	(8,614)	7,761	21,552
2021								20,085	61,642	73,435
2022									22,269	36,195
2023										**39,375**
Total										**$ 1,648,275**
Net reserves for Accident Years and exposures included in the triangles										$ 1,221,248
All outstanding liabilities before Accident Year 2014, net of reinsurance										351,674
Total outstanding net liabilities for unpaid claims										**$ 1,572,922**

AVERAGE ANNUAL PERCENTAGE PAYOUT OF INCURRED CLAIMS BY AGE, NET OF REINSURANCE - CASUALTY (unaudited)

Years	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Casualty	11%	12%	11%	11%	9%	8%	9%	6%	3%	4%

NET INCURRED LOSSES AND LOSS EXPENSES DEVELOPMENT TABLE - SPECIALTY

Accident year	For the year ended December 31, 2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	December 31, 2023 Total of IBNR plus expected development on reported claims
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)		
2014	$ 577,639	$ 564,573	$ 520,160	$ 514,917	$ 511,794	$ 511,318	$ 506,558	$ 505,661	$ 499,837	$ 548,654	$ 7,228
2015		608,190	614,498	596,800	591,238	595,253	585,197	582,344	579,335	520,688	11,813
2016			534,150	538,828	529,439	535,284	533,239	535,146	533,479	527,038	11,020
2017				563,092	611,693	606,865	604,338	610,916	612,431	630,813	29,408
2018					513,915	667,314	688,394	701,134	729,828	660,733	38,273
2019						582,055	733,413	742,856	764,189	878,403	60,840
2020							866,745	688,936	655,029	621,626	69,542
2021								542,832	534,026	668,303	176,083
2022									630,111	671,908	208,506
2023										**670,741**	**160,647**
Total										**$ 6,398,907**	**$ 773,360**

NET PAID LOSSES AND LOSS EXPENSES DEVELOPMENT TABLE - SPECIALTY

Accident year	For the year ended December 31, 2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	
2014	$ 91,476	$ 363,164	$ 429,383	$ 476,532	$ 497,637	$ 511,169	$ 517,748	$ 520,992	$ 525,151	$ 527,587
2015		71,214	284,005	375,171	435,179	456,583	470,806	478,720	485,557	487,924
2016			80,646	308,230	395,644	454,841	472,397	481,982	491,293	493,985
2017				69,775	311,419	424,532	514,873	534,873	553,884	556,852
2018					70,790	246,850	416,859	520,995	552,854	567,994
2019						160,599	352,354	527,342	609,817	696,344
2020							101,797	308,761	403,549	454,374
2021								92,951	220,711	336,721
2022									107,168	281,948
2023										**82,721**
Total										**$ 4,486,450**
Net reserves for Accident Years and exposures included in the triangles										$ 1,912,457
All outstanding liabilities before Accident Year 2014, net of reinsurance										96,038
Total outstanding net liabilities for unpaid claims										**$ 2,008,495**

AVERAGE ANNUAL PERCENTAGE PAYOUT OF INCURRED CLAIMS BY AGE, NET OF REINSURANCE - SPECIALTY (unaudited)

Years	1	2	3	4	5	6	7	8	9	10
Specialty	15%	33%	18%	11%	5%	2%	1%	1%	1%	—%

The Company is predominantly a reinsurer of primary insurers and does not have access to claim frequency information held by our cedants due to the majority of the Company's business being written on a proportional basis. As such, the Company considers it impracticable to disclose information on the frequency of claims.

10. Life and Health Reserves

The Company's liability for life and health reserves at December 31, 2023, 2022 and 2021 was as follows (in thousands of U.S. dollars):

	December 31, 2023	December 31, 2022	December 31, 2021
Long-term protection	**$ 812,160**	$ 728,756	$ 862,519
Longevity	**359,949**	224,220	239,264
Total traditional and limited payment long-duration life and health reserves	**$ 1,172,109**	$ 952,976	$ 1,101,783
Other long-duration life and health reserves	**103,246**	123,906	121,791
Short-term life and health reserves	**526,373**	508,000	574,247
Life and health reserves	**$ 1,801,728**	$ 1,584,882	$ 1,797,821

Traditional and limited payment long-duration contracts

The reconciliation of the beginning and ending liability for the Company's life and health reserves for traditional and limited payment long-duration contracts for the years ended December 31, 2023, 2022 and 2021 was as follows (in thousands of U.S. dollars):

	2023		2022		2021	
	Long-Term Protection	Longevity	Long-Term Protection	Longevity	Long-Term Protection	Longevity
Present Value of Expected Net Premiums						
Balance, beginning of year	**$ 3,901,173**	**$ 5,241,385**	$ 4,525,663	$ 7,051,095	$ 4,241,804	$ 6,088,655
Beginning balance at original discount rate	**5,219,788**	**7,277,818**	4,817,314	7,608,858	4,262,421	5,997,417
Effect of changes in cash flow assumptions	**(54,210)**	**1,208**	57,564	—	74,460	(6,506)
Effect of actual variances from expected experience	**65,775**	**(72,227)**	351,185	60,689	48,864	(31,961)
Foreign exchange effect and other	**10,321**	**(71,444)**	(6,479)	(2,456)	7,364	458
Adjusted beginning of year balance	**5,241,674**	**7,135,355**	5,219,584	7,667,091	4,393,108	5,959,408
Issuances	**449,398**	**2,795,804**	590,784	732,478	718,388	2,024,977
Interest accrual	**126,084**	**244,371**	111,684	139,017	97,236	100,747
Net premiums collected	**(303,130)**	**(816,984)**	(288,386)	(504,828)	(290,194)	(432,836)
Foreign exchange effect and other	**114,719**	**496,581**	(413,878)	(755,939)	(101,225)	(43,438)
Ending balance at original discount rate	**5,628,745**	**9,855,127**	5,219,788	7,277,819	4,817,314	7,608,858
Effect of changes in discount rate assumptions	**(1,046,575)**	**(1,477,170)**	(1,318,615)	(2,036,434)	(291,651)	(557,763)
Balance, end of year	**$ 4,582,170**	**$ 8,377,957**	$ 3,901,173	$ 5,241,385	$ 4,525,663	$ 7,051,095
Present Value of Expected Future Policy Benefits						
Balance, beginning of year	**$ 4,628,155**	**$ 5,465,605**	$ 5,388,178	$ 7,289,899	$ 5,047,929	$ 6,347,275
Beginning balance at original discount rate	**6,022,928**	**7,478,836**	5,697,634	7,829,505	5,052,471	6,236,543
Effect of changes in cash flow assumptions	**(50,987)**	**1,504**	32,584	—	98,091	(9,482)
Effect of actual variances from expected experience	**64,137**	**(80,575)**	365,821	59,099	85,343	(31,195)
Foreign exchange effect and other	**23,179**	**(81,060)**	(4,143)	(3,314)	6,856	518
Adjusted beginning of year balance	**6,059,257**	**7,318,705**	6,091,896	7,885,290	5,242,761	6,196,384
Issuances	**450,490**	**2,800,366**	586,001	732,760	706,901	2,024,808
Interest accrual	**138,933**	**247,669**	125,422	142,167	111,595	105,366
Benefit payments	**(291,478)**	**(705,308)**	(291,589)	(500,844)	(262,207)	(453,786)
Foreign exchange effect and other	**137,465**	**515,618**	(488,803)	(780,537)	(101,415)	(43,268)
Ending balance at original discount rate	**6,494,667**	**10,177,050**	6,022,927	7,478,836	5,697,634	7,829,505
Effect of changes in discount rate assumptions	**(1,103,168)**	**(1,440,240)**	(1,394,772)	(2,013,231)	(309,457)	(539,606)
Balance, end of year	**$ 5,391,499**	**$ 8,736,810**	$ 4,628,155	$ 5,465,605	$ 5,388,178	$ 7,289,899
Cumulative impact of flooring	**$ 2,831**	**$ 1,096**	$ 1,774	$ —	$ 4	$ 460
Liability for future policy benefits, after flooring adjustment	**$ 812,160**	**$ 359,949**	$ 728,756	$ 224,220	$ 862,519	$ 239,264

The amount of undiscounted and discounted expected future gross premiums and expected future benefit payments for traditional and limited payment long-duration contracts for the years ended December 31, 2023, 2022 and 2021 was as follows (in thousands of U.S. dollars):

	December 31, 2023	December 31, 2022	December 31, 2021
Long-Term Protection			
Undiscounted expected future gross premiums	**$ 11,750,072**	$ 10,537,653	$ 9,385,776
Undiscounted expected future benefit payments	**$ 10,563,891**	$ 9,473,861	$ 8,665,123
Discounted expected future gross premiums	**$ 5,790,399**	$ 4,928,086	$ 5,859,064
Discounted expected future benefit payments	**$ 5,391,499**	$ 4,628,155	$ 5,388,178
Longevity			
Undiscounted expected future gross premiums	**$ 14,413,381**	$ 9,945,649	$ 10,113,808
Undiscounted expected future benefit payments	**$ 13,682,588**	$ 9,399,348	$ 9,558,981
Discounted expected future gross premiums	**$ 9,004,663**	$ 5,666,154	$ 7,625,901
Discounted expected future benefit payments	**$ 8,736,810**	$ 5,465,605	$ 7,289,899

The total gross premiums and interest expense recognized in the Consolidated Statements of Operations for traditional and limited payment long-duration contracts for the years ended December 31, 2023, 2022 and 2021 were as follows (in thousands of U.S. dollars):

	Gross Premium			Interest Expense		
	2023	2022	2021	2023	2022	2021
Long-term protection	**$ 396,795**	$ 377,293	$ 386,495	**$ 12,849**	$ 13,822	$ 14,359
Longevity	**874,955**	556,893	497,355	**3,297**	3,151	4,619
Total	**$ 1,271,750**	$ 934,186	$ 883,850	**$ 16,146**	$ 16,973	$ 18,978

The weighted-average interest rates for traditional and limited payment long-duration contracts for the years ended December 31, 2023, 2022 and 2021 were as follows:

	2023	2022	2021
Long-Term Protection:			
Interest accretion rate	**2.50 %**	2.37 %	2.28 %
Current discount rate	**4.17 %**	4.57 %	2.73 %

	2023	2022	2021
Longevity:			
Interest accretion rate	**3.02 %**	2.00 %	1.84 %
Current discount rate	**4.82 %**	5.44 %	2.49 %

The weighted-average duration of reserves for long-term protection was 4.1 years, 4.5 years and 5.9 years for the years ended December 31, 2023, 2022, and 2021, respectively. The weighted average duration of reserves for Longevity has been split into the fixed premium leg and the floating claims leg, with the fixed premium leg having a duration of 7.7 years, 8.0 years and 9.9 years and the floating claims leg having a duration of 7.5 years, 7.8 years and 9.7 years for the years ended December 31, 2023, 2022, and 2021 respectively.

Long-Term Protection

Significant assumptions used to calculate the LFPB for long-term protection include mortality, morbidity, and persistency, and both locked-in and current discount rates.

In 2023, the Company undertook a review of significant assumptions and primarily made changes to mortality and morbidity. Mortality assumption updates primarily reflected mixed future mortality improvements and claims experience on certain treaties that largely offset. Morbidity assumption updates primarily reflected adverse claims experience on a specific treaty. Current discount rates were updated from 2022 resulting in a slight increase to the LFPB.

In 2022, the Company undertook a review of significant assumptions and primarily made changes to mortality and morbidity. Mortality assumption updates partially reflected unfavorable claims experience on certain treaties. Morbidity assumption updates largely reflected adverse claims experience on a specific treaty. Current discount rates were updated from 2021 resulting in a significant decrease to the LFPB.

In 2021, the Company undertook a review of significant assumptions and primarily made changes to mortality and morbidity. Mortality assumption updates primarily reflected unfavorable claims experience on certain treaties. Morbidity assumption updates primarily reflected adverse claims experience on specific treaties. Current discount rates were updated from 2020 resulting in a significant decrease to the LFPB.

Impacts to expected net premiums and expected future policy benefits due to assumption changes in 2023, 2022 and 2021 can be observed in the LFPB rollforward tables at December 31, 2023, 2022 and 2021.

Longevity

Significant assumptions used to calculate the LFPB for Longevity include mortality, and both locked-in and current discount rates.

In 2023, the Company undertook a review of significant assumptions and updated mortality improvement assumptions to reflect favorable developments prior to COVID-19. Current discount rates were updated from 2022, resulting in a slight decrease to the LFPB.

In 2022, the Company reviewed actual experience but did not make any assumption updates. Current discount rates were updated from 2021, resulting in a slight increase to the LFPB.

In 2021, the Company undertook a review of significant assumptions and made revisions to mortality improvement assumption model parameters to reflect industry trends. Current discount rates were updated from 2020, resulting in a slight decrease to the LFPB.

Impacts to expected net premiums and expected future policy benefits due to assumption changes in 2023, 2022 and 2021 can be observed in the LFPB rollforward tables at December 31, 2023, 2022 and 2021.

Life and health short-duration reserves

The reconciliation of the beginning and ending liability of the life and health reserves for short-duration contracts for the years ended December 31, 2023 and 2022 was as follows (in thousands of U.S. dollars):

	December 31, 2023	December 31, 2022	December 31, 2021
Gross liability at beginning of year	**$ 508,000**	$ 574,247	$ 604,926
Reinsurance recoverable at beginning of year	**—**	—	—
Net liability at beginning of year	**508,000**	574,247	604,926
Net incurred losses	**116,803**	85,950	112,308
Net losses paid	**(115,719)**	(113,060)	(160,203)
Effects of foreign exchange rate changes and other	**17,289**	(39,137)	17,216
Net liability at end of year	**$ 526,373**	$ 508,000	$ 574,247
Reinsurance recoverable at end of year	**—**	—	—
Gross liability at end of year	**$ 526,373**	$ 508,000	$ 574,247

11. Market Risk Benefits

MRBs, which relate to our GMDB business, are measured at fair value using an option-based valuation model based on current net amounts at risk, market data, Company experience and other factors. Declines in the equity markets, increased volatility, and a low interest rate environment increase the Company's exposure to liabilities under the guaranteed features. The net amount at risk for GMDB is defined as the current guaranteed benefit amount in excess of the current contract value.

The reconciliation of beginning and ending balances of market risk benefits for the years ended December 31, 2023, 2022 and 2021 was as follows (in thousands of U.S. dollars):

	2023	2022	2021
		GMDB	
Balance, beginning of year	**$ 73,210**	$ (31,807)	$ (46,554)
Effect of changes in the instrument-specific credit risk	**2,205**	35,525	38,084
Balance, beginning of year, before effect of changes in the instrument-specific credit risk	**75,415**	3,718	(8,470)
Issuances	**4,219**	984	(8,894)
Interest accrual	**3,670**	(1,045)	(1,574)
Attributed fees collected	**(18,123)**	(17,189)	(20,698)
Benefit payments	**2,360**	(622)	970
Actual policyholder behavior different from expected behaviors	**(5,188)**	2,776	(8,739)
Effect of changes in future expected policyholder behavior	**(7,276)**	(2,300)	6,466
Effect of changes in other future assumptions	**3,521**	2,591	(31,046)
Effect of changes in interest rates	**(7,625)**	110,563	49,573
Effect of changes in equity index volatility	**7,043**	(14,046)	(2,780)
Effect of changes in equity markets	**8,888**	(32,959)	18,738
Foreign exchange impact	**3,287**	5,867	(202)
Other	**13,387**	17,078	10,374
Balance, end of year, before effect of changes in the instrument-specific credit risk	**$ 83,578**	$ 75,416	$ 3,718
Effect of changes in the instrument-specific credit risk	**780**	(2,206)	(35,525)
Balance, end of year	**$ 84,358**	$ 73,210	$ (31,807)
Net amount at risk	**$ 135,861**	$ 362,194	$ 31,392
Weighted-average attained age of contract holders	**61 years**	61 years	61 years

The reconciliation of market risk benefit asset (liability) to the Company's Consolidated Balance Sheets at December 31, 2023 and 2022 was as follows (in thousands of U.S. dollars):

	December 31, 2023			December 31, 2022		
	Asset	Liability	Net	Asset	Liability	Net
Market risk benefits	**$ 87,395**	**$ 3,037**	**$ 84,358**	$ 78,928	$ 5,718	$ 73,210

In 2023, the Company recognized market risk benefit gains primarily due to an increase in equity markets and a decrease in equity index volatility, both of which reduce the chance of GMDB being at risk and increases the net MRB asset. The Company also recognized the impacts of new business and actual and future expected policyholder activity.

For 2022, the Company recognized market risk benefit gains primarily due to a steep increase in interest rates in the year, which reduces the chance of GMDB being at risk and increases the net MRB asset, partially offset by a decrease in equity markets and an increase in equity index volatility which decreased the MRB net asset.

For 2021, the Company recognized market risk benefit gains due to increases in interest rates and improvements in equity markets which reduced the chance of the GMDB being at risk and increased the net MRB asset, partially offset by the impact of changes in other future assumptions.

See Note 4 for additional information related to the fair value measurement of MRBs.

12. Reinsurance

(a) Reinsurance Recoverable on Paid and Unpaid Losses

The Company uses retrocessional agreements to reduce its exposure to risk of loss on reinsurance assumed. These agreements provide for recovery from retrocessionaires of a portion of losses and loss expenses. The Company remains liable to its cedants to the extent that the retrocessionaires do not meet their obligations under these agreements, and therefore the Company evaluates the financial condition of its reinsurers and monitors concentration of credit risk on an ongoing basis. The Company actively manages its reinsurance exposures by generally selecting either collateralized retrocessionaires or counterparties that have a credit rating of A- or higher.

The Company established Lorenz Re Ltd. (“Lorenz Re”), a special purpose insurer registered as a segregated accounts company in Bermuda, as part of its third party capital platform to provide third party investors with access to portfolios of risk in the global reinsurance markets. Lorenz Re operates by providing fully collateralized reinsurance capacity to the Company in respect of multiple lines of business. Lorenz Re raises capital primarily from third party investors seeking exposure to the global reinsurance markets by issuing non-voting redeemable preferred shares in its individual segregated accounts. The proceeds from issuance of these preferred shares are deposited into trust accounts collateralizing varying portfolios of potential reinsurance recoverables, which have established investment guidelines that generally require assets to be held as either cash and cash equivalents or in U.S. government issued securities of high credit quality. For the years ended December 31, 2023, 2022, and 2021, the Company recorded ceded premium written to Lorenz Re’s segregated cells of $330.2 million, $347.6 million, and $371.2 million, respectively, and Reinsurance recoverable on paid and unpaid losses from the segregated cells of $499.8 million and $650.6 million, respectively.

In assessing an allowance for reinsurance recoverable balances, the Company considers historical information, financial strength and credit ratings of reinsurers, collateralization amounts and the remaining expected life of reinsurance recoverable balances to determine the appropriateness of the allowance. Historically, the Company has not experienced material credit losses from retrocessional agreements. In assessing future default for reinsurance recoverable balances, the Company evaluates the valuation allowance under the probability of default and loss given default method and utilizes counterparty credit ratings from major rating agencies, as well as assessing the current market conditions and reasonable and supportable forecasts for the likelihood of default. A December 31, 2023 and 2022, the Company's allowance for credit losses on its reinsurance recoverable balance was $1.9 million.

(b) Ceded Reinsurance

Net premiums written, net premiums earned and losses and loss expenses are reported net of reinsurance in the Company’s Consolidated Statements of Operations. Assumed, ceded and net amounts for the years ended December 31, 2023 and 2022 were as follows (in thousands of U.S. dollars):

	2023		
	Premiums Written	Premiums Earned	Losses and Loss Expenses
Assumed	**$ 4,379,219**	**$ 4,335,900**	**$ 2,282,874**
Ceded	**524,313**	**517,777**	**(554)**
Net	**$ 3,854,906**	**$ 3,818,123**	**$ 2,283,428**

	2022		
	Premiums Written	Premiums Earned	Losses and Loss Expenses
Assumed	$ 3,680,236	$ 3,615,859	$ 2,559,484
Ceded	406,876	417,659	366,002
Net	$ 3,273,360	$ 3,198,200	$ 2,193,482

	2021		
	Premiums Written	Premiums Earned	Losses and Loss Expenses
Assumed	$ 3,653,774	$ 3,621,704	$ 2,769,743
Ceded	459,137	461,135	530,741
Net	$ 3,194,637	$ 3,160,569	$ 2,239,002

13. Shareholder's Equity

At December 31, 2023 and 2022, the total authorized and issued shares of the Company were 3,000,000 shares with a par value of $1.00 per share.

14. Dividend Restrictions and Statutory Requirements

The Company is licensed as a Class 4 and Class E insurer and is therefore authorized to carry on general and long-term insurance business in Bermuda. The Insurance Act regulates insurance business in Bermuda and requires the Company to maintain minimum levels of solvency and liquidity and to comply with risk-based capital requirements and licensing rules, including its minimum solvency margin ("MSM"), defined as the prescribed minimum amount by which the value of the assets of the Company must exceed the value of its liabilities. As at December 31, 2023, the Company's solvency, liquidity and risk-based capital levels were in excess of the minimum levels required.

The Insurance Act also provides that the Company shall not in any financial year pay dividends which would exceed 25% of its total statutory capital and surplus, as shown on its statutory balance sheet in relation to the previous financial year, unless at least 7 days before payment of those dividends it files with the Bermuda Monetary Authority ("BMA") an affidavit signed by at least two directors, and by the Company's principal representative in Bermuda, which states that in the opinion of those signing, declaration of those dividends has not caused the insurer to fail to meet its relevant margins. Further, the Company must obtain the BMA's prior approval before reducing its total statutory capital as shown in its previous financial year statutory balance sheet by 15% or more. The Company may declare dividends subject to it continuing to meet these minimum levels of solvency, liquidity, and its risk-based capital requirement, which is to hold statutory capital and surplus equal to or exceeding the Target Capital Level (equivalent to 120% of the Enhanced Capital Requirement (ECR)). The ECR is calculated using the Bermuda Solvency Capital Requirement model which is a risk-based capital model. During 2024, the maximum dividend that the Company can pay without prior regulatory approval is approximately $1,133 million.

The Company is required to file annual statements with the BMA on an accounting basis as prescribed by the BMA. The typical adjustments to insurance statutory basis amounts to convert to U.S. GAAP include recognition of goodwill, intangible assets and deferred income taxes, and presentation of ceded reinsurance balances gross of assumed balances. The statutory financial return and capital and solvency return of the Company as at, and for the year ended, December 31, 2023 are due to be submitted to the BMA by April 30, 2024. The statutory financial return and capital and solvency return are subject to the BMA review.

The required and actual statutory capital and surplus of the Company at December 31, 2023 and 2022 was as follows (in millions of U.S. dollars):

	2023	2022
Required statutory capital and surplus [(1)]	**$ 2,811**	$ 2,727
Actual statutory capital and surplus	**$ 7,098**	$ 5,816

[(1)] The required statutory capital and surplus is calculated at the Target Capital Level equivalent to 120% of the ECR.

In addition to the required statutory capital and surplus requirements in the table above, the Company assesses its own solvency capital needs taking into account factors which may not be fully reflected in statutory requirements. The Company's solvency capital requirements determined under these self assessments may impact the level of dividends paid to its Parent.

15. Taxation

The Company and its Bermuda domiciled subsidiaries are not subject to Bermuda income or profits tax, withholding tax, capital gains tax or capital transfer tax in Bermuda, under current Bermuda law. However, on December 27, 2023, Bermuda enacted the Corporate Income Tax Act 2023 (the "CIT Act"). Entities subject to tax under the CIT Act are the Bermuda constituent entities of multi-national groups. A multi-national group is defined under the CIT Act as a group with entities in more than one jurisdiction with consolidated revenues of at least EUR750mm for two of the four previous fiscal years. If Bermuda constituent entities of a multi-national group are subject to tax under the CIT Act, such tax is charged at a rate of 15 per cent of the net income of such constituent entities for tax years starting on or after January 1, 2025. The CIT Act also includes a provision referred to as the economic transition adjustment, which is intended to provide a fair and equitable transition into the tax regime, and results in a deferred tax benefit for the Company. Pursuant to this legislation, the Company has estimated as of December 31, 2023, a $487 million deferred tax asset in relation to the economic transition adjustment and a $55 million deferred tax liability in relation to the future tax impact of temporary differences between book and tax value. Most of the net $432 million deferred tax asset is expected to be utilized predominantly over a 10-year period.

The Company has subsidiaries and, in prior years, branches that operate in various other jurisdictions around the world that are subject to tax in the jurisdictions in which they operate. The significant jurisdiction in which the Company's subsidiaries and branches are subject to tax is the United Kingdom.

Income tax returns are open for examination for the tax years 2019 to 2023. As part of a global organization, the Company may be subject to a variety of transfer pricing or permanent establishment challenges by taxing authorities in various jurisdictions. While management believes that adequate provision has been made in the Consolidated Financial Statements for any potential assessments that may result from tax examinations for all open tax years, the completion of tax examinations for open years may result in changes to the amounts recognized in the Consolidated Financial Statements.

Income tax benefit for the years ended December 31, 2023, 2022 and 2021 was as follows (in thousands of U.S. dollars):

	2023	2022	2021
Current income tax benefit (expense)	**$ (110)**	$ 233	$ (4,173)
Deferred income tax benefit	**435,281**	6,141	943
Total income tax benefit (expense)	**$ 435,171**	$ 6,374	$ (3,230)

The reconciliation of the actual income tax rate for the years ended December 31, 2023, 2022 and 2021 to the amount computed by applying the effective tax rate of 0% under Bermuda law to net income before taxes was as follows (in thousands of U.S. dollars):

	2023	2022	2021
Net income	**$1,619,788**	$ 47,074	$ 963,124
Income tax (benefit) expense	**(435,171)**	(6,374)	3,230
Net income before taxes	**$1,184,617**	$ 40,700	$ 966,354

	2023	2022	2021
Reconciliation of effective tax rate (% of income before taxes)			
Expected tax rate	**0.0 %**	0.0 %	0.0 %
Foreign taxes at local expected tax rates	**0.4**	(15.8)	1.7
Ceding commission	**—**	—	(1.9)
Tax legislation change	**(36.7)**	—	—
Valuation allowance	**(0.3)**	7.2	0.5
Other	**(0.1)**	(7.0)	0.0
Actual tax rate	**(36.7)%**	(15.6)%	0.3 %

Following the enactment in 2023 of the CIT Act, a net $432 million deferred tax asset was recorded as described in further detail above. This had a 36.7 point reduction on the effective tax rate in 2023 and is included within the Tax legislation change line in the table above.

The net tax assets and their components at December 31, 2023 and 2022 were as follows (in thousands of U.S. dollars):

	December 31, 2023	December 31, 2022
Net current tax assets	**$ —**	$ 109
Net deferred tax assets	**432,037**	—
Net tax assets	**$ 432,037**	$ 109

Deferred tax assets reflect the tax impact of temporary differences between the carrying amounts of assets and liabilities for financial reporting and income tax purposes. Significant components of the net deferred tax assets and liabilities at December 31, 2023 and 2022 were as follows (in thousands of U.S. dollars):

	December 31, 2023	December 31, 2022
Deferred tax assets		
Foreign tax credit carryforward	**$ 4,110**	$ 6,066
Bermuda economic transition adjustment	**487,265**	—
Lloyds 3 year deferred taxation	**—**	4,789
Other deferred tax assets	**37**	33
	$ 491,412	$ 10,888
Valuation allowance	**(894)**	(10,888)
Deferred tax assets	**$ 490,518**	$ —
Deferred tax liabilities		
Unrealized depreciation and timing differences on investments	**$ (26,002)**	$ —
Discounting of loss reserves and adjustment to life policy reserves	**(29,226)**	—
Lloyds 3 year deferred taxation	**(3,253)**	**—**
Deferred tax liabilities	**$ (58,481)**	$ —
Net deferred tax assets	**$ 432,037**	**$ —**

Realization of deferred tax assets is dependent on generating sufficient taxable income in future periods. Although realization is not assured, management believes that it is more likely than not that the deferred tax assets will be realized.

The total amount of unrecognized tax benefits for the years ended December 31, 2023 and 2022 was $nil.

16. Retirement Benefit Arrangements

For employee retirement benefits, the Company maintains certain defined contribution plans. Contributions are made by the Company, and these contributions are supplemented by the local plan participants. Contributions are based on a percentage of the participant's base salary depending upon competitive local market practice and vesting provisions meeting legal compliance standards and market trends. The accumulated benefits generally vest immediately or over a two-year period. As required by law, certain retirement plans also provide for death and disability benefits and lump sum indemnities to employees upon retirement.

The Company incurred expenses for these defined contribution arrangements of $0.6 million, $0.6 million, and $0.6 million for the years ended December 31, 2023, 2022 and 2021 within Other expenses in the Consolidated Statements of Operations.

17. Commitments and Contingencies

(a) Concentration of Credit Risk

Fixed maturities

The Company's investment portfolio is managed following prudent standards of diversification and a prudent investment philosophy. The Company is not exposed to any significant credit concentration risk on its investments, except for debt securities issued by the U.S. government and government sponsored enterprises and other highly rated non-U.S. sovereign governments' securities. At December 31, 2023 and 2022, other than the U.S. governments and U.S. government sponsored enterprises, the Company's fixed maturity investment portfolio did not contain exposure to any non-U.S. sovereign government or any other issuer that accounted for more than 10% of the Company's shareholder's equity. The Company keeps cash and cash equivalents in several banks and ensures that there are no significant concentrations of credit risk in any one bank.

Derivatives

The Company's investment strategy allows for the use of derivative instruments, subject to strict limitations. Derivative instruments may be used to replicate investment positions and for the purpose of managing overall currency risk, market exposures and portfolio duration, for hedging certain investments, or for enhancing investment performance that would be allowed under the Company's investment policy if implemented in other ways. The Company is exposed to credit risk in the event of non-performance by the counterparties to the Company's derivative contracts. However, the Company diversifies the counterparties to its derivative contracts to reduce credit risk, and because the counterparties to these contracts are high credit quality international banks, the Company does not anticipate non-performance. These contracts are generally of short duration and settle on a net basis. The difference between the contract amounts and the related market value represents the Company's maximum credit exposure.

Underwriting operations

The Company is also exposed to credit risk in its underwriting operations, most notably in the credit/surety line. Loss experience in these lines of business is cyclical and is affected by the state of the general economic environment. The Company provides its clients in these lines of business with reinsurance protection against credit deterioration, defaults or other types of financial non-performance of or by the underlying credits that are the subject of the reinsurance provided and, accordingly, the Company is exposed to the credit risk of those credits. The Company mitigates the risks associated with these credit-sensitive lines of business through the use of risk management techniques such as risk diversification, careful monitoring of risk aggregations and accumulations and, at times, through the use of retrocessional reinsurance protection and the purchase of credit default, total return and interest rate swaps.

The Company has exposure to credit risk as it relates to its business written through brokers, if any of the Company's brokers is unable to fulfill their contractual obligations with respect to payments to the Company. In addition, in some jurisdictions, if the broker fails to make payments to the insured under the Company's policy, the Company might remain liable to the insured for the deficiency. The Company's exposure to such credit risk is somewhat mitigated in certain jurisdictions by contractual terms.

The Company has exposure to credit risk related to reinsurance balances receivable, reinsurance recoverable on paid and unpaid losses, funds held by reinsured companies and deposit assets. The credit risk exposure related to these balances is mitigated by several factors, including but not limited to, credit checks performed as part of the underwriting process, monitoring of aged receivable balances and, in certain cases, the contractual right to offset amounts payable by the Company to the counterparty against amounts due to the Company from the counterparty. The majority of the reinsurance balances receivable and funds held balances are from related parties (see Note 19).

In assessing future default for reinsurance balances receivable, the Company evaluates the valuation allowance under the loss rate method and utilizes historic loss activity, adjusted for its assessment of current market conditions and reasonable and supportable forecasts on loss rates. As at December 31, 2023 and 2022, the Company's allowance for credit losses for its reinsurance balances receivable was $4.9 million and $5.7 million, respectively. In assessing an allowance for funds held by reinsured companies and deposit assets, the Company considers historical information and the financial strength and credit ratings of counterparties to determine the appropriateness of the allowance. In assessing future default for these balances, the Company evaluates the valuation allowance under the probability of default and loss given default method and utilizes counterparty credit ratings from major rating agencies, as well as assessing the current market conditions and reasonable and supportable forecasts for the likelihood of default. As at December 31, 2023 and 2022, the Company's allowance for credit losses was $0.1 million for funds held by reinsurance companies and $1.0 million for deposit assets. See Note 12 for discussion of credit risk related to reinsurance recoverable on paid and unpaid losses.

(b) Other Agreements

The Company has entered into strategic investments with unfunded capital commitments. In the next five years, the Company expects to fund capital commitments totaling $151.5 million, with $83.3 million, $21.7 million, $21.7 million, $9.4 million and $15.4 million to be paid during 2024, 2025, 2026, 2027 and 2028, respectively.

Effective December 31, 2013, the Company entered into an agreement with one of its affiliates, PartnerRe America Insurance Company, whereby the Company guarantees to PartnerRe America Insurance Company all present and future obligations of each third party reinsurer when such reinsurer is unable to meet any or all its obligations pursuant to the terms of the applicable reinsurance agreement. At December 31, 2023, there were no reinsurers in default.

On June 2, 2017, the Company entered into an agreement to guarantee and indemnify any and all of the obligations of PartnerRe Life Reinsurance Company of America and PartnerRe Canada under reinsurance agreements with third party cedants, in the event of non-payment or non-performance. There were no amounts due under this guarantee at December 31, 2023.

On July 3, 2023, the Company entered into an agreement to guarantee and indemnify any and all of the obligations of Partner Reinsurance Europe SE, Zurich Branch under two reinsurance agreements with third party cedants, in the event of non-payment or non-performance. There were no amounts due under this guarantee at December 31, 2023.

In exchange for a fee, the Company has committed to provide statutory reserve support to a third party by funding loans if certain events occur. At December 31, 2023, the Company does not believe that it will be required to provide any funding under this commitment, as the occurrence of the defined events is considered remote.

(c) Legal Proceedings

Litigation

The Company, and the insurance and reinsurance industry in general, are subject to litigation and arbitration in the normal course of their business operations. In addition to claims litigation and disputes, the Company and its subsidiaries may be subject to lawsuits and regulatory actions in the normal course of business that do not arise from or directly relate to claims on reinsurance contracts. While the outcome of any such litigation cannot be predicted with certainty, the Company will dispute all allegations against the Company and/or its subsidiaries that management believes are without merit.

In March 2019, a cedant (the "Cedant") brought a motion for a declaratory judgment against the Company seeking a declaration that the Cedant had properly exercised its right, pursuant to an agreement between the parties, to recapture certain portfolios of life reinsurance contracts that the Cedant had retroceded to the Company. In February 2021, the Company reached a settlement with the Cedant.

At December 31, 2023, the Company was not a party to any litigation or arbitration that it believes could have a material effect on the financial condition, results of operations or liquidity of the Company.

18. Credit Agreements

In the normal course of its operations, the Company enters into agreements with financial institutions to obtain unsecured and secured credit facilities. At December 31, 2023, the total amount of such credit facilities available to the Company related to a secured credit facility of $200 million that matures on December 21, 2024, and automatically extends for a further year unless canceled by either counterparty. The committed secured credit facility maintained by the Company is used for the issuance of letters of credit which must be fully secured with either cash or investment-grade bonds.

Under the terms of certain reinsurance agreements, irrevocable letters of credit were issued by the Company on a secured basis in the amount of $137 million at December 31, 2023, in respect of losses and unearned premium reserves.

The agreement includes default covenants, which could result in the Company not being allowed to issue any new letters of credit. At December 31, 2023, no conditions of default existed.

19. Agreements with Related Parties

(a) Reinsurance Agreements

In the normal course of its underwriting activities, the Company has entered into reinsurance agreements with companies affiliated with the Company.

As at December 31, 2023 and 2022, the Company had the following quota-share reinsurance agreements with subsidiaries of the Parent:

- a quota-share agreement to assume existing and new non-life and life and health risk transfer business from PartnerRe Europe, including certain of its branches. PartnerRe Europe is a limited liability company incorporated and domiciled in Ireland, and regulated by the Central Bank of Ireland.
    - Non-Life business increased from 50% for treaties incepting 2016 and prior to 65% for years 2017 onward, except for natural catastrophe business which is at a 90% quota-share.
    - Prior to amendments made to the quota-share agreement effective July 1, 2021, Life and Health business was reinsured at 50% for inception years 2016 and prior and 65% for years 2017 onward (excluding certain longevity business written after 2020 which is at a 90% cession and life business written in PartnerRe Europe's Hong Kong branch). Effective July 1, 2021, the quota-share on longevity business written by PartnerRe Europe's head office was increased to 90%. Additionally, effective July 1, 2021, the cession was increased by 10% for all Life and Health business written by PartnerRe Europe's French and Swiss branches, including business in-force at the effective date of the amendment, resulting in a 60% cession for inception years 2016 and prior and a 75% cession for years 2017 onward.
- quota-share agreements to assume certain non-risk transfer life business from PartnerRe Europe's Swiss branch ranging from 95% to 100%.
- a 50% quota-share agreement to assume existing and new business from PartnerRe Asia. During 2020, the quota-share on certain critical illness business was increased to 85%. PartnerRe Asia is licensed by the Monetary Authority of Singapore (MAS) to operate as a non-life and life reinsurer in Singapore and is the principal reinsurance carrier for the Parent’s business underwritten in the Asia Pacific region.
- a 90% quota-share agreement to assume existing and new business from PartnerRe Canada. PartnerRe Canada is licensed to reinsure life, accident and sickness business under the Insurance Companies Act (Canada).

The Company also provides quota-share reinsurance to Partner Reinsurance Company of the U.S. (excluding its Canada Branch) for certain underwriting years prior to 2018. The agreements provided that the Company would accept a

45% participation for underwriting year 2017, 30% participation for underwriting years 2013 to 2016, and 25% participation for certain underwriting years prior to 2012.

In addition, the Company has stop loss agreements with PartnerRe Asia, Partner Reinsurance Company of the U.S., Partner Reinsurance Company of the U.S. Canada Branch and PartnerRe Ireland Insurance dac.

The activity included in the Consolidated Statements of Operations related to subsidiaries of the Parent for the years ended December 31, 2023, 2022 and 2021 was as follows (in thousands of U.S. dollars):

	2023	2022 [1]	2021 [1]
Gross premiums written	**$ 3,215,167**	$ 2,631,149	$ 2,701,441
Net premiums written	**$ 3,215,167**	$ 2,631,149	2,701,441
Net premiums earned	**$ 3,187,063**	$ 2,574,509	2,615,357
Net investment income on funds held	**$ 32,282**	$ 12,032	8,283
Losses and loss expenses	**$ 2,270,570**	$ 1,705,101	$ 1,801,183
Market risk benefit gains	**$ (4,876)**	$ (65,831)	$ (12,390)
Acquisition costs	**$ 683,958**	$ 586,848	$ 585,172

(1) Amounts have been adjusted to reflect the adoption of LDTI.

Included in the Consolidated Balance Sheets at December 31, 2023 and 2022 were the following balances related to subsidiaries of the Parent (in thousands of U.S. dollars):

	2023	2022 [1]
Reinsurance balances receivable	**$ 1,422,142**	$ 1,198,922
Funds held by reinsured companies	**$ 781,153**	$ 729,598
Deferred acquisition costs	**$ 423,767**	$ 400,706
Market risk benefit assets, at fair value	**$ 87,395**	$ 78,928
Non-life reserves	**$ 3,743,938**	$ 3,528,408
Life and health reserves	**$ 1,616,530**	$ 1,461,096
Market risk benefit liabilities, at fair value	**$ 3,037**	$ 5,718
Unearned premiums	**$ 919,981**	$ 880,547
Other reinsurance balances payable	**$ 109,872**	$ 130,285

(1) Amounts have been adjusted to reflect the adoption of LDTI.

Refer to Note 12 for details regarding the Company's business ceded to Lorenz Re.

(b) Amounts due to/from Related Parties and Loan Agreements

On November 19, 2020, the Company entered into an agreement with its Parent to sell the shares of its 100% interest in PartnerRe Capital Investments Corporation (PCIC) in exchange for a 10-year promissory note bearing interest at an annual rate of 4.4%. The carrying value of the investment at the time of sale, which approximated market value, was $458.5 million. At the time of sale, the carrying value of PCIC primarily consisted of investments in fixed maturities, cash and cash equivalents, other invested assets, and equities in the amounts of $327.6 million, $59.4 million, $52.0 million, and $26.3 million, respectively. The transaction was recognized as a sale of ownership interest between entities under common control at carrying amounts with no gain or loss recognized. At December 31, 2023 and 2022, the carrying value of the note receivable was $458.5 million, with accrued interest of $42.1 million and $21.9 million, respectively. Interest income for this loan was $20.2 million, $20.2 million, and $1.7 million for the years ended December 31, 2023, 2022 and 2021, respectively.

On December 28, 2022, the Company entered into an Inter-Company Revolving Loan Agreement with PartnerRe Ltd. (the Parent). The Company (Lender), extended to the Parent (Borrower) $744 million as at September 30, 2022 through a series of unsecured inter-company revolving loans (Existing Loans) as reflected in the financial statements of the Lender as intercompany receivable and in those of the Borrower as intercompany payable. In addition, the Lender and the Borrower agreed on additional loans totaling up to $356 million over the total outstanding amount of the Existing Loans to be used by the Borrower to finance the Borrower's business activities, to provide working capital for the Borrower, for general corporate purposes and for any other purpose permitted under the Agreement. The Lender has agreed to provide the Borrower Additional Loans which together with Existing Loans results in an unsecured inter-company revolving loan facility of up to $1.1 billion. The Revolving Loan matures at the earliest of: (a) the date upon which the Lender declares the outstanding Loan and all interest accrued thereon due and payable after the occurrence of an event of default; and (b) December 31, 2032. The Borrower will pay interest on the outstanding amount of the Loan on the maturity date. Interest will be calculated at 3-month secured overnight financing rate for such Business Day published by the Federal Reserve Bank of New York plus 160 bps. Interest will accrue quarterly on the outstanding amount of the Loan and calculated on the basis of the actual number of days elapsed and a 365 year. At December 31, 2022, the carrying value of the Revolving Loan receivable was $776.4 million with interest income and accrued interest of $nil for 2022 and included $32.1 million advances to affiliates primarily related to amounts advanced to or paid on behalf of the parent. On December 5, 2023, the Company declared a dividend of $375 million to the Parent, the proceeds of which together with additional funding provided by the Parent were used as partial repayment of the loan balance. As a result, at December 31, 2023, the carrying value of the Revolving Loan receivable was $287.0 million. Interest income of $52.0 million was recorded for the year ended December 31, 2023, with the same amount recorded as accrued interest at December 31, 2023.

As at December 31, 2023 and 2022, the Company had $107.3 million and $32.1 million other advances to affiliates primarily related to amounts advanced to or paid on behalf of its Parent, respectively.

The Company had other liabilities to affiliates totaling $79.4 million and $109.1 million, respectively, at December 31, 2023 and 2022. These represent expenses incurred in the normal course of operations.

(c) Service Agreements

In the normal course of its operations, the Company entered into service agreements with other subsidiaries of the Parent. Revenues earned under the service agreements for each of the years ended December 31, 2023, 2022 and 2021 were $0.8 million, $0.7 million and $0.4 million, respectively. Expenses incurred under the service agreements for the years ended December 31, 2023, 2022 and 2021 were $9.4 million, $8.5 million and $9.9 million, respectively.

(d) Transaction with EXOR

Prior to the acquisition of the Parent's common shares by Covéa Coopérations, EXOR was a related party to the Company. The following transactions occurred during EXOR's ownership of the Company.

In the normal course of its investment operations, the Company bought or held securities of companies affiliated with the Company, including the following:

- In 2021, the Company invested in two Exor managed funds. Net unrealized losses related to these funds of $72 million were recorded in the Consolidated Statements of Operations for the year ended December 31, 2022 (including $34 million pre-acquisition), compared to net unrealized gains of $115 million for the year ended December 31, 2021.
- In 2018, the Company entered into an agreement with Exor to invest in a newly formed limited partnership, Exor Seeds L.P. During 2021, the Company sold its interest in Exor Seeds L.P. to Exor S.A. at a transaction price of $51 million.
- In 2017, the Company invested $500 million in two Exor managed equity funds. In conjunction with the Covéa acquisition in 2022, the Company sold a portion of these funds to EXOR for total consideration of $772 million resulting in a realized gain of $450 million, the majority of which was included in unrealized gains in prior periods. Net realized and unrealized investment gains related to these funds of $40 million (including $24 million of losses pre-acquisition) and $115 million were recorded in the Consolidated Statements of Operations for the years ended December 31, 2022 and 2021, respectively.

Following the acquisition of the Parent's common shared by Covéa Coopérations, EXOR is no longer a related party to the Company.

(e) Transactions with Covéa

Covéa Coopérations is part of the Covéa Group, which meets the definition of a related party. In this context, the Covéa Group covers Covéa (the parent company of the Covéa Group, whose legal form is "SGAM" i.e. a mutual insurance group company), its affiliated mutual companies, Covéa Coopérations, and their subsidiaries and affiliates included in their consolidated financial statements.

During 2023, a deemed dividend of $13.2 million was paid to Covéa Coopérations related to the Company acquiring renewal rights associated with an identified set of reinsurance treaties written by Covéa Coopérations.

In the normal course of its underwriting activities, the Company entered into assumed reinsurance agreements with certain affiliates of Covéa Group.

Included in the Consolidated Statements of Operations for the year ended December 31, 2023 were the following transactions related to the Covéa Group (in thousands of U.S. dollars):

		2023
Gross premiums written	**$**	**2,772**
Losses and loss expenses and life policy benefits	**$**	**10,371**

Included in the Consolidated Balance Sheets at December 31, 2023 and 2022 were the following balances related to the Covéa Group (in thousands of U.S. dollars):

		2023		2022
Reinsurance balances receivable	**$**	**909**	$	275
Non-life reserves	**$**	**65,018**	$	57,672

Upon close of the acquisition of the Parent by Covéa Coopérations in 2022, the Covéa Group sold its interest in the Company's third-party capital vehicles.

(f) Other

On February 15, 2022, the Company entered into an Assumption Reinsurance Agreement with PartnerRe Canada to transfer all the remaining insurance contract liabilities in the Company's Canadian Branch (the "Branch"). Under the agreement, all of the Branch's policy liabilities were effectively transferred to PartnerRe Canada making it directly liable to the policyholder following the transaction. The retrocession agreement between the Branch and PartnerRe Life (PRLCBL) was also amended to reinsure the related business from PartnerRe Canada to the Company at a 90% quota share, and PRLCBL was merged into the Company effective on the same date. Contemporaneously, the Company executed a Business Transfer Agreement with PartnerRe Canada that transferred all the remaining invested assets (other than the Branch's statutory capital) from the Branch to PartnerRe Canada. PartnerRe Canada issued preferred shares to the Company as consideration for the invested assets. As a result, the Company held 150,000,000 preference shares series A in the capital of PartnerRe Canada. Invested assets of $117.8 million were transferred in exchange for preferred shares of $117.8 million. This is a change in legal organization but not a change in the reporting entity.

On March 11, 2022, the Branch filed an initial application for the release of the Branch's assets in Canada and to terminate the Branch's insurance business in Canada with OSFI. On August 24, 2022, OSFI approved the Branch's application of Release of assets in Canada. On September 16, 2022, the Branch cancelled its Ontario Insurance license with Financial Services Regulatory Authority of Ontario, Canada.

On November 30, 2022, the Company's Board approved an in specie dividend of preference share series A of PartnerRe Canada. Upon board approval, the Company transferred and assigned by way of dividend in specie the preference shares in PartnerRe Canada to PartnerRe Ltd. (the Parent). The Company recorded $110.6 million dividend declared and a consequent reduction to investment in subsidiaries.

20. Subsequent Events

On April 8, 2024, the Company's Board of Directors declared a dividend of $50 million.

The Company has evaluated subsequent events from the balance sheet date through to April 30, 2024, which is the date the consolidated financial statements were available to be issued. Other than the items described above, there were no other material subsequent events arising during this period.