MARKEL BERMUDA LIMITED

Financial Statements

December 31, 2023 and 2022

KPMG LLP
Suite 2000
1021 East Cary Street
Richmond, VA 23219-4023

Independent Auditors’ Report

To the Shareholder and Board of Directors
Markel Bermuda Limited:

Opinion

We have audited the financial statements of Markel Bermuda Limited (the Company), which comprise the balance sheets as of December 31, 2023 and 2022, and the related statements of income (loss) and comprehensive income (loss), changes in shareholder’s equity, and cash flows for the years then ended, and the related notes to the financial statements.

In our opinion, the accompanying 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 U.S. generally accepted accounting principles.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditors’ Responsibilities for the Audit of the 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 audits. 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 Financial Statements

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

In preparing the 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 that the financial statements are available to be issued.

Auditors’ Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an 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 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 judgment made by a reasonable user based on the financial statements.

KPMG

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the 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 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 financial statements.
- Conclude whether, in our judgment, 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 Supplementary Information

Management has omitted certain disclosures related to short-duration insurance contracts that U.S. generally accepted accounting principles require to be presented to supplement the basic financial statements. Such missing information, although not a part of the basic 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 financial statements in an appropriate operational, economic, or historical context. Our opinion on the basic financial statements is not affected by this missing information.

KPMG LLP

Richmond, Virginia
April 23, 2024

MARKEL BERMUDA LIMITED
BALANCE SHEETS

	December 31, 2023	December 31, 2022 (Restated)
	(dollars in thousands)	
ASSETS		
Investments, at estimated fair value:		
Fixed maturity securities, available-for-sale (amortized cost of $2,381,019 in 2023 and $1,971,920 in 2022)	$ 2,358,479	$ 1,853,217
Equity securities (cost of $865,368 in 2023 and $883,311 in 2022)	2,160,813	1,771,161
Short-term investments, available-for-sale (estimated fair value approximates cost)	204,511	286,172
Total Investments	4,723,803	3,910,550
Cash and cash equivalents	297,725	513,996
Restricted cash and cash equivalents	69,670	143,298
Premiums receivable	894,273	868,186
Reinsurance recoverables	1,269,589	1,211,149
Deferred policy acquisition costs	159,820	189,007
Prepaid reinsurance premiums	362,130	240,425
Due from affiliates, net	250,618	324,045
Other assets	137,981	81,616
Total Assets	$ 8,165,609	$ 7,482,272
LIABILITIES		
Unpaid losses and loss adjustment expenses	$ 3,851,260	$ 3,723,144
Life and annuity benefits	614,218	616,378
Unearned property and casualty premiums	1,059,168	934,978
Payables to insurance and reinsurance companies	64,277	90,348
Other liabilities	278,533	206,218
Total Liabilities	5,867,456	5,571,066
SHAREHOLDER'S EQUITY		
Common stock (par value $1.00 per share); 58,829,354 shares issued and outstanding	58,829	58,829
Additional paid-in capital	1,217,589	1,217,589
Retained earnings	966,044	636,532
Accumulated other comprehensive income (loss)	55,691	(1,744)
Total Shareholder's Equity	2,298,153	1,911,206
Total Liabilities and Shareholder's Equity	$ 8,165,609	$ 7,482,272

See accompanying notes to financial statements.

MARKEL BERMUDA LIMITED
STATEMENTS OF INCOME (LOSS) AND COMPREHENSIVE INCOME (LOSS)

	Years Ended December 31, 2023	2022 *(Restated)*
	(dollars in thousands)	
REVENUES		
Earned premiums	$ 1,313,871	$ 1,218,458
Net investment income	99,241	72,333
Net investment gains (losses)	407,281	(385,197)
Other revenues	21,256	17,926
Total Revenues	1,841,649	923,520
LOSSES AND EXPENSES		
Losses and loss adjustment expenses	803,625	684,439
Claims and policy benefits	19,327	20,689
Acquisition costs	407,750	397,708
General and administrative expenses	42,141	47,531
Net foreign exchange losses (gains)	27,387	(37,252)
Interest expense	187	442
Total Losses and Expenses	1,300,417	1,113,557
Income (Losses) Before Income Taxes	541,232	(190,037)
Income tax expense (benefit)	111,720	(43,033)
Net Income (Loss)	$ 429,512	$ (147,004)
OTHER COMPREHENSIVE INCOME (LOSS)		
Change in net unrealized gains (losses) on available-for-sale investments, net of taxes:		
Net holdings gains (losses) arising during the period	$ 69,098	$ (293,473)
Reclassification adjustments for net gains included in net income (loss)	6,887	2,548
Change in net unrealized gains (losses) on available-for-sale investments, net of taxes	75,985	(290,925)
Change in discount rate for life and annuity benefits, net of taxes	(18,550)	158,130
Total Other Comprehensive Income (Loss)	$ 57,435	$ (132,795)
Comprehensive Income (Loss)	$ 486,947	$ (279,799)

See accompanying notes to financial statements.

MARKEL BERMUDA LIMITED
STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY

(dollars in thousands)	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Shareholders Equity
December 31, 2021	$ 58,829	$ 1,157,948	$ 787,284	$ 107,547	$ 2,111,608
Cumulative effects of adoption of ASU No. 2018-12	—	—	(3,748)	23,504	19,756
January 1, 2022	58,829	1,157,948	783,536	131,051	2,131,364
Net loss	—	—	(147,004)	—	(147,004)
Other comprehensive loss	—	—	—	(132,795)	(132,795)
Comprehensive income (loss)					(279,799)
Capital contribution from parent	—	59,641	—	—	59,641
December 31, 2022 *(restated)*	58,829	1,217,589	636,532	(1,744)	1,911,206
Net income	—	—	429,512	—	429,512
Other comprehensive income	—	—	—	57,435	57,435
Comprehensive income					486,947
Dividend	—	—	(100,000)	—	(100,000)
December 31, 2023	$ 58,829	$ 1,217,589	$ 966,044	$ 55,691	$ 2,298,153

See accompanying notes to financial statements.

MARKEL BERMUDA LIMITED
STATEMENTS OF CASH FLOWS

	Years Ended December 31, 2023	2022 (Restated)
	(dollars in thousands)	
OPERATING ACTIVITIES		
Net Income (Loss)	$ 429,512	$ (147,004)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Net investment (gains) losses	(407,281)	385,197
Net Foreign exchange (gains) losses	27,387	(37,252)
Deferred tax expense (benefit)	70,082	(76,168)
Amortization of fixed maturity and short-term investment net (discounts) premiums	(7,783)	5,546
Credit loss expense - reinsurance recoverables	64,086	4,820
Increase in premium receivable	(23,709)	(162,907)
Increase in reinsurance recoverables	(122,726)	(369,648)
Increase in deferred policy acquisition costs	29,915	(25,167)
Increase in prepaid reinsurance premiums	(121,675)	(112,360)
Decrease (increase) in due from affiliates	3,453	(12,811)
Increase in other assets	(32,960)	(14,699)
Increase in unpaid losses and loss adjustment expenses	112,522	517,980
Decrease in life and annuity benefits	(43,188)	(36,423)
Increase in unearned property and casualty premiums	120,644	203,011
(Decrease) Increase in payables to insurance and reinsurance companies	(26,484)	26,269
(Decrease) Increase in other liabilities	(10,947)	929
Other	286	(6,514)
Net Cash Provided By Operating Activities	61,134	142,799
INVESTING ACTIVITIES		
Proceeds from sales, maturities, calls and prepayments of fixed maturity securities	67,854	—
Cost of fixed maturity securities purchased	(721,334)	(126,435)
Proceeds from sales of equity securities	67,972	57,330
Cost of equity securities purchased	(41,636)	(36,104)
Redemptions of fixed maturities, available for sale	209,409	120,676
Net change in short-term investments	91,981	(284,343)
Proceeds from redemption of investments in affiliates	—	5,385
Due from affiliates	70,000	5,000
Other	—	5,404
Net Cash Used By Investing Activities	(255,754)	(253,087)
FINANCING ACTIVITIES		
Dividend Paid	(100,000)	—
Other	(2,966)	(3,109)
Net Cash Used By Financing Activities	(102,966)	(3,109)
Effect of foreign currency rate changes on cash, cash equivalents, restricted cash and restricted cash equivalents	7,687	(28,657)
Decrease in cash, cash equivalents, restricted cash and restricted cash equivalents	(289,899)	(142,054)
Cash, cash equivalents, restricted cash and restricted cash equivalents at beginning of year	657,294	799,348
CASH, CASH EQUIVALENTS, RESTRICTED CASH AND RESTRICTED CASH EQUIVALENTS AT END OF YEAR	$ 367,395	$ 657,294
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION		
Taxes paid	$ (50,938)	$ (28,243)

See accompanying notes to financial statements.

NOTES TO FINANCIAL STATEMENTS

1. General

Markel Bermuda Limited ("Markel Bermuda" or "the Company") was incorporated on August 20, 1999 and is registered as both a Class 4 commercial insurer and Class C long-term insurer under the insurance laws of Bermuda. The Company's ultimate parent company is Markel Group Inc., formerly Markel Corporation. Effective May 26, 2023, Markel Corporation changed its name to Markel Group Inc. (Markel Group). The Markel Group is a publicly traded holding company (NYSE: MKL), headquartered in Richmond, Virginia, which is comprised of a diverse group of companies and investments with specialty insurance at its core. The Company provides diversified specialty insurance and reinsurance products to corporations, public entities and property and casualty insurers, and serves as a platform to front business for Markel Group's insurance-linked securities (ILS) operations.

2. Summary of Significant Accounting Policies

a) Basis of Presentation. The accompanying financial statements have been prepared in accordance with United States (U.S.) generally accepted accounting principles (GAAP). Certain prior period amounts have been reclassified to conform to the current period presentation.

b) Use of Estimates. The preparation of financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities. Management periodically reviews its estimates and assumptions. Quarterly reviews include evaluating the adequacy of reserves for unpaid losses and loss adjustment expenses, and contingencies. Actual results may differ materially from the estimates and assumptions used in preparing the financial statements.

c) Investments. Available-for-sale investments and equity securities are recorded at estimated fair value. Available-for-sale investments include fixed maturity securities and short-term investments. Fixed maturity securities include government and municipal bonds and mortgage-backed securities with original maturities of more than one year. Short-term investments are comprised of treasury bills with original maturities of one year or less.

Realized investment gains or losses on available-for-sale investments are included in net income. Realized gains or losses from sales of available-for-sale investments are derived using the first-in, first-out method on the trade date. Unrealized gains and losses on available-for-sale investments, net of income taxes, are included in other comprehensive income. The Company completes a detailed analysis each quarter to assess declines in the fair value of its available-for-sale investments. Any credit-related impairment losses on the Company's available-for-sale investments are recorded as an allowance, subject to reversal, and recognized in net income. Realized and unrealized gains and losses on equity securities, net of income taxes, are included in net income as net investment gains or losses.

Premiums and discounts are amortized or accreted over the lives of the related fixed maturity securities as an adjustment to the yield using the effective interest method. Dividend and interest income are recognized when earned. Accrued interest receivable is excluded from both the estimated fair value and the amortized cost basis of available-for-sale securities and included within other assets on the Company's balance sheets. Any uncollectible accrued interest receivable is written off in the period it is deemed uncollectible.

See note 3 and 4 for further details regarding the Company's investment portfolio.

d) Cash and Cash Equivalents. The Company considers all investments with original maturities of 90 days or less to be cash equivalents, with the exception of treasury bills which are treated as short-term investments. The carrying value of the Company's cash and cash equivalents approximates fair value.

e) Restricted Cash and Cash Equivalents. Cash and cash equivalents that are restricted as to withdrawal or use are recorded as restricted cash and cash equivalents. The carrying value of the Company's restricted cash and cash equivalents approximates fair value.

f) Premium Receivables. Premium receivables include amounts receivable from agents, brokers and insureds, which represent premiums that are both currently due and amounts not yet due on insurance and reinsurance policies. Premiums for insurance policies are generally due at inception. Premiums for reinsurance policies generally become due over the period of coverage based on the policy terms. Changes in the estimate of reinsurance premiums written will result in an adjustment to premiums receivable in the period they are determined.

The Company monitors credit risk associated with receivables, taking into consideration the fact that in certain instances in the Company's insurance operations credit risk may be reduced by the Company's right to offset loss obligations or unearned premiums against premiums receivable. An allowance is established for credit losses expected to be incurred over the life of the receivable, which is recorded net of this allowance. The allowance is charged to net income in the period the receivable is recorded and revised in subsequent periods to reflect changes in the Company's estimate of expected credit losses. The allowance for credit losses associated with the Company's receivables did not have a material impact on the Company's result of operations or cash flows.

g) Reinsurance Recoverables. Amounts recoverable from reinsurers are estimated in a manner consistent with the claim liability associated with the reinsured business. The Company evaluates the financial condition of its reinsurers and monitors concentration of credit risk to minimize its exposure to significant losses from individual reinsurers. To further reduce credit exposure on reinsurance recoverables, the Company has received collateral, including letters of credit and trust accounts, from certain reinsurers. Cash collateral related to these reinsurance agreements is available, without restriction, when the Company pays losses covered by the reinsurance agreements. An allowance is established for credit losses expected to be incurred over the life of the reinsurance recoverable, which is recorded net of this allowance. The allowance is charged to net income in the period the recoverable is recorded and revised in subsequent periods to reflect changes in the Company's estimate of expected credit losses. The allowance for credit losses associated with the Company's reinsurance recoverables was $71.5 million and $7.5 million as of December 31, 2023 and 2022, respectively. See note 5 for further details on the allowance for credit losses.

h) Deferred Policy Acquisition Costs. Costs directly related to the acquisition of insurance and reinsurance premiums are deferred and amortized over the related policy period, generally one year. The Company only defers acquisition costs incurred that are related directly to the successful acquisition of new or renewal insurance contracts, including commissions to agents and brokers, salaries and benefits and premium taxes. Commissions received related to reinsurance premiums ceded are netted against broker commissions in determining acquisition costs eligible for deferral. To the extent that future policy revenues on existing policies are not adequate to cover related costs and expenses, deferred policy acquisition costs are charged to earnings. The Company does not consider anticipated investment income in determining whether a premium deficiency exists. In December 2023, the Company determined that it's Professional liability line of business within the insurance operations had a premium deficiency of $69.5M, which resulted in $33.3 million of deferred policy acquisition costs and $36.2 million of premium deficiency reserve being expensed to Acquisition costs and Losses and loss adjustment expenses, respectively. Refer to note 5 for further details on premium deficiency reserve.

i) Income Taxes. The Company records deferred income taxes to reflect the net tax effect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and their tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in years in which those temporary differences are expected to be recovered or settled. Deferred tax assets are reduced by a valuation allowance when management believes it is more likely than not that some, or all, of the deferred tax assets will not be realized. The Company recognizes the tax benefit from an uncertain tax position taken or expected to be taken in income tax returns only if it is more likely than not that the tax position will be sustained upon examination by tax authorities, based on the technical merits of the position. Tax positions that meet the more likely than not threshold are then measured using a probability weighted approach, whereby the largest amount of tax benefit that is greater than 50% likely of being realized upon ultimate settlement is recognized. The Company recognizes interest and penalties related to uncertain tax positions in income tax expense. See note 8 for further details regarding income taxes.

j) Unpaid Losses and Loss Adjustment Expenses. Unpaid losses and loss adjustment expenses on the Company's property and casualty insurance business are based on evaluations of reported claims and estimates for losses and loss adjustment expenses incurred but not reported. Estimates for losses and loss adjustment expenses incurred but not reported are based on reserve development studies, among other things. Recorded reserves are estimates, and the ultimate liability may be greater or less than the estimates. See note 5 for further details regarding unpaid losses and loss adjustment expenses.

k) Life and Annuity Benefits. The Company has a run-off block of life and annuity reinsurance contracts that subject the Company to mortality, longevity and morbidity risks. Effective January 1, 2023, the Company adopted Financial Accounting Standards Board (FASB) Accounting Standards Update (ASU) No. 2018-12, *Financial Services—Insurance (Topic 944): Targeted Improvements to the Accounting for Long-Duration Contracts* and restated the prior period to reflect the new accounting standard. See note 1q for the impact of the restatement. The primary component of the Company's liabilities for life and annuity benefits is the present value of the liability for future policyholder benefits. The cash flow assumptions used to determine the policyholder benefit reserves are reviewed, and updated as necessary, at least annually. Interest accretion for the reserves is calculated using the discount rate locked-in at contract inception. Policy benefit reserves are remeasured each period using current discount rates, based on yields for upper-medium grade fixed maturity securities, with the impact of changes in the discount rate included in other comprehensive income, net of taxes. All other results attributable to the run-off of life and annuity reinsurance contracts are included in other revenues and other expenses in the statements of income and comprehensive income. Investment income earned on the investments that support the policy benefit reserves are included in net investment income. Because of the uncertainty in the assumptions used to estimate reserves for life and annuity benefit obligations and the long-term nature of these reinsurance contracts, the ultimate liability may be greater or less than the estimated liability. See note 7 for further details regarding life and annuity benefits.

l) Revenue Recognition.

Property and Casualty Premiums

Insurance premiums written are generally recorded at the inception of a policy and earned on a pro rata basis over the policy period, typically one year. The cost of reinsurance ceded is initially recorded as prepaid reinsurance premiums and is amortized over the reinsurance contract period in proportion to the amount of insurance protection provided. Premiums ceded are netted against premiums written. For multi-year contracts where insurance premiums are payable in annual installments, written premiums are recorded at the inception of the contract based on management’s best estimate of total premiums to be received. For contracts where the cedent has the ability to unilaterally commute or cancel coverage within the term of the policy, premiums are generally recorded on an annual basis or up to the contract cancellation point. The remaining premiums are estimated and included as written at each successive anniversary date within the multi-year term.

Assumed reinsurance premiums are recorded at the inception of each contract based upon contract terms and information received from cedents and brokers and are earned on a pro rata basis over the coverage period, or for multi-year contracts, in proportion with the underlying risk exposure to the extent there is variability in the exposure through the coverage period. Changes in reinsurance premium estimates are expected and may result in significant adjustments in any period. These estimates change over time as additional information regarding changes in underlying exposures is obtained. Any subsequent differences arising on such estimates are recorded as premiums written in the period they are determined and are earned on a pro rata basis over the coverage period, or immediately if the coverage period has ended. The Company uses the periodic method to account for assumed reinsurance from foreign reinsurers as a result of the sufficiency of the information provided by the reinsurer, which is consistent with its accounting for assumed reinsurance from U.S. reinsurers.

Certain contracts that the Company writes provide for reinstatement of coverage. Reinstatement premiums are the premiums for the restoration of the insurance or reinsurance limit of a contract to its full amount after a loss occurrence by the insured or reinsured. The Company accrues for reinstatement premiums resulting from losses recorded. Such accruals are based upon contractual terms and management judgment is involved with respect to the amount of losses recorded. Changes in estimates of losses recorded on contracts with reinstatement premium features will result in changes in reinstatement premiums based on contractual terms. Reinstatement premiums are recognized as premiums written at the time losses are recorded and are generally earned on a pro rata basis over the remaining coverage period.

Other Revenues

Fronting fees are received based on the gross premiums written on behalf of Markel Group's ILS operations. Fronting fees are earned in a manner consistent with the recognition of the gross premiums earned on the underlying insurance or reinsurance policies.

Deposits

Long duration contracts written by the Company that do not transfer significant mortality or morbidity risks are accounted for as deposits. The Company periodically reassesses the amount of deposit liabilities. Changes to the estimated ultimate liability are recognized as an adjustment to earnings to reflect the cumulative effect since the inception of the contract. For certain contracts the future accretion rate of the liability is also adjusted over the remaining estimated contract term.

m) Fronting operations. The Company enters into contractual agreements with ceding insurers and reinsurers and assuming reinsurers that are associated with Markel Group's ILS operations and program services business, whereby the ceding insurers and reinsurers and assuming reinsurers are typically only obligated to each other for payment of losses. Therefore, no receivables or payables are recorded for premiums or commissions. All loss obligations of the Company to or on behalf of its policyholders are recorded by the Company and, to the extent appropriate, offsetting reinsurance recoverables are recorded.

n) Leases. The present value of future lease payments for the Company's lease with terms greater than 12 months is included on the balance sheet as lease liabilities and right-of-use lease assets within other liabilities and other assets, respectively.

The Company has one operating lease for real estate. Total expected lease payments are based on the lease payments specified in the contract and the stated term, including any options to extend or terminate that the Company is reasonably certain to exercise. The Company accounts for lease components and any associated non-lease components within a contract as a single lease component, and therefore allocates all of the expected lease payments to the lease component.

The lease liability, which represents the Company's contractual obligation to make lease payments, is calculated based on the present value of expected lease payments over the remaining lease term, discounted using the Company's collateralized incremental borrowing rate at the lease commencement date. The lease liability is then adjusted for any prepaid rent, lease incentives received or capitalized initial direct costs to determine the lease asset, which represents the Company's right to use the underlying asset for the lease term.

Total lease costs are primarily comprised of rental expense for operating leases, which is recognized on a straight line basis over the lease term. Rental expense attributable to the Company's underwriting operations is included in underwriting, acquisition and insurance expenses. See note 12 for further details regarding leases.

o) Foreign Currency Translation. The U.S. Dollar is the Company's reporting and functional currency.

Foreign currency transaction gains and losses are the result of exchange rate changes on transactions denominated in currencies other than the functional currency. Monetary assets and liabilities are remeasured to the functional currency at current exchange rates, with resulting gains and losses included in net foreign exchange gains within net income. Non-monetary assets and liabilities are remeasured to the functional currency at historic exchange rates. Available-for-sale securities are recorded at fair value with resulting gains and losses, including the portion attributable to movements in exchange rates, included in the change in net unrealized gains on available-for-sale investments, net of taxes within other comprehensive income. While the Company attempts to naturally hedge our exposure to foreign currency fluctuations by matching assets and liabilities in the same currencies, there is a financial statement mismatch between the gains or losses recorded in net income related to insurance reserves denominated in non-functional currencies and the gains or losses recorded in other comprehensive income related to the available-for-sale securities held in non-functional currencies supporting the reserves.

p) Comprehensive Income (Loss). Comprehensive income represents all changes in equity that result from recognized transactions and other economic events during the period. Other comprehensive income refers to revenues, expenses, gains and losses that under U.S. GAAP are included in comprehensive income but excluded from net income, such as unrealized gains or losses on available-for-sale investments and changes in discount rate of life and annuity benefits.

q) Recent Accounting Pronouncements.

Accounting Standards Adopted in 2023

Effective January 1, 2023, the Company adopted ASU No. 2018-12 and several ASUs issued as amendments to ASU No. 2018-12. This standard requires insurance companies with long duration contracts to: (1) review and, if there is a change, update the assumptions used to measure expected cash flows at least annually; (2) update the discount rate assumption at each reporting date; and (3) enhance certain qualitative and quantitative disclosures. ASU No. 2018-12 was applied using a modified retrospective approach that required restatement of prior periods presented, including a cumulative adjustment recorded to accumulated other comprehensive income as of January 1, 2022 (the transition date) as a result of updating the discount rate assumption. At the transition date, the adoption of ASU 2018-12 resulted in a decrease to retained earnings of $3.7 million, net of taxes, but resulted in an increase to accumulated other comprehensive income, net of taxes, of $23.5 million, which was comprised of the following corresponding adjustments to life and annuity benefits and deferred tax liabilities.

(dollars in thousands)	January 1, 2022
Reverse reserve deficiency adjustment related to unrealized gains on underlying investment portfolio of available-for-sale securities	$ 201,327
Apply updated discount rate to the liability for future policyholder benefits	(171,573)
Decrease in life and annuity benefits	29,754
Increase in deferred tax liability	(6,250)
Increase in accumulated other comprehensive income, net of taxes	$ 23,504

The impact of changes in the discount rate on the liability for future policyholder benefits following the transition date are included in other comprehensive income in the respective periods and, combined with the transition adjustment, resulted in the following cumulative changes to the Company's previously presented balance sheet.

(dollars in thousands)	December 31, 2022
Decrease in life and annuity benefits	$ 28,591
Increase in deferred tax liability	(6,004)
Decrease in accumulated other comprehensive loss, net of taxes	$ 22,587

Changes in the discount rate on the liability for future policyholder benefits also resulted in a decrease of $0.9 million to the other comprehensive loss previously presented in 2022, which was comprised of the following adjustments.

(dollars in thousands)	Year Ended December 31, 2022
Reverse benefit included in change in net unrealized gains (losses) on available-for-sale-investments, net of taxes, related to reversal of previously recognized reserve deficiency adjustment	$ (159,048)
Change in discount rate for life and annuity benefits, net of taxes	158,130
Decrease in other comprehensive loss, net of taxes	$ (918)

The adoption of other provisions of this ASU did not have a material impact on the Company's financial position, results of operations or cash flows for any of the periods presented.

Accounting Standards Not Yet Adopted

In December 2023, the FASB issued ASU No. 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures. The standard requires entities other than public business entities, on an annual basis, to provide qualitative disclosures of specific categories and additional information for reconciling items and individual jurisdictions that result in a significant difference between the statutory tax rate and the effective tax rate. The standard also requires companies to, among other things, disaggregate income taxes paid by federal, state and foreign taxes. ASU No. 2023-09 becomes effective for the Company in the first quarter of 2026, but will be adopted in conjunction with the Markel Group in the first quarter of 2025. The standard will not impact the Company's financial position, results of operations or cash flows.

3. Investments

a) The following tables summarize the Company's available-for-sale investments. Commercial and residential mortgage-backed securities include securities issued by U.S. government-sponsored enterprises and U.S. government agencies. The net unrealized holding gains (losses) in the tables below are presented before taxes.

	December 31, 2023			
(dollars in thousands)	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
Fixed maturity securities:				
U.S. Treasury securities	$ 423,167	$ 6,710	$ (8,072)	$ 421,805
U.S. government-sponsored enterprises	149,418	2,148	(4,337)	147,229
Obligations of states, municipalities and political subdivisions	434,994	3,677	(17,187)	421,484
Foreign governments	735,454	32,203	(22,706)	744,951
Commercial mortgage-backed securities	273,567	1,762	(17,520)	257,809
Residential mortgage-backed securities	111,770	150	(4,033)	107,887
Corporate bonds	252,649	9,361	(4,696)	257,314
Total fixed maturity securities	2,381,019	56,011	(78,551)	2,358,479
Short-term investments	204,484	27	—	204,511
Investments, available-for-sale	$ 2,585,503	$ 56,038	$ (78,551)	$ 2,562,990

	December 31, 2022			
(dollars in thousands)	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
Fixed maturity securities:				
U.S. Treasury securities	$ 313,795	$ —	$ (19,002)	$ 294,793
U.S. government-sponsored enterprises	108,291	561	(5,206)	103,646
Obligations of states, municipalities and political subdivisions	415,722	1,493	(24,394)	392,821
Foreign governments	620,639	9,597	(49,536)	580,700
Commercial mortgage-backed securities	244,723	—	(21,257)	223,466
Residential mortgage-backed securities	130,879	1	(5,225)	125,655
Corporate bonds	137,871	2,140	(7,875)	132,136
Total fixed maturity securities	1,971,920	13,792	(132,495)	1,853,217
Short-term investments	286,166	10	(4)	286,172
Investments, available-for-sale	$ 2,258,086	$ 13,802	$ (132,499)	$ 2,139,389

b) The following tables summarize gross unrealized investment losses on available-for-sale investments by the length of time that securities have continuously been in an unrealized loss position.

	December 31, 2023					
	Less than 12 months		12 months or longer		Total	
(dollars in thousands)	Estimated Fair Value	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Losses
Fixed maturity securities:						
U.S. Treasury securities	$ 46,301	$ (643)	$ 131,393	$ (7,429)	$ 177,694	$ (8,072)
U.S. government-sponsored enterprises	21,302	(49)	75,768	(4,288)	97,070	(4,337)
Obligations of states, municipalities and political subdivisions	23,121	(65)	246,707	(17,122)	269,828	(17,187)
Foreign governments	—	—	253,039	(22,706)	253,039	(22,706)
Commercial mortgage-backed securities	—	—	219,142	(17,520)	219,142	(17,520)
Residential mortgage-backed securities	10,440	(64)	92,478	(3,969)	102,918	(4,033)
Corporate bonds	19,365	(126)	47,159	(4,570)	66,524	(4,696)
Total fixed maturity securities	$ 120,529	$ (947)	$1,065,686	$ (77,604)	$1,186,215	$ (78,551)

At December 31, 2023, the Company held 191 available-for-sale securities in an unrealized loss position with a total estimated fair value of $1,186.2 million and gross unrealized losses of $78.6 million. Of these 191 securities, 168 securities had been in a continuous unrealized loss position for one year or longer and had a total estimated fair value of $1,065.7 million and gross unrealized losses of $77.6 million. The Company does not intend to sell or believe it will be required to sell these available-for-sale securities before recovery of their amortized cost.

	December 31, 2022					
	Less than 12 months		12 months or longer		Total	
(dollars in thousands)	Estimated Fair Value	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Losses
Fixed maturity securities:						
U.S. Treasury securities	$ 53,640	$ (2,059)	$ 241,154	$ (16,943)	$ 294,794	$ (19,002)
U.S. government-sponsored enterprises	91,445	(4,355)	6,235	(851)	97,680	(5,206)
Obligations of states, municipalities and political subdivisions	264,834	(18,057)	29,895	(6,337)	294,729	(24,394)
Foreign governments	334,865	(32,401)	85,567	(17,135)	420,432	(49,536)
Commercial mortgage-backed securities	158,213	(10,186)	65,253	(11,071)	223,466	(21,257)
Residential mortgage-backed securities	114,108	(5,132)	574	(93)	114,682	(5,225)
Corporate bonds	58,629	(4,448)	18,252	(3,427)	76,881	(7,875)
Total fixed maturity securities	1,075,734	(76,638)	446,930	(55,857)	1,522,664	(132,495)
Short-term investments	231,277	(4)	—	—	231,277	(4)
Total	$1,307,011	$ (76,642)	$ 446,930	$ (55,857)	$1,753,941	$(132,499)

At December 31, 2022, the Company held 208 available-for-sale securities in an unrealized loss position with a total estimated fair value of $1,753.9 million and gross unrealized losses of $132.5 million. Of these 208 securities, one security had been in a continuous unrealized loss position for one year or longer and had a total estimated fair value of $446.9 million and gross unrealized losses of $55.9 million. The Company does not intend to sell or believe it will be required to sell these available-for-sale securities before recovery of their amortized cost.

The Company completes a detailed analysis each quarter to assess whether the decline in the fair value of any investment below its cost basis is the result of a credit loss. All available-for-sale securities with unrealized losses are reviewed. The Company considers many factors in completing its quarterly review of securities with unrealized losses for credit-related impairment to determine whether a credit loss exists, including the extent to which fair value is below cost, the implied yield to maturity, rating downgrades of the security and whether or not the issuer has failed to make scheduled principal or interest payments. The Company also takes into consideration information about the financial condition of the issuer and industry factors that could negatively impact the issuer.

If the decline in fair value of an available-for-sale security below its amortized cost is considered to be the result of a credit loss, the Company compares the estimated present value of the cash flows expected to be collected to the amortized cost of the security. The extent to which the estimated present value of the cash flows expected to be collected is less than the amortized cost of the security represents the credit loss, which is recorded as an allowance and recognized in net income. The allowance is limited to the difference between the fair value and the amortized cost of the security. Any remaining decline in fair value represents the non-credit portion of the impairment, which is recognized in other comprehensive income (loss). The Company did not have an allowance for credit losses as of December 31, 2023 or 2022.

Quarterly, the Company also considers whether it intends to sell an available-for-sale security or if it is more likely than not that it will be required to sell a security before recovery of its amortized cost. In these instances, a decline in fair value is recognized in net income based on the fair value of the security at the time of assessment, resulting in a new cost basis for the security.

c) The following table sets forth certain information regarding the investment ratings of the Company's fixed maturity securities as of December 31, 2023 and 2022.

	Years Ended December 31,			
	2023	2023	2022	2022
(dollars in thousands)	Estimated Fair Value	%	Estimated Fair Value	%
AAA	$ 767,090	32.5	$ 557,182	30.1
AA	1,518,525	64.4	1,218,481	65.7
A	64,201	2.7	56,094	3.0
BBB	7,070	0.3	19,575	1.1
Not Rated	1,593	0.1	1,885	0.1
Total fixed maturity securities	$ 2,358,479	100.0	$ 1,853,217	100.0

d) The amortized cost and estimated fair value of fixed maturity securities at December 31, 2023 are shown below by contractual maturity.

(dollars in thousands)	Amortized Cost	Estimated Fair Value
Due in one year or less	$ 145,792	$ 143,235
Due after one year through five years	793,014	780,632
Due after five years through ten years	663,072	661,042
Due after ten years	393,804	407,874
	1,995,682	1,992,783
Commercial mortgage-backed securities	273,567	257,809
Residential mortgage-backed securities	111,770	107,887
Total fixed maturity securities	$ 2,381,019	$ 2,358,479

Expected maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without penalties, and the holders may have the right to put the securities back to the issuer. Based on expected maturities, the estimated average duration of fixed maturity securities at December 31, 2023 was 5.0 years.

e) The following table presents the components of net investment income.

	Years Ended December 31,	
(dollars in thousands)	2023	2022
Interest:		
Fixed maturity securities	$ 63,848	$ 52,951
Short-term investments	10,300	1,822
Cash and cash equivalents	13,010	2,789
Other investments	—	3,616
Loan to affiliates	10,960	11,053
Dividends on equity securities	25,965	24,002
Investment expenses	(24,842)	(23,900)
Net investment income	$ 99,241	$ 72,333

f) The following table presents the components of net investment gains (losses) included in net income (loss) and the change in net unrealized gains (losses) included in other comprehensive income (loss). Gross realized investment gains and losses on fixed maturity securities, short-term investments and other investments were not material to the financial statements and are presented on a net basis in the following table.

	Years Ended December 31,	
(dollars in thousands)	2023	2022
Fixed maturity securities, short-term investments and other investments:		
Net realized investment gains (losses)	$ (8,717)	$ 2,251
Equity securities:		
Change in fair value of securities sold during the period	10,062	4,993
Change in fair value of securities held at the end of the period	405,936	(392,441)
Total change in fair value	415,998	(387,448)
Net investment gains (losses)	$ 407,281	$ (385,197)
Change in net unrealized gains (losses) on available-for-sale investments included in other comprehensive income (loss):		
Fixed maturity securities	$ 96,163	$ (368,266)
Short-term investments	21	6
Net increase (decrease)	$ 96,184	$ (368,260)

g) Total restricted assets are included on the Company's balance sheets as follows.

	December 31,	
(dollars in thousands)	2023	2022
Fixed maturity securities	$ 1,519,125	$ 1,398,288
Equity securities	612,183	511,308
Short-term investments	194,511	216,392
Restricted cash and cash equivalents	69,670	143,298
Total	$ 2,395,489	$ 2,269,286

The following table presents the components of restricted assets.

(dollars in thousands)	December 31, 2023	December 31, 2022
Assets held in trust or on deposit to support underwriting activities	$ 2,073,745	$ 1,974,281
Assets pledged as security for letters of credit	321,744	295,005
Total	$ 2,395,489	$ 2,269,286

4. Fair Value Measurements

FASB ASC 820, *Fair Value Measurements and Disclosures,* establishes a three-level hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). If the inputs used to measure the assets or liabilities fall within different levels of the hierarchy, the classification is based on the lowest level input that is significant to the fair value measurement of the asset or liability.

Classification of assets and liabilities within the hierarchy considers the markets in which the assets and liabilities are traded and the reliability and transparency of the assumptions used to determine fair value. The hierarchy requires the use of observable market data when available. The levels of the hierarchy are defined as follows:

- Level 1 — Inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities traded in active markets.
- Level 2 — Inputs to the valuation methodology include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability and market-corroborated inputs.
- Level 3 — Inputs to the valuation methodology are unobservable for the asset or liability and are significant to the fair value measurement.

In accordance with ASC 820, the Company determines fair value based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In determining fair value, the Company uses various methods, including the market, income and cost approaches. The Company uses valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs. The following section describes the valuation methodologies used by the Company to measure assets and liabilities at fair value, including an indication of the level within the fair value hierarchy in which each asset or liability is generally classified.

Available-for-sale investments and equity securities. Available-for-sale investments and equity securities are recorded at fair value on a recurring basis. Available-for-sale investments include fixed maturity securities and short-term investments. Fair value is determined by the Company after considering various sources of information, including information provided by a third party pricing service. The pricing service provides prices for substantially all of the Company's fixed maturity securities and equity securities. In determining fair value, the Company generally does not adjust the prices obtained from the pricing service. The Company obtains an understanding of the pricing service's valuation methodologies and related inputs, which include, but are not limited to, reported trades, benchmark yields, issuer spreads, bids, offers, duration, credit ratings, estimated cash flows and prepayment speeds. The Company validates prices provided by the pricing service by reviewing prices from other pricing sources and analyzing pricing data in certain instances.

The Company has evaluated the various types of securities in its investment portfolio to determine an appropriate fair value hierarchy level based upon trading activity and the observability of market inputs. Level 1 investments include those traded on an active exchange, such as the New York Stock Exchange. Level 2 investments include U.S. Treasury securities, U.S. government-sponsored enterprises, municipal bonds, foreign government bonds, commercial mortgage-backed securities, residential mortgage-backed securities, and corporate debt securities. Level 3 investments previously included the Company's investments in Markel CATCo Funds that are in run-off, which are not traded on an active exchange and are valued using unobservable inputs.

Fair value for available-for-sale investments and equity securities is measured based upon quoted prices in active markets, if available. Due to variations in trading volumes and the lack of quoted market prices, fixed maturity securities are classified as Level 2 investments. The fair value of fixed maturity securities is normally derived through recent reported trades for identical or similar securities, making adjustments through the reporting date based upon available market observable data previously discussed. If there are no recent reported trades, the fair value of fixed maturity securities may be derived through the use of matrix pricing or model processes, where future cash flow expectations are developed based upon collateral performance and discounted at an estimated market rate. Significant inputs used to determine the fair value of obligations of states, municipalities and political subdivisions, corporate bonds and obligations of foreign governments include reported trades, benchmark yields, issuer spreads, bids, offers, credit information and estimated cash flows. Significant inputs used to determine the fair value of commercial mortgage-backed securities, and residential mortgage-backed securities include the type of underlying assets, benchmark yields, prepayment speeds, collateral information, tranche type and volatility, estimated cash flows, credit information, default rates, recovery rates, issuer spreads and the year of issue.

The following tables present the balances of assets measured at fair value on a recurring basis by level within the fair value hierarchy.

	December 31, 2023			
(dollars in thousands)	Level 1	Level 2	Level 3	Total
Fixed maturity securities, available-for-sale:				
U.S. Treasury securities	$ —	$ 421,805	$ —	$ 421,805
U.S. government-sponsored enterprises	—	147,229	—	147,229
Obligations of states, municipalities and political subdivisions	—	421,484	—	421,484
Foreign governments	—	744,951	—	744,951
Commercial mortgage-backed securities	—	257,809	—	257,809
Residential mortgage-backed securities	—	107,887	—	107,887
Corporate bonds	—	257,314	—	257,314
Total fixed maturity securities, available-for-sale	—	2,358,479	—	2,358,479
Equity securities:				
Insurance, banks and other financial institutions	760,514	—	—	760,514
Industrial, consumer and all other	1,400,299	—	—	1,400,299
Total equity securities	2,160,813	—	—	2,160,813
Short-term investments, available-for-sale	204,511	—	—	204,511
Total investments	$ 2,365,324	$ 2,358,479	$ —	$ 4,723,803

(dollars in thousands)	December 31, 2022 Level 1	Level 2	Level 3	Total
Fixed maturity securities, available-for-sale:				
U.S. Treasury securities	$ —	$ 294,793	$ —	$ 294,793
U.S. government-sponsored enterprises	—	103,646	—	103,646
Obligations of states, municipalities and political subdivisions	—	392,821	—	392,821
Foreign governments	—	580,700	—	580,700
Commercial mortgage-backed securities	—	223,466	—	223,466
Residential mortgage-backed securities	—	125,655	—	125,655
Corporate bonds	—	132,136	—	132,136
Total fixed maturity securities, available-for-sale	—	1,853,217	—	1,853,217
Equity securities:				
Insurance, banks and other financial institutions	623,481	—	—	623,481
Industrial, consumer and all other	1,147,680	—	—	1,147,680
Total equity securities	1,771,161	—	—	1,771,161
Short-term investments, available-for-sale	286,172	—	—	286,172
Total investments	$ 2,057,333	$ 1,853,217	$ —	$ 3,910,550

The following table summarizes changes in Level 3 investments measured at fair value on a recurring basis.

(dollars in thousands)	2023	2022
Investments in affiliates at fair value, beginning of period	$ —	$ 5,312
Purchases	—	—
Sales	—	(5,312)
Net investment losses	—	—
Investments in affiliates at fair value, end of period	$ —	$ —

Previously, Level 3 investments included the Company's investment in an insurance-linked securities fund managed by Markel CATCo Investment Management Ltd. (MCIM). In 2022, the Company's remaining investment of $5.3 million was redeemed in conjunction with a buy-out transaction that provided for an accelerated return of all remaining capital to investors.

The Company did not have any assets or liabilities measured at fair value on a non-recurring basis during the years ended December 31, 2023 and 2022.

5. Unpaid Losses and Loss Adjustment Expenses

a) The following table presents a reconciliation of beginning and ending reserves for losses and loss adjustment expenses.

	Years Ended December 31,	
(dollars in thousands)	2023	2022
Gross balance at January 1	$ 3,723,144	$ 3,360,122
Less: Reinsurance recoverables on unpaid losses	(1,188,776)	(825,860)
Net balance at January 1	2,534,368	2,534,262
Effect of foreign currency movement on beginning of year balance	23,099	(41,643)
Incurred losses related to:		
Current accident year	876,378	742,122
Prior accident years	(108,953)	(57,683)
Total incurred	767,425	684,439
Premium deficiency reserve	36,200	—
Losses and loss adjustment expenses	803,625	684,439
Paid losses related to:		
Current accident year	(114,283)	(65,085)
Prior accident years	(563,569)	(556,475)
Total paid	(677,852)	(621,560)
Commutations	(59,708)	(14,304)
Effect of foreign currency movement on current year activity	3,376	(6,826)
Net balance at December 31	2,626,908	2,534,368
Plus: Reinsurance recoverables on unpaid losses	1,224,352	1,188,776
Gross balance at December 31	$ 3,851,260	$ 3,723,144

In 2023, the Company recognized losses on our intellectual property collateral protection insurance ("CPI") written within our professional liability product line. These losses included $65.0 million of credit losses recognized in connection with fraudulent letters of credit that were provided by an affiliate of Vesttoo Ltd, as collateral for reinsurance purchased on two policies, which the Company believe represents our full exposure to credit losses on the related reinsurance recoverables. The Company is actively pursuing remedies to make recoveries on the reinsurance recoverables impacted by the fraudulent letters of credit and do not have any other ceded reinsurance contracts with Vesttoo Ltd. or its affiliates.

In 2023, the company recognized a premium deficiency reserve for the Professional liability line of business driven by CPI product performance, as future policy revenues on existing policies are not adequate to cover future expected losses.

In 2023, current accident year losses and loss adjustment expenses included $0.5 million of gross and net losses and loss adjustment expenses from Hawaiian Wildfires and Hurricane Idalia. The Company also had gross losses and loss adjustment expenses of $72.5 million within its fronting operations attributed to Hawaiian Wildfires, all of which were ceded to third-party capital managed through the Markel Group's ILS operations, which hold sufficient investor collateral to support the Company's related reinsurance recoverables. See note 9(f) for further details regarding related party transactions with Nephila Holdings Ltd.

In 2022, current accident year losses and loss adjustment expenses included $2.4 million of net losses and loss adjustment expenses attributed to Hurricane Ian. These losses and loss adjustment expenses were net of ceded losses of $23.3 million. The Company also had gross losses and loss adjustment expenses of $493.9 million within its fronting operations attributed to Hurricane Ian, all of which were ceded to third-party capital managed through the Markel Group's ILS operations, which hold sufficient investor collateral to support the Company's related reinsurance recoverables.

In 2022, current accident year losses and loss adjustment expenses also included $7.7 million of net losses and loss adjustment expenses attributed to the Russia-Ukraine conflict. These losses and loss adjustment expenses were net of ceded losses of $28.8 million.

Effective January 1, 2023, the Company and Markel International S.E., a company related by common control, agreed to modify the existing quota share reinsurance agreement to reduce the ceding percentage to the Company to 80% from 90% and commute 10% of the balance sheet position as of December 31, 2022. In Q2 2023, MBL paid MISE $50.3 million for the 10% commutation. There was no net impact to MBL's operating results from the commutation.

b) Reserving Methodology

The Company uses a variety of techniques to establish the liabilities for unpaid losses and loss adjustment expenses based upon estimates of the ultimate amounts payable. The Company maintains reserves for specific claims incurred and reported (case reserves) and reserves for claims incurred but not reported (IBNR reserves), which include expected development on reported claims. The Company does not discount its reserves for losses and loss adjustment expenses to reflect estimated present value.

As of any balance sheet date, all claims have not yet been reported, and some claims may not be reported for many years. As a result, the liability for unpaid losses and loss adjustment expenses includes significant estimates for incurred but not reported claims.

There is normally a time lag between when a loss event occurs and when it is reported to the Company. The actuarial methods that the Company uses to estimate losses have been designed to address the lag in loss reporting as well as the delay in obtaining information that would allow the Company to more accurately estimate future payments. There is also often a time lag between cedents establishing case reserves or re-estimating their reserves and notifying the Company of those new or revised case reserves. As a result, the reporting lag is more pronounced in reinsurance contracts than in the insurance contracts. On reinsurance transactions, the reporting lag will generally be 60 to 90 days after the end of a reporting period, but can be longer in some cases. There may also be a more pronounced reporting lag, as well as reliance on third-party claims handling practices and reserve estimates, on insurance contracts for which the Company is not the primary insurer and participates only in excess layers of loss. Based on the experience of the Company's actuaries and management, the Company selects loss development factors and trending techniques to mitigate the difficulties caused by reporting lags. At least annually, the Company evaluates its loss development factors and trending assumptions using its own loss data, as well as cedent-specific and industry data, and updates them as needed.

IBNR reserves are based on the estimated ultimate cost of settling claims, including the effects of inflation and other social and economic factors, using past experience adjusted for current trends and any other factors that would modify past experience. IBNR reserves are calculated by subtracting paid losses and loss adjustment expenses and case reserves from estimated ultimate losses and loss adjustment expenses. IBNR reserves were 70% and 70% of total unpaid losses and loss adjustment expenses at December 31, 2023 and 2022, respectively.

In establishing liabilities for unpaid losses and loss adjustment expenses, the Company's actuaries estimate an ultimate loss ratio, by accident year or underwriting year, for each product line with input from underwriting and claims personnel. For product lines in which loss reserves are established on an underwriting year basis, the Company has developed a methodology to convert from underwriting year to accident year for financial reporting purposes. In estimating an ultimate loss ratio for a particular line of business, the actuaries may use one or more actuarial reserving methods and select from these a single point estimate. To varying degrees, these methods include detailed statistical analysis of past claim reporting, settlement activity, claim frequency and severity, policyholder loss experience, industry loss experience and changes in market and economic conditions, policy forms and exposures. Greater judgment may be required when new product lines are introduced or when there have been changes in claims handling practices, as the statistical data available may be insufficient. Greater judgment also may be required for product lines that experience a low frequency of high severity claims, particularly when the Company is reliant on third party case reserve estimates and claims handling practices. These estimates also reflect implicit and explicit assumptions regarding the potential effects of external factors, including economic and social inflation, judicial decisions, changes in law, general economic conditions and recent trends in these factors. Management believes the process of evaluating past experience, adjusted for the effects of current developments and anticipated trends, is an appropriate basis for predicting future events.

Estimates for losses from widespread catastrophic events, such as hurricanes and earthquakes, as well as pandemics and wars, are based on claims received to date, industry loss estimates and output from both industry, broker and proprietary models, as well as analysis of the Company's ceded reinsurance contracts. The Company may also perform detailed policy and reinsurance contract level reviews. The level of reliance on these procedures varies depending on the timing of the event relative to the point at which the Company develops its estimates. The Company also considers loss experience on historical events that may have similar characteristics to the underlying event and current market conditions, including the level of economic inflation. In the period shortly after an event occurs, more weight is put on modeling and industry estimates, whereas with the passage of time, greater reliance is placed on incurred claims data and historical claim patterns. Due to the inherent uncertainty in estimating such losses, these estimates are subject to variability, which increases with the severity and complexity of the underlying event. As additional claims are reported and paid, and industry loss estimates are revised, the Company incorporates this new information into its analysis and adjusts its estimate of ultimate losses and loss adjustment expenses as appropriate.

Loss reserves are established at management's best estimate, which is developed using the actuarially calculated point estimate as the starting point. The actuarial point estimate represents the actuaries' estimate of the most likely amount that will ultimately be paid to settle the losses that have occurred at a particular point in time; however, there is inherent uncertainty in the point estimate as it is the expected value in a range of possible reserve estimates. Similarly, the point estimate for ceded losses is calculated based on the ultimate gross loss amount expected to be paid, as well as the frequency and severity of the underlying claims, which ultimately determines coverage under the applicable ceded reinsurance contracts. Therefore, ceded loss estimates are subject to many of the same judgments and assumptions as the gross loss estimates. In some cases, actuarial analyses, which are generally based on statistical analysis, cannot fully incorporate all of the subjective factors that affect development of losses. In other cases, management's perspective of these more subjective factors may differ from the actuarial perspective. Subjective factors influencing the development of management's best estimate include: the credibility and timeliness of claims and loss information received from cedents and other third parties; and the impacts of economic and social inflation, judicial decisions, changes in law, changes in underwriting or claims handling practices, general economic conditions, the risk of moral hazard and other current and developing trends within the insurance and reinsurance markets, including the effects of competition. For example, the Company's loss experience in recent years has reflected higher than anticipated levels of economic inflation, as well as the impacts of social inflation, including the rising cost to adjust and settle claims and the impact of more pervasive litigation financing trends.

Inherent in the Company's reserving practices is the desire to establish loss reserves that are more likely redundant than deficient, and therefore, will ultimately prove to be adequate. This approach to establishing loss reserves typically results in loss reserves that exceed the calculated actuarial point estimate. Management continually attempts to improve its loss estimation process by refining its ability to analyze loss development patterns, claim payments and other information, but uncertainty remains regarding the potential for adverse development of estimated ultimate liabilities.

The Company's ultimate liability may be greater or less than current reserves. Changes in the Company's estimated ultimate liability for loss reserves generally occur as a result of the emergence of unanticipated loss activity, the completion of specific actuarial or claims studies or changes in internal or external factors that impact the assumptions used to derive the Company's estimates. The Company closely monitors new information on reported claims and uses statistical analyses prepared by its actuaries to evaluate the adequacy of recorded reserves. Management exercises judgment when assessing the relative credibility of loss development trends.

Management currently believes the Company's gross and net reserves are adequate. However, there is no precise method for evaluating the impact of any significant factor on the adequacy of reserves, and actual results will differ from original estimates.

c) Prior Accident Year Loss Development

The following tables summarize, by business operation, the product lines with the most significant changes in prior accident years loss reserves for the years ended December 31, 2023 and 2022, along with the corresponding accident years and the trends and factors that impacted management's best estimate of ultimate losses and loss adjustment expenses on underlying products in each of these product lines. The Company does not estimate losses at this level of aggregation as it offers a diverse portfolio of products and manages these products in logical groupings within each underwriting operation. As a result of the trends and factors described in the following tables, the Company's actuaries adjusted their estimates of the ultimate liability for unpaid losses and loss adjustment expenses. For those product lines with favorable development on prior accident years loss reserves, management has now given more credibility to the favorable trends observed by the Company's actuaries and after also incorporating these favorable trends into its best estimate, reduced prior years loss reserves accordingly.

	Year Ended December 31, 2023		
(dollars in thousands)	Loss Development	Accident Years with Most Significant Development	Trends and Factors Impacting Loss Estimates
Insurance operations:			
Marine and energy	$ (42,284)	2022	Lower loss severity than previously anticipated
General liability	(27,501)	Several	Lower loss frequency and severity than previously anticipated
Professional liability	(16,196)	Several	Lower loss frequency and severity than previously anticipated
Property	(11,443)	2021 to 2022	Lower loss severity than previously anticipated and net favorable development on catastrophe events
Other products	(3,198)		
Total Insurance	(100,622)		
Reinsurance operations:			
Professional liability	(7,062)	Several	Lower loss frequency and severity than previously anticipated
Workers' compensation	(6,222)	2022	Lower loss frequency and severity than previously anticipated
Marine and energy	(5,896)	2020 to 2021	Lower loss severity than previously anticipated
General liability	7,868	Several	Large reported claims and adverse loss development trends
Other products	2,981		
Total Reinsurance	(8,331)		
Total decrease	$ (108,953)		

	Year Ended December 31, 2022		
(dollars in thousands)	Loss Development	Accident Years with Most Significant Development	Trends and Factors Impacting Loss Estimates
Insurance operations:			
Professional liability	$ (33,725)	Several	More favorable loss experience and lower loss severity than previously anticipated
Credit and surety	(4,744)	2017 to 2021	Lower than expected frequency of claims
General liability	7,329	Several	Unfavorable claims settlements and increased claim frequency and severity
Property	7,219	2021	Increased claim frequency and severity
Other products	(10,919)		
Total Insurance	(34,840)		
Reinsurance operations:			
Workers' compensation	(9,045)	2009 to 2012	Lower loss severity than previously anticipated
Professional liability	(7,202)	Several	More favorable loss experience and lower loss severity than previously anticipated
Marine and energy	(3,605)	2020	Lower loss frequency and severity than originally anticipated
Other products	(2,991)		
Total Reinsurance	(22,843)		
Total decrease	$ (57,683)		

d) Historic Loss Development

The following tables present undiscounted loss development information, by accident year, for the Company's Insurance and Reinsurance operations, including cumulative incurred and paid losses and allocated loss adjustment expenses, net of reinsurance, as well as the corresponding amount of IBNR reserves as of December 31, 2023. This level of disaggregation is consistent with how the Company analyzes loss reserves for both internal and external reporting purposes. The loss development information for the years ended December 31, 2016 through December 31, 2022 is presented as supplementary information. Loss development information for years prior to 2016, which would also be supplementary information, has not been presented. Insurance business written by the Company's affiliates and ceded to the Company are included in Insurance operations. Assumed reinsurance business written by the Company's affiliates and ceded to the Company are included in Reinsurance operations. All amounts included in the tables below related to transactions denominated in a foreign currency have been translated into U.S. dollars using the exchange rates in effect at December 31, 2023.

The difference between the loss development implied by the tables for the year ended December 31, 2023 and actual losses and loss adjustment expenses on prior accident years is attributed to the fact that amounts presented in these tables exclude amounts attributed to the 2015 and prior accident years and exclude unallocated loss adjustment expenses and the differences in the presentation of foreign currency movements, as described above. None of these are material to the Insurance or Reinsurance operations.

The Insurance operations table below also includes claim frequency information, by accident year. The Company defines a claim as a single claim incident, per policy, which may include multiple claimants and multiple coverages on a single policy. Claim counts include claims closed without a payment as well as claims where the Company is monitoring to determine if an exposure exists, even if a reserve has not been established.

All of the business contained within the Company's Reinsurance operations represents treaty business that is assumed from other insurance or reinsurance companies for which the Company does not have access to the underlying claim counts. Further, this business includes both quota share and excess of loss treaty reinsurance, through which only a portion of each reported claim results in losses to the Company. As such, the Company excluded claim count information from the Reinsurance operations disclosures.

Insurance Operations

(in thousands)	Ultimate Incurred Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance Unaudited As of December 31,								Total of Incurred-but-Not-Reported Liabilities, Net of Reinsurance	Cumulative Number of Reported Claims
Year	2016	2017	2018	2019	2020	2021	2022	2023	December 31, 2023	
2016	$154,192	$217,671	$176,062	$246,997	$234,715	$221,728	$215,184	$ 228,401	$ 24,738	3
2017		433,139	474,057	433,928	435,267	417,847	421,645	429,586	36,341	4
2018			423,408	502,512	489,391	439,916	461,002	487,942	30,261	4
2019				555,615	542,153	538,013	529,173	529,274	29,439	4
2020					786,576	720,150	695,048	675,341	142,349	3
2021						598,236	577,572	520,670	171,621	4
2022							647,013	542,785	254,115	3
2023								788,840	626,141	3
								$ 4,202,839		

(in thousands)	Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance Unaudited As of December 31,							
Year	2016	2017	2018	2019	2020	2021	2022	2023
2016	$ 21,446	$ 68,057	$ 90,747	$152,622	$154,264	$161,851	$165,535	$ 176,712
2017		67,969	195,507	294,369	326,198	337,606	350,884	354,209
2018			71,730	182,192	310,609	357,203	381,816	391,024
2019				90,611	208,288	324,043	432,272	477,263
2020					125,170	298,657	435,731	501,599
2021						38,528	135,813	270,887
2022							41,086	170,943
2023								83,064
								$ 2,425,701
All outstanding liabilities for unpaid losses and loss adjustment expenses before 2016, net of reinsurance								144,467
Total liabilities for unpaid losses and loss adjustment expenses, net of reinsurance								$ 1,921,605

Reinsurance Operations

(in thousands)	Ultimate Incurred Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance								Total of Incurred- but-Not-Reported Liabilities, Net of Reinsurance
	Unaudited								
	As of December 31,								December 31, 2023
Accident Year	2016	2017	2018	2019	2020	2021	2022	2023	
2016	$239,895	$271,662	$279,389	$198,974	$191,201	$191,952	$192,014	$ 191,227	20,581
2017		504,194	569,369	352,421	339,545	339,098	336,216	332,090	22,705
2018			456,817	291,542	281,730	275,531	269,689	264,434	27,286
2019				171,138	181,464	166,328	181,656	181,659	44,313
2020					147,497	193,960	197,052	210,541	57,884
2021						164,230	162,705	164,547	33,285
2022							49,892	62,605	20,361
2023								64,761	55,120
								$ 1,471,864	

	Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance							
	d							
(in thousands)	As of December 31,							
Accident Year	2016	2017	2018	2019	2020	2021	2022	2023
2016	$ 37,470	$ 88,787	$127,638	$164,174	$166,578	$168,928	$171,361	$ 172,636
2017		82,214	176,840	261,457	266,268	275,470	286,667	294,373
2018			61,600	134,393	180,467	204,391	214,556	218,062
2019				19,817	54,642	92,889	114,872	122,195
2020					24,435	69,286	115,815	136,523
2021						21,657	67,337	106,782
2022							582	7,753
2023								2,169
								$ 1,060,493
All outstanding liabilities for unpaid losses and loss adjustment expenses before 2016, net of reinsurance								229,851
Total liabilities for unpaid losses and loss adjustment expenses, net of reinsurance								$ 641,222

The following table presents supplementary information about average historical claims duration as of December 31, 2023 based on cumulative incurred and paid losses and allocated loss adjustment expenses presented above.

	Average Annual Percentage payout of Incurred Losses by Age (in Years), Net of Reinsurance							
Unaudited	1	2	3	4	5	6	7	8
Insurance	12.6 %	23.3 %	21.2 %	14.9 %	4.2 %	2.8 %	1.2 %	4.9 %
Reinsurance	13.5 %	23.2 %	21.7 %	10.3 %	3.0 %	2.0 %	1.8 %	0.7 %

The following table reconciles the net incurred and paid loss development tables to the liability for losses and loss adjustment expenses on the balance sheet.

(dollars in thousands)		December 31, 2023
Net outstanding liabilities		
Insurance	$	1,921,605
Reinsurance		641,222
Other		4,462
Liabilities for unpaid losses and loss adjustment expenses, net of reinsurance		2,567,289
Reinsurance recoverable on unpaid losses		
Insurance		672,272
Fronting		464,729
Reinsurance		82,562
Other		4,789
Total reinsurance recoverable on unpaid losses		1,224,352
Unallocated loss adjustment expenses		59,619
Total gross liability for unpaid losses and loss adjustment expenses	$	3,851,260

6. Ceded Reinsurance

In reinsurance and retrocession transactions, an insurance or reinsurance company transfers, or cedes, all or part of its exposure in return for a premium. The ceding of insurance does not legally discharge the Company from its primary liability for the full amount of the policies, and the Company will be required to pay the loss and bear collection risk if the reinsurer fails to meet its obligations under the reinsurance or retrocessional agreement. A credit risk exists with ceded reinsurance to the extent that any reinsurer is unable to meet the obligations assumed under the reinsurance or retrocessional contracts. Allowances are established for credit losses expected to be recognized over the life of the reinsurance recoverables.

Within its underwriting operations, the Company uses reinsurance and retrocessional reinsurance to manage its net retention on individual risks and overall exposure to losses while providing it with the ability to offer policies with sufficient limits to meet policyholder needs.

Within the Company's underwriting operations, at December 31, 2023, balances recoverable from the ten largest reinsurers, by group, represented 58% of the $804.9 million reinsurance recoverables before considering reinsurance allowances and collateral. As of December 31, 2022, balances recoverable from the ten largest reinsurers, by group, represented 60% of the $725.7 million reinsurance recoverables before considering reinsurance allowances and collateral. At December 31, 2023, the largest reinsurance balance was due from Renaissance Reinsurance US Inc. and represented 12% of reinsurance recoverables before considering reinsurance allowances and collateral.

Within its fronting operations, the Company generally enters into 100% quota share reinsurance agreements whereby the Company cedes to the capacity providers (reinsurers) substantially all of its gross liability under all policies issued by and on behalf of the Company. However, there are generally limits on the reinsurers' obligations to the Company that expose the Company to underwriting risk, including aggregate reinsurance limits that the Company believes are unlikely to be exceeded. The Company also remains exposed to the credit risk of the reinsurer, or the risk that one of its reinsurers becomes insolvent or otherwise unable or unwilling to pay policyholder claims. This credit risk is generally mitigated by requiring that the capacity provider post substantial collateral to secure the reinsured risks, which, in some instances, exceeds the related reinsurance recoverable.

Within the Company's fronting operations, at December 31, 2023, balances recoverable from the top three reinsurers, by group, represented 98% of the $464.7 million reinsurance recoverables before considering reinsurance allowances and collateral. As of December 31, 2022, balances recoverable from the top three reinsurers, by group, represented 99% of the $485.4 million reinsurance recoverables before considering reinsurance allowances and collateral. At December 31, 2023, the largest reinsurance balance was due from Poseidon Re Ltd. and represented 96% of reinsurance recoverables before considering reinsurance allowances and collateral.

The following tables summarize the effect of reinsurance and retrocessional reinsurance on premiums written and earned.

	Year Ended December 31, 2023			
(dollars in thousands)	Direct	Assumed	Ceded	Net Premiums
Underwriting:				
Written	$ 483,111	$ 998,949	$ (160,169)	$ 1,321,891
Earned	$ 507,933	$ 958,838	$ (152,900)	$ 1,313,871
Fronting:				
Written	—	860,897	(860,897)	—
Earned	—	746,529	(746,529)	—
Total:				
Written	$ 483,111	$ 1,859,846	$(1,021,066)	$ 1,321,891
Earned	$ 507,933	$ 1,705,367	$ (899,429)	$ 1,313,871

	Year Ended December 31, 2022			
(dollars in thousands)	Direct	Assumed	Ceded	Net Premiums
Underwriting:				
Written	$ 604,155	$ 953,844	$ (232,292)	$ 1,325,707
Earned	$ 486,861	$ 872,521	$ (140,924)	$ 1,218,458
Fronting:				
Written	—	557,385	(557,385)	—
Earned	—	536,132	(536,132)	—
Total:				
Written	$ 604,155	$ 1,511,229	$ (789,677)	$ 1,325,707
Earned	$ 486,861	$ 1,408,653	$ (677,056)	$ 1,218,458

All of the premiums written and earned in the Company's fronting operations for the years ended December 31, 2023 and 2022 were ceded. The percentage of total ceded earned premiums to gross earned premiums was 41% and 36% for the years ended December 31, 2023 and 2022, respectively.

All of the incurred losses and loss adjustment expenses in the Company's fronting operations were ceded. These losses totaled $131.3 million and $510.7 million for the years ended December 31, 2023 and 2022, respectively.

The following table summarizes the effect of reinsurance and retrocessional reinsurance on losses and loss adjustment expenses in the Company's underwriting operations.

	Years ended December 31,	
(dollars in thousands)	2023	2022
Gross	$ 1,037,781	$ 748,091
Ceded	(270,356)	(63,652)
Net incurred losses	767,425	684,439
Premium deficiency reserve	36,200	—
Net losses and loss adjustment expenses	$ 803,625	$ 684,439

7. Life and Annuity Benefits

The Company's run-off block of life and annuity reinsurance contracts consists primarily of Euro and U.S. Dollar denominated life-contingent payout annuities and traditional and universal life contracts. The following table presents the components of the Company's liabilities for life and annuity benefits.

	December 31,	
(dollars in thousands)	2023	2022
Liability for future policyholder benefits[(1)]	$ 556,858	$ 553,619
Deferred Profit Liability	14,423	10,830
Other	42,937	51,929
Total	$ 614,218	$ 616,378

(1) The undiscounted liability for future policyholder benefits was $823.4 million and $860.3 million as of December 31, 2023 and 2022, respectively

The primary component of the Company's liabilities for life and annuity benefits is the liability for future policyholder benefits. Life and annuity benefit reserves are calculated for aggregated cohorts of contracts, which are determined based on the attributes of the underlying contracts, and are discounted using standard actuarial techniques and cash flow models. Since the development of the life and annuity reinsurance reserves is based upon cash flow projection models, the Company makes estimates and assumptions based on cedent experience and industry mortality tables. The cash flow assumptions used to determine the Company's life and annuity benefit reserves are reviewed, and updated as necessary, at least annually. The discount rate assumptions are updated at each reporting date. There were no changes to the cash flow assumptions used to measure the Company's life and annuity benefit reserves as a result of the annual review of cash flow assumptions completed in 2023 and 2022. The following table presents a rollforward of the present value of the liability for future policyholder benefits.

(dollars in thousands)	Year Ended December 31, 2023	2022
Liability for future policyholder benefits, beginning of year	$ 553,619	$ 820,650
Liability for future policyholder benefits at original discount rate, beginning of year	582,211	649,076
Effect of changes in cash flow assumptions	—	—
Effect of actual variances from expected experience	(5,401)	(4,014)
Adjusted liability for future policyholder benefits, beginning of year	576,810	645,062
Interest accretion	21,051	22,043
Benefit payments	(52,448)	(53,089)
Effect of foreign currency rate changes	16,556	(31,806)
Liability for future policyholder benefits at original discount rate, end of year	561,969	582,210
Cumulative effect of changes in discount rate assumptions	(5,111)	(28,591)
Liability for future policyholder benefits, end of year	$ 556,858	$ 553,619

The following table summarizes additional details for the Company's liability for future policyholder benefits.

	December 31, 2023	2022
Weighted-average interest rate:		
Interest accretion rate	3.8 %	3.8 %
Current discount rate	3.8 %	4.3 %
Weighted-average liability duration	8.6 years	8.6 years

8. Income Taxes

Markel Bermuda is incorporated in Bermuda and pursuant to Bermuda law is not currently taxed on either income or capital gains. In December 2023, Bermuda enacted the Corporate Income Tax Act of 2023 (the Bermuda CIT Act) effective January 1, 2025, which imposes a 15% corporate income tax on certain Bermuda businesses of large, multi-national enterprises (the Bermuda CIT). The Company generally expects to be subject to the Bermuda CIT but does not expect to incur material taxes given the allowance of certain tax credits and elections under the Bermuda CIT Act that it expects will reduce or eliminate its Bermuda CIT exposure. In addition, the Bermuda CIT did not have a material impact on the Company's results of operations, financial condition or cash flows in the current period, and the Company does not expect the Bermuda CIT to have a material impact on its results of operations, financial condition or cash flows in future periods. However, Markel Bermuda will continue to evaluate these tax law changes as additional guidance is issued by the Bermuda tax authorities.

Effective May 2, 2013, Markel Bermuda made an irrevocable election under Section 953(d) of the United States Internal Revenue Code of 1986, as amended, to be taxed as a U.S. domestic corporation. As a result of this election, the Company is subject to U.S. taxation on its world-wide income as if it were a U.S. corporation; such U.S. income taxes are expected to generally be creditable against Bermuda CIT liability.

The Company is included in the consolidated U.S. federal income tax return filed by Markel Group. The method of allocation among companies is subject to a written agreement, approved by the Board of Directors, whereby allocation is made primarily on a separate return basis. Additionally, if current losses or other carryovers are utilized on a separate return calculation, credit is generally given to the Company for these items regardless of utilization in the ultimate consolidated tax return.

The Company records income taxes based on the enacted tax laws and rates applicable in the relevant jurisdictions. Interest and penalties related to uncertain tax positions, of which there have been none, would be recognized in income tax expense. The amount of income taxes paid may vary in comparison to the current income tax expense recognized in the period due to differences in the timing between the tax expense recognition and the required tax remittance.

The components of income taxes attributable to operations for the years ended December 31, 2023 and 2022 were as follows.

	Years Ended December 31,	
(dollars in thousands)	2023	2022
Current:		
United States	$ 41,638	$ 33,135
Total current tax expense	41,638	33,135
Deferred:		
United States	70,082	(76,168)
Total deferred tax expense (benefit)	70,082	(76,168)
Income tax expense (benefit)	$ 111,720	$ (43,033)
Income tax expense (benefit) in net income (loss)	$ 111,720	$ (43,033)
Income tax expense (benefit) on other comprehensive income (loss)	15,268	(35,300)
Total income tax expense (benefit)	$ 126,988	$ (78,333)

All of the Company's income (loss) before income tax expense (benefit) for the years ended December 31, 2023 and 2022, is from Bermuda-based operations subject to U.S. tax.

The following table presents a reconciliation of income taxes using the U.S. corporate tax rate to the Company's income tax expense (benefit).

	Years Ended December 31,	
(dollars in thousands)	2023	2022
U.S corporate tax rate	$ 113,659	$ (39,908)
Increase (decrease) resulting from:		
Tax-exempt investment income	(2,432)	(2,419)
Other	493	(706)
Income tax expense (benefit)	$ 111,720	$ (43,033)

The following table presents the components of foreign deferred tax assets and liabilities.

(dollars in thousands)	December 31, 2023	December 31, 2022
Deferred tax asset:		
Property and casualty losses	$ 43,087	$ 33,949
Net unearned property and casualty premiums	29,396	29,465
Life and annuity benefits	28,155	25,787
Other differences between financial reporting and tax bases	4,303	4,182
Deferred tax asset	104,941	93,383
Deferred tax liability:		
Investments	261,138	152,328
Deferred ceding commissions, net	33,744	39,834
Other differences between financial reporting and tax bases	5,057	10,869
Deferred tax liability	299,939	203,031
Net deferred tax liability	$ (194,998)	$ (109,648)

Deferred tax assets and liabilities are recorded on the balance sheets on a net basis within other liabilities.

Based on the Company's historical and expected future taxable earnings and the reversal of existing gross deferred tax liabilities, management believes that it is more likely than not that the Company will realize the benefit of its deferred tax assets at December 31, 2023 and does not have a valuation allowance on its deferred tax assets. Additionally, the Company's net deferred tax liability for investments includes deferred tax assets attributed to its unrealized losses on fixed maturity securities. The Company has the ability and intent to execute a tax planning strategy such that it is more likely than not that all of these deferred tax assets will be realized.

The Company does not have any unrecognized tax benefits at December 31, 2023 and 2022.

The Internal Revenue Service is currently examining the Company's parent's consolidated 2017 U.S. federal income tax return. The Company believes its income tax liabilities are adequate as of December 31, 2023; however, these liabilities could be adjusted as a result of this examination. With few exceptions, including the 2017 U.S. federal income tax return, the Company is no longer subject to income tax examination by tax authorities for years ended before January 1, 2020.

The Inflation Reduction Act of 2022 (the IRA), which implemented a 15% corporate minimum tax based on adjusted financial statement income, became effective in the U.S. in 2023. The IRA did not have a material impact on the Company's results of operations, financial conditions or cash flows in 2023, and is not expected to have a material impact on its results of operations, financial condition or cash flows in future periods. However, Markel Bermuda will continue to evaluate the impacts of the IRA as additional guidance is issued by the U.S. Treasury.

9. Related Party Transactions

a) Due from affiliates, net

The amounts due from affiliates, net presented in the table below are at carrying value.

(dollars in thousands)	December 31, 2023	2022
Promissory Notes from Markel Ventures, Inc.	$ 240,000	$ 310,000
Other amounts due from affiliates, net	10,618	14,045
Total	$ 250,618	$ 324,045

On August 11, 2017, the Company entered into a $130.0 million promissory note with Markel Ventures, Inc, a wholly-owned subsidiary of Markel Group. Prior to 2022, $125.0 million was repaid. On June 30, 2022, the remaining $5.0 million of this loan was repaid.

On September 26, 2018, the Company entered into a $110.0 million promissory note with Markel Ventures, Inc. The loan bears interest at a fixed rate of 4.54% per annum. On December 20, 2023, $70.0 million of this loan was repaid. The loan is due on September 26, 2028.

On November 4, 2019, the Company entered into a $45.0 million promissory note with Markel Ventures, Inc. The loan bears interest at a fixed rate of 3.15% per annum. The loan is due on November 4, 2029.

On November 22, 2019, the Company entered into a $105.0 million promissory note with Markel Ventures, Inc. The loan bears interest at a fixed rate of 3.21% per annum. The loan is due November 22, 2029.

On August 12, 2021, the Company entered into a $50.0 million promissory note with Markel Ventures, Inc. The loan bears interest at a fixed rate of 2.43% per annum. The loan is due August 12, 2031.

All of the promissory notes with Markel Ventures, Inc. are guaranteed by Markel Group Inc.

The other amounts due from affiliates, net represent amounts receivable and payable from/to companies consolidated by Markel Group. The balances arise in the normal course of business and are due on demand and are non-interest bearing.

b) Lloyd's Syndicates

The Company provides quota share reinsurance to Lloyd's syndicates and corporate capital providers which are related by common control. Management believes the terms of the reinsurance agreements are similar to those of an arm's length transaction with an unrelated party. The Company also assumes Lloyd's syndicates investment income/loss through the reinsurance agreements and records the investment income/loss in acquisitions costs and premiums receivable as a cost of acquiring the business. The accompanying balance sheets and statements of income (loss) and comprehensive income (loss) include the following amounts related to such reinsurance agreements.

(dollars in thousands)	December 31, 2023	2022
Balance Sheet		
Premiums receivable	$ 628,491	$ 487,418
Deferred policy acquisition costs	94,028	79,531
Unpaid losses and loss adjustment expenses	411,156	423,926
Unearned property and casualty premiums	232,980	204,328
Income Statement		
Gross premiums written	$ 542,384	$ 487,117
Net earned premiums	516,250	453,852
Losses and loss adjustment expenses	244,360	251,610
Acquisition costs	175,428	222,804

The net of premiums receivable and the unpaid losses and loss adjustment expenses by underwriting year of account are tracked separately and the oldest year of account is settled annually. The Company has also deposited funds at Lloyd's for the benefit of Lloyd's syndicates related by common control. The amount held in deposit was $632.4 million and $517.6 million as of December 31, 2023 and 2022, respectively, and this amount is included in restricted assets in Note 3.

c) Markel International Insurance Company Limited

The Company provides quota share reinsurance to Markel International Insurance Company Limited ("MIICL"), a company related by common control. Management believes the terms of the reinsurance agreements are similar to those of an arm's length transaction with an unrelated party. The accompanying balance sheets and statements of income (loss) and comprehensive income (loss) include the following amounts related to the reinsurance agreements with MIICL.

	December 31,	
(dollars in thousands)	2023	2022
Balance Sheet		
Premiums receivable	$ 15,546	$ 8,235
Deferred policy acquisition costs	3,462	3,448
Unpaid losses and loss adjustment expenses	153,967	130,624
Unearned property and casualty premiums	18,061	17,971
Reinsurance balances payable	5,023	15,365
Income Statement		
Gross premiums written	$ 37,915	$ 35,325
Net earned premiums	38,098	27,195
Losses and loss adjustment expenses	40,718	2,908
Acquisition costs	7,306	6,007

d) Markel International S.E.

The Company provides quota share reinsurance to Markel International S.E. ("MISE"), a company related by common control. Management believes the terms of the reinsurance agreements are similar to those of an arm's length transaction with an unrelated party. The accompanying balance sheets and statements of income (loss) and comprehensive income (loss) include amounts related to the reinsurance agreement with MISE.

During 2023 and 2022, the Company entered into multiple policy level guarantee agreements with MISE. Under the terms of the agreements, the Company guaranteed payment of amounts due and payable on policies written or renewed by MISE that were not reinsured by the Company. The guarantees serve to enhance MISE's financial strength, and provides protection against limit losses on certain product lines. The Company estimates the maximum potential exposure under the guarantees to be no more than $50.0 million. In 2023 and 2022, the Company has not made any payments under the guarantees, and the likelihood of such future payments is remote.

(dollars in thousands)	December 31, 2023	December 31, 2022
Balance Sheet		
Premiums receivable	$ 70,638	$ 176,234
Deferred policy acquisition costs	50,842	47,682
Unpaid losses and loss adjustment expenses	435,048	420,055
Unearned property and casualty premiums	120,456	115,779
Reinsurance balances payable	91	575
Income Statement		
Gross premiums written	$ 332,685	$ 325,528
Net earned premiums	319,057	300,005
Losses and loss adjustment expenses	129,070	169,154
Acquisition costs	135,272	108,313

e) State National Insurance Company, Inc.

State National Companies, Inc. ("SNC") fronts catastrophe-exposed primary property insurance policies for selected general agents appointed by Nephila Capital Ltd. ("Nephila") for risks in the United States. Using intercompany reinsurance agreements with the SNC fronting carriers, a specified portion of the tail risk from these transactions started being assumed by the Company during January 2020. These risks were then ceded in their entirety to a newly formed Bermuda registered Special Purpose Insurer ("SPI"). The SPI issued principal-at-risk variable rate notes transferring risk to third-party investors. The proceeds paid to the SPI from the sale of the notes were deposited in a trust account and fully collateralize the obligations of the SPI to the Company. The Company received a commercially priced fronting fee for its role in facilitating the transaction. The reinsurance agreements terminated on the scheduled termination date of January 31, 2023 and the-principal-at-risk variable rate notes were redeemed on February 7, 2023. For the year end December 31, 2023 and 2022, the amounts assumed and ceded by the Company associated with these reinsurance agreements were not material to the financial statements.

During 2021, the Company entered into a fronting arrangement in conjunction with Markel Group's program services business in which it assumes reinsurance from various third parties and cedes to SNC. The ultimate reinsurer provides collateral on behalf of SNC. The Company received a commercially priced fronting fee for its role in facilitating these transactions. For the year end December 31, 2023 and 2022, the amounts assumed and ceded by the Company associated with these reinsurance agreements were not material to the financial statements.

f) Nephila Holdings Ltd. (together with its subsidiaries, Nephila)

Nephila serves as the investment manager to several Bermuda based private funds (the Nephila Funds). To provide access for the Nephila Funds to a variety of insurance linked securities in the property catastrophe, climate and specialty markets, Nephila also acts as an insurance manager to certain Bermuda Class 3 and 3A reinsurance companies, Lloyd's Syndicate 2357 and Lloyd's Syndicate 2358 (collectively, the Nephila Reinsurers). Through the Company's fronting operations, the Company has catastrophe-exposed property, specialty risk and climate risk programs with Nephila through which the Company assumes reinsurance contracts that are then fully ceded to Nephila Reinsurers. Under its program with Nephila Reinsurers, the Company bears underwriting risk for annual aggregate agreement year losses in excess of a limit the Company believes is unlikely to be exceeded. To the extent losses under these programs exceed the prescribed limits, the Company is obligated to pay such losses to the cedents without recourse to the Nephila Reinsurers. While the Company believes losses under these programs are unlikely, those losses, if incurred, could be material to the Company's results of operations and financial condition. The Company receives a commercially priced fronting fee for its role in facilitating these programs. For the years ended December 31, 2023 and 2022, the Company assumed and ceded $861.7 million and $562.5 million, respectively, of premiums associated with these reinsurance agreements with Nephila reinsurers, earning a fronting fee of $20.3 million and $16.7 million which is included in other revenues on the statements of income (loss) and comprehensive income (loss) for the years ended December

31, 2023 and 2022, respectively.

The Company has also entered into other assumed and ceded reinsurance transactions with the Nephila Reinsurers in the normal course of business, which are not material to the Company's consolidated financial statements.

10. Other Comprehensive Income (Loss)

Other comprehensive income (loss) includes changes in net unrealized gains (losses) on available-for-sale investments, which is comprised of net holding gains (losses) arising during the period, changes in unrealized other-than-temporary impairment losses, if any, and reclassification adjustments for net gains included in net income. Other comprehensive income also includes changes in the discount rate for life and annuity benefits. The following table presents the change in accumulated other comprehensive income (loss) by component.

(dollars in thousands)	Net unrealized gains (losses) on available-for-sale investments	Foreign Currency	Life and annuity discount rate assumption	Accumulated Other Comprehensive Income (Loss)
December 31, 2021	$ 136,593	$ (29,046)	$ —	$ 107,547
Cumulative effects of adoption of ASU No. 2018-12 net of income taxes	159,047	—	(135,543)	23,504
January 1, 2022	295,640	(29,046)	(135,543)	131,051
Total other comprehensive income (loss) before income taxes	(368,260)	—	200,165	(168,095)
Income tax (expense) benefit	77,335	—	(42,035)	35,300
Total other comprehensive income (loss)	(290,925)	—	158,130	(132,795)
December 31, 2022	$ 4,715	$ (29,046)	$ 22,587	$ (1,744)
Total other comprehensive income (loss) before income taxes	96,184	—	(23,481)	72,703
Income tax (expense) benefit	(20,199)	—	4,931	(15,268)
Total other comprehensive income (loss)	75,985	—	(18,550)	57,435
December 31, 2023	$ 80,700	$ (29,046)	$ 4,037	$ 55,691

11. Commitments and Contingencies

a) Concentrations of credit risk

The Company’s portfolio of investments and cash and cash equivalents is managed following prudent standards of diversification. The Company's investment guidelines limit the allowable holdings of a single issue and issuers. We monitor our investment portfolio to ensure that credit risk does not exceed prudent levels. The Company believes that there are no significant concentrations of credit risk associated with its portfolio of cash and fixed maturity securities.

At December 31, 2023, and 2022, investments in securities issued by the U.S. Treasury, U.S. government agencies and U.S. government-sponsored enterprises were the only investments in any one issuer that exceeded 10% of shareholder's equity.

At December 31, 2023, the Company's ten largest equity holdings represented $1,020.7 million, or 47%, of the equity portfolio. Investments in the property and casualty insurance industry represented $323.0 million, or 15% of the equity portfolio at December 31, 2023.

Premiums receivable comprise amounts due within one year or amounts not yet due. As of December 31, 2023 and 2022, the Company’s largest premiums receivable balance from a single unrelated party were 3% and 3% of total premiums receivable, respectively.

For the years ended December 31, 2023 and 2022, brokered transactions accounted for the majority of the Company's property and casualty gross premiums written. For the years ended December 31, 2023 and 2022, the top five independent producing intermediaries and brokerage firms accounted for 39% and 43%, respectively, of property and casualty gross premiums written.

b) Credit facilities

The Company holds a letter of credit facility with $100.0 million of committed and $150.0 million of uncommitted capacity that expires on December 31, 2025. This facility allows for the issuance of letters of credit in U.S. dollars and other currencies. At December 31, 2023 and 2022, $184.4 million and $193.6 million of letters of credit, respectively, denominated in various currencies, were issued and outstanding under this credit facility.

At December 31, 2023, the Company was in compliance with the terms and conditions contained in its credit agreements. To the extent that the Company is not in compliance, the Company's access to these credit facilities could be restricted.

12. Leases

The Company has one operating lease for real estate, which has a remaining term of 4.5 years. Total lease costs for this lease were $0.1 million and $0.1 million for the year ended December 31, 2023 and 2022, respectively.

The following table summarizes details of the Company's operating lease recorded on the balance sheet.

	December 31,	
(dollars in thousands)	2023	2022
Right-of-use lease assets	$ 5,323	$ 6,357
Lease liabilities	$ 5,520	$ 6,417
Weighted average remaining lease term	4.5 years	5.5 years
Weighted average discount rate	4.9 %	4.9 %

The table below summarizes maturities of the Company's operating lease liability as of December 31, 2023, which reconciles to total lease liabilities included in other liabilities in the Company's balance sheet.

Years Ending December 31,	*(dollars in thousands)*
2024	$ 1,297
2025	1,336
2026	1,376
2027	1,417
2028	719
2029 and thereafter	—
Total lease payments	6,145
Less imputed interest	(625)
Total operating lease liabilities	$ 5,520

13. Statutory Financial Information

Statutory capital and surplus and statutory net income (loss) for the Company as of December 31, 2023 and 2022 and for the years ended December 31, 2023 and 2022 are summarized below. Statutory capital and surplus and statutory net income (loss) agree to the U.S. GAAP capital and surplus and net income (loss) presented in the accompanying balance sheets and statements of income (loss) and comprehensive income (loss).

(dollars in thousands)	2023	2022
Statutory capital and surplus	$ 2,298,153	$ 1,911,206
Statutory net income (loss)	$ 429,512	$ (147,004)

Under the Bermuda Insurance Act, 1978 and related regulations, the Company is subject to capital requirements calculated using the Bermuda Solvency and Capital Requirement, or BSCR model, which is a standardized statutory risk-based capital model used to measure the risk associated with the Company's assets, liabilities and premiums. The Company's required statutory capital and surplus under the BSCR model is referred to as the enhanced capital requirement ("ECR"). The Company is required to calculate and submit the ECR to the Bermuda Monetary Authority ("BMA") annually. Following receipt of the submission of the Company's ECR the BMA has the authority to impose additional capital requirements (capital add-ons) if it deems necessary. If a company fails to maintain or meet its ECR, the BMA may take various degrees of regulatory action. As of December 31, 2023, the Company exceeded its ECR.

The Company is also required under its Class 4 license to maintain a minimum liquidity ratio whereby the value of its relevant assets is not less than 75% of the amount of its relevant liabilities for general business. Relevant assets include cash, cash equivalents, restricted cash, restricted cash equivalents, fixed maturity securities, other investments, accrued interest income, premiums receivable, and funds withheld. The relevant liabilities are total general business insurance reserves and total other liabilities, less sundry liabilities. As of December 31, 2023, the Company met the minimum liquidity ratio requirement.

The Company may declare dividends subject to it continuing to meet its solvency and capital requirements, which includes continuing to hold statutory capital and surplus equal to or exceeding its ECR. The Company is prohibited from declaring or paying in any fiscal year dividends of more than 25% of its prior year's statutory capital and surplus unless the Company files with the BMA an affidavit signed by at least two members of the Board of Directors attesting that a dividend would not cause the Company to fail to meet its relevant margins. As of December 31, 2023 and 2022, the Company could pay dividends to the holding company during the subsequent year up to $574.5 million and $477.8 million, respectively, without providing an affidavit to the BMA.

The payment of dividends is limited by applicable regulations and statutory requirements of Bermuda. The Company is prohibited from declaring or paying a dividend if such payment would reduce its respective regulatory capital below the required minimum as required by law and regulatory practice. The Company is also subject to certain restrictions under its credit facilities that affect its ability to pay dividends. The Company paid $100.0 million in dividends in 2023. In December 2022, the Company received a capital contribution of $59.6 million from Markel Group in the form of fixed maturity securities. This capital contribution was made to provide adequate surplus to meet the Company's internal capital requirements.

The Company must obtain the BMA's prior approval for a reduction of 15% or more of the total statutory capital, as set forth in its previous year's financial statements. In addition, as a long-term insurer, the Company may not declare or pay a dividend to any person other than a policyholder unless the value of the assets in its long-term business fund, as certified by the Company's approved actuary, exceeds the liabilities of its long-term business.

14. Significant Non-Cash Transactions

The company engaged in the following significant non-cash operating, investing and financing activities during the years:

(dollars in thousands)	2023	2022
Transfer of fixed maturity securities from related parties	$ 6,428	$ —
Transfer of fixed maturity securities to related parties	(6,113)	—
Capital contribution of fixed maturity securities from Markel Group	—	59,641
Settlement of internal quota share arrangement in fixed maturity securities	—	(53,852)

15. Subsequent Events

Subsequent events have been evaluated through April 23, 2024.