Liberty Mutual Holding Company Inc.

First Quarter 2023

Consolidated Financial Statements

LIBERTY MUTUAL HOLDING COMPANY INC.

Consolidated Statements of Income

(dollars in millions)

(Unaudited)

	Three Months Ended March 31,	
	2023	**2022**
Revenues		
Premiums earned	$ 11,907	$ 10,951
Net investment income	628	816
Fee and other revenues	241	251
Net realized losses	(16)	(144)
Total revenues	12,760	11,874
Claims, Benefits and Expenses		
Benefits, claims and claim adjustment expenses	8,812	7,686
Operating costs and expenses	2,163	2,119
Amortization of deferred policy acquisition costs	1,682	1,319
Interest expense	135	122
Interest credited to policyholders	7	8
Total claims, benefits and expenses	12,799	11,254
Acquisition & integration costs	(12)	(9)
Restructuring costs	(2)	(2)
Unit linked life insurance	(30)	47
Income (loss) from continuing operations before income tax expense and non-controlling interest	(83)	656
Income tax (benefit) expense	(16)	158
Consolidated net (loss) income	(67)	498
Less: Net income attributable to non-controlling interest	7	-
Net (loss) income attributable to Liberty Mutual Holding Company Inc.	$ (74)	$ 498

Net Realized (Losses) Gains	**2023**	**2022**
Impairment losses[a]	$ (12)	$ (12)
Other net realized losses	(26)	(124)
Valuation changes on equity investments, derivatives, other	22	(8)
Total net realized losses	$ (16)	$ (144)

(a) The Company adopted ASC 326, *Measurement of Credit Losses on Financial Instruments* as of Jan 1, 2023. In prior year this amount related to other-than-temporary impairment.

Liberty Mutual Holding Company Inc.

Consolidated Balance Sheets

(dollars in millions)

(Unaudited)

	March 31, 2023	December 31, 2022
Assets:		
Investments		
Fixed maturities, available for sale (net of allowance for credit losses of $0 in 2023) (amortized cost of $75,003 and $73,234)	$ 69,671	$ 66,610
Equity securities, at fair value	1,904	1,833
Short-term investments	1,288	532
Mortgage loans (net of allowance for credit losses of $31 in 2023)	3,564	3,632
Other investments (net of allowance for credit losses of $37 in 2023)	15,908	15,408
Total investments	92,335	88,015
Cash and cash equivalents	10,244	13,110
Premium and other receivables	17,055	16,356
Reinsurance recoverables (net of allowance for credit losses of $142 in 2023)	18,889	18,817
Deferred tax asset	1,795	1,930
Deferred acquisition costs	4,121	4,213
Goodwill	5,794	5,776
Prepaid reinsurance premiums	3,352	2,669
Other assets	9,581	9,430
Total assets	$ 163,166	$ 160,316
Liabilities:		
Unpaid claims and claim adjustment expenses and future policy benefits:		
Property and casualty	$ 79,263	$ 78,598
Life	1,590	1,540
Other policyholder funds and benefits payable	16	14
Unearned premiums	28,773	28,058
Funds held under reinsurance treaties	333	356
Short-term debt	1,090	547
Long-term debt	9,559	10,053
Accrued postretirement and pension benefits	2,970	3,003
Payable for investments purchased and loaned	3,221	3,034
Other liabilities	13,086	12,905
Total liabilities	139,901	138,108
Equity:		
Unassigned equity	29,704	29,822
Accumulated other comprehensive loss	(6,662)	(7,830)
Total policyholders' equity	23,042	21,992
Non-controlling interest	223	216
Total equity	23,265	22,208
Total liabilities and equity	$ 163,166	$ 160,316

Liberty Mutual Holding Company Inc.

Consolidated Statements of Comprehensive Income

(dollars in millions)

(Unaudited)

	Three Months Ended March 31, 2023	Three Months Ended March 31, 2022
Consolidated net (loss) income	$ (67)	$ 498
Other comprehensive income (loss), net of taxes:		
Unrealized gains (losses) on securities	1,064	(2,769)
Foreign currency translation and other adjustments	104	123
Other comprehensive income (loss), net of taxes	1,168	(2,646)
Comprehensive income (loss)	$ 1,101	$ (2,148)

See accompanying notes to the unaudited consolidated financial statements

Liberty Mutual Holding Company Inc.

Consolidated Statements of Changes in Total Equity

(dollars in millions)

(Unaudited)

	Three Months Ended March 31,	
	2023	**2022**
Balance at beginning of the year	$ 22,208	$ 27,848
Cumulative effect from the adoption of new accounting standards	(44)	90
Mutual Merger with State Auto	-	542
Comprehensive income (loss):		
Consolidated net (loss) income	(67)	498
Other comprehensive income (loss), net of taxes	1,168	(2,646)
Total comprehensive income (loss)	1,101	(2,148)
Balance at end of the period	$ 23,265	$ 26,332

See accompanying notes to the unaudited consolidated financial statements

LIBERTY MUTUAL HOLDING COMPANY INC.

Consolidated Statements of Cash Flows
(dollars in millions)

(Unaudited)

	Three Months Ended March 31, 2023	Three Months Ended March 31, 2022
Cash flows from operating activities:		
Consolidated net (loss) income	$ (67)	$ 498
Adjustments to reconcile consolidated net (loss) income to net cash provided by operating activities:		
Depreciation and amortization	209	199
Realized losses (gains)	16	144
Undistributed private equity investment gains	143	(297)
Premium, other receivables, and reinsurance recoverables	(898)	(1,612)
Deferred acquisition costs	114	(159)
Liabilities for insurance reserves	1,029	2,007
Taxes payable, net of deferred	(64)	153
Other, net	(429)	(147)
Total adjustments	120	288
Net cash provided by operating activities	53	786
Cash flows from investing activities:		
Purchases of investments	(8,693)	(22,928)
Sales and maturities of investments	5,671	22,802
Property and equipment purchased, net	(19)	(37)
Cash paid for mutual merger, net of cash on hand	-	(800)
Other investing activities	66	(1,017)
Net cash used in investing activities	(2,975)	(1,980)
Cash flows from financing activities:		
Net activity in policyholder accounts	(2)	(7)
Debt financing, net	5	6
Net security lending activity and other financing activities	31	397
Net cash provided by financing activities	34	396
Effect of exchange rate changes on cash	22	8
Net decrease in cash and cash equivalents	(2,866)	(790)
Cash and cash equivalents, beginning of year	13,110	10,777
Cash and cash equivalents, end of period	$ 10,244	$ 9,987

See accompanying notes to the unaudited consolidated financial statements

(1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The accompanying consolidated financial statements include the accounts of Liberty Mutual Holding Company Inc., entities over which the Company exercises control including majority and wholly owned subsidiaries and variable interest entities ("VIE") when the Company is deemed the primary beneficiary (collectively "LMHC" or the "Company"). The minority ownership of consolidated affiliates is represented in equity as non-controlling interest. All material intercompany transactions and balances have been eliminated.

The accompanying consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("GAAP"). The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. The Company's principal estimates include (1) unpaid claims and claim adjustment expense reserves, including asbestos and environmental liability reserves and loss sensitive premium attributable to prior years, (2) reinsurance recoverables and associated uncollectible allowance, (3) fair value determination and other-than temporary impairments of the investment portfolio and direct investments in natural resources, (4) valuation of goodwill and intangible assets, (5) deferred income tax valuation allowance, and (6) pension and post-retirement benefit obligations. While the amounts included in the consolidated financial statements reflect management's best estimates and assumptions, these amounts ultimately could vary.

Adoption of New Accounting Standards

The Company adopted the FASB issued updated guidance for leases, ASU 2016-02, which requires a lessee to recognize a right-of-use asset and a lease liability on the balance sheet for leases with terms longer than 12 months. Leases are classified as either finance or operating, with classification affecting the pattern of expense recognition in the statements of income. The Company adopted the updated guidance for the quarter ended March 31, 2022, and elected the option allowed in the transition guidance to recognize a cumulative effect adjustment to the opening balance of unassigned equity in the year of adoption. The adoption resulted in the recognition of a right-of-use asset and a lease liability of $421 and an equity adjustment of $90, net of tax.

Effective January 1, 2023, the Company adopted ASC 326, *Measurement of Credit Losses on Financial Instruments*. As a result, the Company used modified retrospective transition and estimates allowance for credit losses on items measured at amortized cost within the scope of ASC 326-20, including mortgage loans, private loans, unfunded commitments, reinsurance recoverables, and premium receivables, to reflect management's estimate of expected credit losses considering historical losses, existing economic conditions, and reasonable and supportable forecasts. On January 1, 2023, the allowance for credit losses and liability for unfunded commitments increased by $56 million (pre-tax), and the cumulative effect to opening retained earnings was a reduction of $44 million. Adoption of ASC 326 for the AFS debt securities did not impact the transition adjustment as it is applied prospectively

There are no accounting standards not yet adopted by the Company that are expected to have a material impact on the consolidated financial statements.

Securities Lending

The Company participates in a securities lending program to generate additional income, whereby certain domestic fixed maturity securities and equity securities are loaned for a short period of time from the Company's portfolio to qualifying third parties via a lending agent. Terms of the agreement are for borrowers of these securities to provide collateral of at least 102% of the market value of the loaned securities. Acceptable collateral may be in the form of cash or permitted securities as outlined in the securities lending agreement. The market value of the loaned securities is monitored, and additional collateral is obtained if the market value of the collateral falls below 102% of the market value of the loaned securities. Under the terms of the securities lending program, the lending agent indemnifies the Company against borrower defaults. The loaned securities remain a recorded asset of the Company; however, the Company records a liability for amount of cash collateral held, representing its obligation to return the collateral related to the loaned securities.

Net Investment Hedge Instruments

The Company has designated non-derivative foreign currency denominated long-term debt and the related accrued interest as hedges of its net investment in certain foreign operations. Accordingly, the foreign currency translation of the debt instrument and accrued interest is recorded in accumulated other comprehensive loss, offsetting the foreign currency translation adjustment of the related net investment that is also recorded in accumulated other comprehensive loss. As of March 31, 2023, the Company had €2,250 million of outstanding long-term debt and approximately €42 million of accrued interest designated as non-derivative hedges of its net investment in certain foreign operations. As of March 31, 2023, the foreign currency translation of the debt instrument and accrued interest recorded in accumulated other comprehensive loss was $35.

Accumulated Other Comprehensive Loss

Accumulated other comprehensive loss consists principally of unrealized gains and losses on certain investments in debt securities, foreign currency translation adjustments, and pension and postretirement liability adjustments.

(dollars in millions)

The components of accumulated other comprehensive loss excluding non-controlling interest, net of related deferred acquisition costs and taxes, are as follows:

	March 31, 2023	December 31, 2022
Unrealized losses on securities	$(4,309)	$(5,373)
Foreign currency translation and other adjustments	(1,117)	(1,200)
Pension and post retirement liability funded status	(1,236)	(1,257)
Accumulated other comprehensive loss	$(6,662)	$(7,830)

The following tables present the changes in the components of other comprehensive income (loss) for the three months ended March 31, 2023 and 2022, respectively.

Three months ended March 31, 2023	Unrealized gains on securities	Change in pension and post retirement plans funded status	Foreign currency translation and other adjustments	Total
Unrealized change arising during the period	$1,242	$-	$73	$1,315
Less: Reclassification adjustments included in consolidated net income	(50)	(27)	-	(77)
Total other comprehensive income before income tax expense	1,292	27	73	1,392
Less: Income tax expense (benefit)	228	6	(10)	224
Total other comprehensive income, net of income tax expense	$1,064	$21	$83	$1,168

Three months ended March 31, 2022	Unrealized gains on securities	Change in pension and post retirement plans funded status	Foreign currency translation and other adjustments	Total
Unrealized change arising during the period	$(3,600)	$-	$106	$(3,494)
Less: Reclassification adjustments included in consolidated net income	(108)	(32)	-	(140)
Total other comprehensive (loss) income before income tax expense	(3,492)	32	106	(3,354)
Less: Income tax expense (benefit)	(723)	7	8	(708)
Total other comprehensive (loss) income, net of income tax expense	$(2,769)	$25	$98	$(2,646)

(2) ACQUISITIONS, MERGERS AND DISPOSITIONS

ACQUISITIONS

AmGeneral Insurance Berhad

On July 19, 2021, the Company announced they will be applying for regulatory approval to acquire Malaysian insurer AmGeneral Insurance Berhad. The acquisition closed July 28, 2022. As a result of the transaction Liberty Insurance Berhad acquired 100% of shares of the AmGeneral. AmBank Group's share of the sale proceeds were in the form of cash and consideration shares, which resulted in AmBank Group holding a 30% interest in the Liberty Insurance Berhad and AmGeneral businesses. The AmGeneral and Liberty Insurance Berhad operations formally merged in Q1 2023. The table below details the preliminary allocation of assets acquired and liabilities assumed. The fair values listed below are the Company's best estimates as of March 31, 2023, and are subject to adjustments as additional information becomes available to complete the allocation.

(dollars in millions)

	As of July 28, 2022
Assets	
Total investments	835
Cash and cash equivalents	42
Premiums and other receivables	12
Reinsurance recoverables	114
Goodwill	88
Other assets	104
Total assets	**1,195**
Liabilities	
Unpaid claims and claims adjustment expenses	410
Unearned premium	177
Deferred tax liability	7
Other liabilities	87
Total liabilities	**681**

Direct costs related to the acquisition were expensed as incurred. Integration and acquisition costs principally consisting of non-recurring banking, legal, tax and accounting services, retention and severance costs are reflected separately on the consolidated statements of income.

MERGERS

State Auto

On March 1, 2022, the Company completed its merger with State Auto Group, a super-regional insurance holding company headquartered in Columbus, Ohio. Under the terms of the agreement, State Auto mutual members became mutual members of Liberty Mutual and Liberty Mutual acquired all of the publicly held shares of common stock of State Auto Financial for $52 per share in cash, totaling approximately $980 million. As a mutual merger under ASC 805, *Business Combinations*, the fair value of SAM's member interest was estimated and used as a proxy for consideration in the merger. The Company recorded a direct increase to unassigned equity of $542 million, which represent the fair value of SAM's member interest. The table below details the final allocation of assets acquired and liabilities assumed as of March 31, 2023.

(dollars in millions)

	As of March 1, 2022
Assets	
Total investments	3,335
Cash and cash equivalents	176
Premiums and other receivables	650
Reinsurance recoverable	189
Goodwill	47
Prepaid reinsurance premiums	16
Deferred tax asset	75
Other assets	467
Total assets	4,955
Liabilities	
Unpaid claims and claim adjustment expenses	1,799
Unearned premiums	1,233
Long-term debt	203
Other liabilities	198
Total liabilities	3,433

Direct costs related to the merger were expensed as incurred. Integration and merger costs principally consisting of non-recurring banking, legal, tax and accounting services, retention and severance costs are reflected separately on the consolidated statements of income.

DISPOSITIONS

In August 2021, the Company entered into an agreement to sell an Australian subsidiary entity (Baralaba Coal Company) and recorded an incremental impairment of $10 in Q4, bringing the total 2021 impairment to $509. The transaction closed in December 2021 with a realized loss incurred of $30. In December 2022, the Company recognized a $60 gain from contingent consideration related to the transaction. In Q1 2023, the Company received a contingent consideration payment and recognized an additional gain of $5.

(dollars in millions)

(3) INVESTMENTS

The amortized cost, gross unrealized gains and losses and fair values of available for sale investments as of March 31, 2023 and December 31, 2022, are as follows:

March 31, 2023	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. government and agency securities	$8,938	$7	$(626)	$8,319
Residential MBS[1]	6,446	8	(533)	5,921
Commercial MBS	4,491	10	(253)	4,248
Other MBS and ABS[2]	5,055	4	(346)	4,713
U.S. state and municipal	7,470	38	(440)	7,068
Corporate and other	36,549	123	(3,031)	33,641
Foreign government securities	5,975	31	(325)	5,681
Redeemable Preferred Stock	79	1	-	80
Total securities available for sale	$75,003	$222	$(5,554)	$69,671

December 31, 2022	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. government and agency securities	$8,885	$2	$(777)	$8,110
Residential MBS[1]	6,547	5	(605)	5,947
Commercial MBS	4,457	10	(310)	4,157
Other MBS and ABS[2]	4,912	3	(396)	4,519
U.S. state and municipal	7,698	19	(586)	7,131
Corporate and other	34,868	48	(3,653)	31,263
Foreign government securities	5,788	20	(405)	5,403
Redeemable Preferred Stock	79	1	-	80
Total securities available for sale	$73,234	$108	$(6,732)	$66,610

(1) Mortgage-backed securities ("MBS")

(2) Asset-backed securities ("ABS")

There were no allowances for credit losses on available for sale securities in accordance with ASC 326 as of March 31, 2023.

As of March 31, 2023 and December 31, 2022, the fair value of common stock securities associated with non-guaranteed unit linked products where the policyholder bears the investment risk were approximately $677 and $633, respectively.

As of March 31, 2023 and December 31, 2022, the fair values of fixed maturity securities and equity securities loaned were approximately $3,692 and $3,281, respectively. Cash and short-term investments received as collateral in connection with the loaned securities were approximately $3,013 and $2,917 as of March 31, 2023 and December 31, 2022, respectively. Investments other than cash and short-term investments received as collateral in connection with the loaned securities were approximately $758 and $434 as of March 31, 2023 and December 31, 2022, respectively.

The amortized cost and fair value of fixed maturities as of March 31, 2023, by contractual maturity are as follows:

	Amortized Cost	Fair Value
Due to mature:		
One year or less	$2,876	$2,825
Over one year through five years	25,703	24,270
Over five years through ten years	22,067	20,178
Over ten years	8,365	7,516
MBS and ABS of government and corporate agencies	15,992	14,882
Total fixed maturities	$75,003	$69,671

(dollars in millions)

Actual maturities may differ from contractual maturities as borrowers may have the right to call or prepay obligations with or without call or prepayment penalties. Due to the potential for prepayment on MBS and ABS, they are not categorized by contractual maturity.

The following table summarizes the Company's gross realized gains and losses by asset type for the three months ended March 31, 2023 and 2022:

	Three Months Ended March 31,	
Components of Net Realized Gains (Losses)	**2023**	**2022**
Fixed maturities:		
Gross realized gains	$27	$87
Gross realized losses	(77)	(201)
Equities:		
Gross realized gains	56	130
Gross realized losses	(16)	(301)
Derivatives:		
Gross realized gains	28	15
Gross realized losses	(18)	(55)
Other:		
Gross realized gains	11	214
Gross realized losses	(27)	(33)
Total net realized (losses)	$(16)	$(144)

Included in the above are unrealized gains related to equity securities still held of $25 and $44, respectively, for the three months ended March 31, 2023 and 2022.

As of March 31, 2023 and December 31, 2022, impairment losses recognized through accumulated other comprehensive loss were $(1) and $(3) respectively.

During the three months ended March 31, 2023 and 2022, the Company recorded $(12) of impairment losses. Included in the impairment losses are impairment charges for assets measured at fair value on a non-recurring basis related to natural resources for the three months ended March 31, 2023 and 2022, of $- and $(12), respectively.

During the three months ended March 31, 2023 and 2022, proceeds from sales of fixed maturities available for sale were $2,903 and $19,613, respectively. The gross realized gains (losses) on sales of fixed maturities available for sale totaled $20 and $(61) in 2023 and $82 and $(191) in 2022. During the three months ended March 31, 2023 and 2022, proceeds from sales of equities at fair value were $56 and $760, respectively. The gross realized gains (losses) on sales of equities at fair value totaled $1 and $(2) in 2023 and $68 and $(27) in 2022.

The following tables present the gross unrealized losses and fair value of fixed maturity securities by the length of time that individual securities have been in a continuous unrealized loss position for which an allowance for credit losses has not been recorded as of March 31, 2023, and that were not deemed to be other-than-temporarily impaired as of December 31, 2022. The Company adopted ASC 326 on January 1, 2023. Prior to that, the Company followed the other-than-temporary impairment accounting guidance:

March 31, 2023	**Less Than 12 Months**		**12 Months or Longer**	
	Unrealized Losses	**Fair Value of Investments with Unrealized Losses**	**Unrealized Losses**	**Fair Value of Investments with Unrealized Losses**
U.S. government and agency securities	$(156)	$2,794	$(470)	$4,790
Residential MBS	(61)	1,216	(472)	4,434
Commercial MBS	(74)	1,860	(179)	2,179
Other MBS and ABS	(24)	617	(322)	3,817
U.S. state and municipal	(28)	1,310	(412)	3,848
Corporate and other	(472)	7,908	(2,559)	20,735
Foreign government securities	(31)	1,228	(294)	3,307
Total Securities Available for Sale	$(846)	$16,933	$(4,708)	$43,110

(dollars in millions)

December 31, 2022	**Less Than 12 Months**		**12 Months or Longer**	
	Unrealized Losses	**Fair Value of Investments with Unrealized Losses**	**Unrealized Losses**	**Fair Value of Investments with Unrealized Losses**
U.S. government and agency securities	$(448)	$5,338	$(329)	$2,499
Residential MBS	(431)	4,569	(174)	1,165
Commercial MBS	(222)	3,513	(88)	584
Other MBS and ABS	(139)	1,974	(257)	2,475
U.S. state and municipal	(284)	4,374	(302)	1,664
Corporate and other	(1,705)	19,321	(1,948)	10,073
Foreign government securities	(123)	2,541	(282)	2,248
Total Securities Available for Sale	$(3,352)	$41,630	$(3,380)	$20,708

As of March 31, 2023, there were 7,362 securities that were in an unrealized loss position for 12 months or longer. The Company monitors the difference between the amortized cost and estimated fair value of fixed maturity securities to ascertain whether declines in value are temporary in nature. The Company currently does not have the intent to sell these securities and has determined it is not more likely than not that it would be required to sell these fixed maturity securities before they recover their fair value.

The following table is a roll-forward of the allowance for credit losses for fixed income securities:

	2023
Balance at January 1,	$-
Credit losses on securities not previously reported	11
Net increase/(decrease) on credit losses on securities previously reported	-
Reductions of allowance related to sales	-
Write-offs	(11)
Balance at March 31,	$-

The Company believes the unrealized loss position as of March 31, 2023, does not contain credit loss because (i) the Comany did not intend to sell these fixed maturity AFS securities; (ii) it is not more likely than not that the Company will be required to sell the fixed maturity AFS securities before recovery of their amortized cost basis; and (iii) the difference between the present value of cash flows expected to be collected from the security and the amortized cost basis of the security was due to factors other than credit loss.

As of March 31, 2023, the unrealized losses associated with the U.S. government and agency securities, U.S. state and municipal, and foreign government securities were attributable primarily to movement in interest rates and does not reflect a deterioration in the credit quality of the issuers. Based on the Company's analysis, no credit loss exists in any of these securities.

Credit ratings express opinions of the credit quality of a security. Securities rated investment grade (those rated BBB- or higher by S&P or Baa3 or higher by Moody's) are generally considered to have a low credit risk. As of March 31, 2023, 87% of the fair value of the Company's corporate bond and other securities was rated investment grade, and the portion of the Company's corporate bond and other securities rated below investment grade had an amortized cost basis of $4,670 and a fair value of $4,278. Based on the Company's analysis, no credit loss exists in any of these securities.

As of March 31, 2023, the unrealized losses associated with the Company's MBS and ABS securities were attributable primarily to movement in interest rates. The Company assessed allowance for credit losses using the present value of expected cash flows which incorporates key assumptions, including credit spreads for the security, adverse conditions related to the security, the industry, or geographic area and assessment of the issuer being able to make payments. Based on the Company's analysis, no credit loss exists in any of these securities.

Accrued interest is excluded from the amortized cost basis of the securities and is reported in the "Other assets" line item of the Consolidated Balance Sheet. As of March 31, 2023, accrued interest was $429. For identifying and measuring an impairment, the Company monitors accrued interest receivables and writes them off by reversing interest income, and as of March 31, 2023, this written-off amount was $0.

Starting January 1, 2023, the Company has a portfolio monitoring process to assess whether a credit loss exists. For an available for sale security in an unrealized loss position, the Company assesses whether management with the appropriate authority has decided to sell or it is more likely than not that the Company will be required to sell before recovery of the amortized cost basis. If the security meets either of these criteria, the allowance for credit losses is written off and the amortized cost basis is written down to the debt security's fair value at the reporting date with any incremental impairment reported in earnings. If the Company does not intend to sell the security and it is not more likely than not that the Company will be required to sell the security before recovery of its amortized cost basis, the Company utilizes both qualitative and quantitative inputs to determine if a credit loss is expected. These factors include:

- the extent to which fair value is less than the amortized cost basis
- Credit Spreads for the security
- adverse conditions related to the security, the industry, or geographic area,
- assessment of the issuer being able to make payments,

When developing estimate of cash flows expected to be collected, the Company considers available information relevant to the collectability of the security, including information about past events, current conditions, and reasonable and supportable forecasts. This information includes:

- remaining payment terms of the security,
- prepayment speeds,
- value of the underlying collateral.

These considerations are part of the Company's portfolio monitoring process which includes a quarterly review of all securities to identify those whose fair value fell below their amortized cost basis by internally established thresholds. The securities identified, along with other securities for which the Company may have a concern, are evaluated to determine whether a credit loss exists. If the company determines that a credit loss exists, an allowance for credit losses is recorded in the Net realized (losses) gains line item of the statement of income, limited by the amount that the fair value is less than amortized cost basis. The Company calculates the present value of cash flows expected to be collected using the effective interest rate implicit in the security at the date of acquisition and compares it with the amortized cost basis of the security. The portion of the unrealized loss related to factors other than credit loss remains in OCI. Write-offs are deducted from the allowance in the period in which the securities are deemed uncollectible. Recoveries are recognized when received.

Prior to January 1, 2023, the Company reviewed fixed maturity securities and other investments for impairment on a quarterly basis. These investments were reviewed for both quantitative and qualitative considerations including, but not limited to: (a) the extent of the decline in fair value below book value, (b) the duration of the decline, (c) significant adverse changes in the financial condition or near term prospects of the investment or issuer, (d) significant change in the business climate or credit ratings of the issuer, (e) general market conditions and volatility, (f) industry factors, (g) the past impairment of the security holding or the issuer and (h) impact of foreign exchange rates on foreign currency denominated securities. For fixed maturity securities that the Company does not intend to sell or for which it is more likely than not that the Company would not be required to sell before an anticipated recovery in value, the Company separates impairments into credit loss and non-credit loss components. The determination of the credit loss component of the impairment charge is based on the Company's best estimate of the present value of the cash flows expected to be collected from the fixed maturity security compared to its amortized cost and is reported as part of net realized gains. The non-credit component, the residual difference between the credit impairment component and the fair value, is recognized in other comprehensive income. The factors considered in making an evaluation for credit versus non-credit other-than-temporary impairment include the following: (a) failure of the issuer of the security to make scheduled interest or principal payments (including the payment structure of the fixed maturity security and the likelihood the issuer will be able to make payments that increase in the future), (b) performance indicators of the underlying assets in the security (including default and delinquency rates), (c) vintage, (d) geographic concentration and (e) industry analyst reports, sector credit ratings, and volatility of the security's fair value. In addition, the Company's accounting policy for other-than-temporary impairment recognition requires an other-than-temporary impairment charge be recorded when it is determined the security will be sold or it is more likely than not that the Company will be required to sell the security before recovery of the security's amortized cost basis (all fixed maturity securities and certain preferred equity securities) or the Company does not have the intent and ability to hold certain equity securities for a period of time that is sufficient to allow for any anticipated recovery in fair value.

The Company is required to review its natural resource and other equity method investments when facts and circumstances indicate that carrying values may not be recoverable. In performing a quarterly review, the fair value of the Company's investment is estimated using indicators including, but not limited to, market comparables and analyses, commodity prices, and discounted cash flows, and a realized loss is recognized for the excess, if any, of the investment's carrying value over its estimated fair value.

Mortgage Loans

The Company's mortgage loans are commercial mortgage loans collateralized by real estate properties and totaled $3,564 net of credit loss allowances. Loan to value ratio and debt service coverage ratio are considered key credit quality indicators when estimating expected credit loss allowance for mortgage loans. Payments on mortgage loans were current as of March 31, 2023.

(dollars in millions)

Private Loans
Private loans consist of lending to small businesses, pools of individual consumers, and individual companies. The Company's private loans totaled $2,376, net of credit loss allowance, as of March 31, 2023 and are reported in the "Other investments" line item of the Consolidated Balance Sheet. Credit rating is considered a key credit quality indicator when estimating expected credit loss allowances for private loans. Payments on private loans were current as of March 31, 2023.

Interest on loans
Interest income on a loan is recognized unless the loan is more than 90 days delinquent, at which time they are moved to non-accrual status. Amounts deemed uncollectable are written off. Subsequently collected amounts are recognized in the period in which the cash is collected. Accrued interest is excluded from the amortized cost of loans and is reported in the "Other assets" line item of the Consolidated Balance Sheet. As of March 31, 2023, accrued interest was $18 and $27 for mortgage loans and private loans, respectively.

The following table is a roll-forward of the allowance for credit losses for loan securities by segment:

	2023		
	Mortgage	Private	Total
Balance at January 1,	$9	$-	$9
Adoption impact of ASC 326	21	28	49
Net increase/(decrease) due to credit losses	1	9	10
Net decrease due to sales/maturities/write-offs	-	-	-
Balance at March 31,	$31	$37	$68

Variable Interest Entities
The Company invests in limited partnerships and other entities subject to VIE analysis under the VIE subsections of ASC 810, *Consolidation*. The Company analyzes each investment to determine whether it is a VIE, and if so, whether the Company is the primary beneficiary or a significant interest holder based on a qualitative and quantitative assessment. The Company evaluates the design of the entity, the risks to which the entity was designed to expose the variable interest holder and the extent of the Company's control of and variable interest in the VIE. As of March 31, 2023 and December 31, 2022, the Company has determined that it is not the primary beneficiary of any of its VIEs except for the Company's investment in its India joint venture, which is deemed immaterial.

The Company has variable interests in VIEs for which it is not the primary beneficiary and accounts for these VIEs under the equity method in accordance with ASC 323, *Investments-Equity Method and Joint Ventures*. The VIEs are principally private equity limited partnerships in which the Company has invested as a passive limited partner. The partnerships were deemed to be VIEs because the equity holders as a group lack the power to direct the activities that most significantly impact the respective entity's economic performance. The VIEs generate variability primarily from investment portfolio performance and that variability is passed to equity holders. The net carrying value of non-consolidated VIEs in which the Company has a variable interest was $11,662 and $11,554 as of March 31, 2023 and December 31, 2022, respectively, and the Company's maximum exposure to loss was $18,893 and $18,279 as of March 31, 2023 and December 31, 2022, respectively. The assets are included in other investments on the accompanying consolidated balance sheets. Maximum exposure to loss includes the carrying value and unfunded commitment of the VIE. The increase in the maximum exposure to loss from December 31, 2022 to March 31, 2023, is primarily related to valuation changes and new commitments to VIEs related to private credit and energy transition and infrastructure, partially offset by a decrease in real estate.

Limited Partnership Investments
As of March 31, 2023 and December 31, 2022, the carrying values of limited partnership investments were $12,359 and $12,346, respectively. These investments consist of traditional private equity partnerships, real estate partnerships, natural resources partnerships (primarily energy, metals and mining, and agriculture and timber), and other partnership funds and equity method investments. Included in the carrying value of limited partnership investements are $489 and $518 of limited partnership investments where the Company has elected the fair value option as of March 31, 2023 and December 31, 2022, respectively. The Company's investments in limited partnership investments are long-term in nature. The Company believes these investments offer the potential for superior longterm returns and are appropriate in the overall context of a diversified portfolio.

(4) REINSURANCE

In the ordinary course of business, the Company assumes reinsurance and also cedes reinsurance to other insurers to reduce overall risk, including exposure to large losses and catastrophic events. The Company is also a member of various involuntary pools and associations and serves as a servicing carrier for residual market organizations. The Company remains contingently liable in the event reinsurers are unable to meet their obligations for paid and unpaid reinsurance recoverables and unearned premiums ceded under reinsurance agreements.

The Company reported reinsurance recoverables of $18,889 and $18,817 as of March 31, 2023 and December 31, 2022, respectively, net of allowance for credit losses of $142 and $140, respectively. Included in these balances are $1,141 and $1,022 of paid recoverables and $17,890 and $17,935 of unpaid recoverables (including retroactive reinsurance), respectively.

Amounts recoverable from reinsurers are estimated in a manner consistent with the claim liability associated with the reinsured business. The Company evaluates and monitors the financial condition of its reinsurers under voluntary reinsurance arrangements to minimize its exposure to significant losses from reinsurer insolvencies. The Company reports its reinsurance recoverables net of an allowance for credit losses. The allowance is based upon the Company's ongoing review of amounts outstanding, length of collection periods, changes in reinsurer credit standing and other relevant factors, including information relating to past events, current conditions, and reasonable and supportable forecasts. The Company assesses allowance for credit losses by individual reinsurers and uses a probability-of-default method. Write-offs of reinsurance recoverable are recorded in the period in which they are deemed uncollectible and are recorded against allowance for credit losses. The establishment of reinsurance recoverables and the related allowance for credit losses is also an inherently uncertain process involving estimates. Changes in these estimates could result in additional charges to the accompanying consolidated statements of income.

On November 5, 2019, Liberty Mutual Insurance Company ("LMIC") entered into a reinsurance transaction with National Indemnity Company ("NICO"), a subsidiary of Berkshire Hathaway Inc., on a combined aggregate excess of loss agreement for certain GRM U.S. Business Lines and GRS National Insurance workers compensation liabilities, commercial auto liability and general liability excluding umbrella and warranty ("NICO Casualty Reinsurance Transaction"). The first layer of the contract attaches at $300 below applicable held reserves at inception of $8,342 of combined aggregate reserves. The second layer of the contract provides adverse development coverage for $1,000 above a retention equal to $8,742. The contract includes a sublimit of $100 for certain general liability liabilities. At the closing of the NICO Casualty Reinsurance Transaction, but effective as of January 1, 2019, the Company ceded $300 of existing undiscounted liabilities, paid NICO total consideration of $462 and recorded a pre-tax loss of $173. This contract is accounted for on a retroactive basis.

In general terms, the covered business includes post December 31, 2018 development on: (1) certain workers compensation liabilities arising under policies on the books of the Company's GRM U.S. Business Lines and GRS National Insurance strategic business units as of December 31, 2018, as respects injuries or accidents occurring after December 31, 2013 and prior to January 1, 2019; (2) commercial auto liabilities arising under policies on the books of the Company's GRM U.S. Business Lines and GRS National Insurance strategic business units as of December 31, 2018 as respects injuries or accidents occurring prior to January 1, 2019; and (3) general liability excluding umbrella and warranty arising under policies on the books of the Company's GRM U.S. Business Lines and GRS National Insurance strategic business units as of December 31, 2018, as respects injuries or accidents occurring prior to January 1, 2019.

Since the NICO Casualty Reinsurance Transaction is accounted for as retroactive reinsurance in the Company's Consolidated Financial Statements, to the extent there is unfavorable development of losses covered by this reinsurance, an additional reinsurance benefit is recognized in the consolidated statements of income until those benefits exceed the loss on the transaction. Reinsurance benefits will be deferred and are amortized into earnings over the period when underlying claims are settled.

As the aggregate development on the contract has exceeded the original pre-tax loss of $173, deferred gains are now being recorded. The Company reported deferred gain amortization of $4 and $2 for the three months ended March 31, 2023 and March 31, 2022, respectively. As of March 31, 2023 and December 31, 2022, deferred gains were $215 and $218. Limits remaining on the contract as of March 31, 2023, were $543.

In conjunction with the Ironshore acquisition and effective May 1, 2017, the Company entered into a reinsurance transaction with NICO on a combined aggregate excess of loss agreement providing coverage for substantially all of Ironshore's reserves related to losses occurring prior to January 1, 2017. The first layer of the contract transfers $400 of held reserves at inception, for which the Company established reinsurance recoverables on the consolidated balance sheets. The second layer of the contract provides adverse development coverage for 95% of $500 above a retention equal to $3,006, minus paid losses between January 1, 2017 and May 1, 2017, which retention approximates the total held reserves on the covered business on Ironshore's opening balance sheet. The contract includes a sublimit of $277 for certain construction liability liabilities. The Company paid NICO consideration of $550, including interest accrued at the time of the settlement. The contract is accounted for on a prospective basis. Limits remaining on the contracts in total, and for construction liability liabilities, respectively, were $456 and zero as of March 31, 2023.

On July 17, 2014, LMIC entered into a reinsurance transaction with NICO on a combined aggregate excess of loss agreement for substantially all of the Company's U.S. workers compensation, asbestos and environmental liabilities (the "NICO Reinsurance Transaction"), attaching at $12,522 of combined aggregate reserves, with an aggregate limit of $6,500 and sublimits of $3,100 for asbestos and environmental liabilities and $4,507 for certain workers compensation liabilities. At the closing of the NICO Reinsurance Transaction, but effective as of January 1, 2014, the Company ceded $3,320 of existing undiscounted liabilities under this retroactive reinsurance agreement. NICO will provide $3,180 of additional aggregate adverse development reinsurance. The Company paid NICO total consideration of $3,046 and recorded a pre-tax loss of $128. With respect to the ceded asbestos and environmental business, NICO has been given authority to handle claims, subject to the Company's oversight and control. With respect to the ceded workers compensation business, the Company will continue to handle claims. The contract is accounted for on a retroactive basis.

In general terms, the covered business includes post December 31, 2013 development on: (1) asbestos and environmental liabilities arising under policies of insurance and reinsurance with effective dates prior to January 1, 2005; and (2) workers compensation liabilities arising out of policies on the books of the Company's former Commercial Insurance Strategic Business Unit as of December 31, 2013, as respects injuries or accidents occurring prior to January 1, 2014.

As the aggregate development on the contract has exceeded the original pre-tax loss of $128, deferred gains are now being recorded. The Company reported deferred gain amortization of $0 for the three months ended March 31, 2023 and March 31, 2022, respectively. As of March 31, 2023 and December 31, 2022, deferred gains were $23 and $26. Limits remaining on the contract in total, and for asbestos and environmental liabilities, respectively, were $3,177 and $368 as of March 31, 2023.

Non Catastrophe Reinsurance

The Company purchases facultative and treaty reinsurance protection on a per risk, per policy, per loss and/or per occurrence basis. Treaty coverage is provided on a pro rata and excess of loss basis for portions of the Company's property, marine, terrorism, energy, third party motor, cyber, financial risk, surety, aviation and casualty lines portfolios.

Catastrophe Reinsurance

The Company has property catastrophe reinsurance coverage for its domestic business and certain specialty operations including: 1) hurricanes and earthquake reinsurance covering a substantial portion of $3,100 of loss in excess of $1,000 of retained loss in the United States, Canada and the Caribbean, excluding certain reinsurance exposures; 2) per occurrence and aggregate excess of loss coverage targeting our reinsurance exposures; and 3) quota share reinsurance programs. These programs are structured to meet the Company's established tolerances under its Enterprise Risk Management Program.

The Company purchases property catastrophe reinsurance coverage for the international property books to protect against international catastrophe events.

The Company purchases workers compensation catastrophe reinsurance, including coverage for its domestic commercial operations and certain specialty operations' US exposures. This program provides significant reinsurance protection in excess of $330 per occurrence retention, including coverage for terrorism events and/or losses for a single event at a single insured location in excess of $75. These contracts generally exclude acts of terrorism which are "certified" by the US government where such certified terrorism events involve the intentional use of nuclear, chemical, or biological materials.

Catastrophe Bond Reinsurance

On December 16, 2022, the Company entered into a multi-year property catastrophe reinsurance agreement, effective January 1, 2023, with Mystic Re IV Ltd. ("Mystic IV"), a Bermuda domiciled reinsurer, to provide a total of $150 of reinsurance coverage for the Company and its affiliates for named storms and earthquakes covering U.S., Caribbean and Canada. The reinsurance agreement is collateralized. Such collateral is provided by Mystic IV using proceeds from the issuance of certain catastrophe bonds. The reinsurance agreement provides per occurrence indemnity coverage. The Company has not recorded any recoveries under this program.

On June 16, 2021, the Company entered into a multi-year property catastrophe reinsurance agreement, effective July 1, 2021, with Mystic IV to provide a total of $300 of reinsurance coverage for the Company and its affiliates for named storms and earthquakes covering U.S., Caribbean and Canada. The reinsurance agreement is collateralized. Such collateral is provided by Mystic IV using proceeds from the issuance of certain catastrophe bonds. The reinsurance agreement provides per occurrence indemnity coverage. The Company has not recorded any recoveries under this program.

(dollars in millions)

On December 21, 2020, the Company entered into a multi-year property catastrophe reinsurance agreement, effective January 1, 2021, with Mystic IV to provide a total of $300 of reinsurance coverage for the Company and its affiliates for named storms covering U.S. and earthquakes covering U.S. and Canada. The reinsurance agreement is collateralized. Such collateral is provided by Mystic IV using proceeds from the issuance of certain catastrophe bonds. The reinsurance agreement provides per occurrence coverage based on weighted industry insured loss index. This loss index is weighted to align with the Company's assumed reinsurance portfolio. The Company has not recorded any recoveries under this program.

Florida Hurricane Catastrophe Fund

The Company participates in the Florida Hurricane Catastrophe Fund ("FHCF"), a state-mandated catastrophe fund that provides reimbursement to insurers for a portion of their Florida hurricane losses. FHCF resources may be insufficient to meet the obligations of FHCF. Limits, premium and reimbursements from FHCF apply on a per company basis. If losses fall disproportionately on one insurance entity within the Company, recovery from FHCF could be less than anticipated. On June 1, 2022, the Company renewed coverage for 90% of approximately $52 excess of $22. Recoveries from FHCF inure to the sole benefit of the Company. If the Company fails to recover as anticipated from FHCF there could be an adverse effect on the Company's business, financial condition or results of operations.

The Company participates in the Reinsurance to Assist Policyholders ("RAP") program, a state administered catastrophe fund that provides reimbursement to insurers for a portion of their Florida hurricane losses. Limits, premium and reimbursements from RAP apply on a per company basis. If losses fall disproportionately on one insurance entity within the Company, recovery from RAP could be less than anticipated. On July 15, 2022, the Company received coverage for 90% of approximately $5 excess of $14.

(5) DEBT OUTSTANDING

Debt outstanding as of March 31, 2023 and December 31, 2022 includes the following:

Short-term debt:

	2023	2022
4.25% Notes, due 2023[1]	$547	$547
1.75% €500 million Notes, due 2024[1]	543	-
Total short-term debt	$1,090	$547

Long-term debt:

	2023	2022
1.75% €500 million Notes, due 2024[1]	$-	$533
8.50% Surplus Notes, due 2025	140	140
2.75% €750 million Notes, due 2026	815	801
7.875% Surplus Notes, due 2026	227	227
7.625% Notes, due 2028	3	3
4.569% Notes, due 2029	1,000	1,000
4.625% €500 million Notes, due 2030	543	533
3.91% - 4.25% Federal Home Loan Bank Borrowings due 2032	300	300
7.00% Notes, due 2034	124	124
6.50% Notes, due 2035	271	271
7.50% Notes, due 2036	19	19
6.50% Notes, due 2042	250	250
4.85% Notes, due 2044	564	564
4.50% Notes, due 2049	232	232
3.951% Notes, due 2050	1,248	1,248
4.125% Junior Subordinated Notes, due 2051[2]	500	500
5.50% Notes, due 2052	1,000	1,000
3.625% €500 million Junior Subordinated Notes, due 2059[3]	543	533
3.95% Notes, due 2060	746	746
4.30% Junior Subordinated Notes, due 2061[4]	800	800
7.80% Junior Subordinated Notes, due 2087[5]	437	437
10.75% Junior Subordinated Notes, due 2088[6]	35	35
7.697% Surplus Notes, due 2097	260	260
Subtotal	10,057	10,556
Unamortized discount	(433)	(437)
Long-term debt excluding unamortized debt issuance costs	9,624	10,119
Unamortized debt issuance costs	(65)	(66)
Total long-term debt	$9,559	$10,053

(1) Short-term debt is the current maturities of the 4.25% Notes, due June 15, 2023 and the 1.75% Notes, due March 27, 2024.

(2) The par value call date is three months prior to and on December 15, 2026, after which the notes are callable at par during the three-month period prior to and on each succeeding interest reset date.

(3) The par value call date and final fixed rate interest payment date is May 23, 2024, subject to certain requirements.

(4) The par value call date is February 1, 2026 after which the notes are callable at par on each subsequent interest payment date.

(5) The par value call date and final fixed rate interest payment date is March 15, 2037, subject to certain requirements.

(6) The par value call date and final fixed rate interest payment date is June 15, 2038, subject to certain requirements.

Debt Transactions and In-Force Credit Facilities

On December 15, 2022, $40 of Rockhill Holding Company ("RHC") Notes were redeemed.

On December 2, 2022, Liberty Mutual Group, Inc. ("LMGI") issued EUR500 of Senior Notes, due 2030 (the "2030 Notes"). Interest is payable annually at a fixed rate of 4.625%. The 2030 Notes mature on December 2, 2030.

On November 23, 2022, $15 of State Auto Financial Corporation ("STFC") Notes were redeemed.

On November 3, 2022, $96 of State Auto Property & Casualty Insurance Company ("SPC") Federal Home Loan Bank (FHLB) borrowings were paid.

On September 21, 2022, $19 of State Automobile Mutual Insurance Company ("SAM") and $21 of SPC FHLB borrowings were paid.

On September 2, 2022, $11 of SAM FHLB borrowings were paid.

On June 6, 2022, LMGI issued $1,000 of Senior Notes, due 2052 (the "2052 Notes"). Interest is payable semi-annually at a fixed rate of 5.50%. The 2052 Notes mature on June 15, 2052.

On May 2, 2022, $473 of LMGI 4.95% Notes were paid at maturity.

On April 18, 2022, LMGI amended and restated its five-year unsecured revolving credit facility of $1,000 with an expiration date of April 18, 2027. To date, no funds have been borrowed under the facility.

LMIC, Peerless Insurance Company ("PIC"), Liberty Mutual Fire Insurance Company ("LMFIC"), Employers Insurance Company of Wausau ("EICOW"), Safeco Insurance Company of America ("SICOA"), Ohio Casualty Insurance Company ("OCIC"), SAM, SPC and Rockhill Insurance Company ("RIC") are members of the Federal Home Loan Bank. On March 21, 2012, LMFIC borrowed $150 at a rate of 3.91% with a maturity date of March 22, 2032. On March 23, 2012 and April 2, 2012, LMIC borrowed $127 at a rate of 4.24% with a maturity date of March 23, 2032 and $23 at a rate of 4.25% with a maturity date of April 2, 2032, respectively. As of March 31, 2023, all outstanding Federal Home Loan Bank borrowings are fully collateralized. On December 29, 2022, SICOA and OCIC became members of FHLB Boston. Ironshore Indemnity Insurance ("III") and Ironshore Specialty Insurance Company ("ISIC") memberships were cancelled on February 24th and 25th, 2020, respectively. Final cancellation of membership has a five-year waiting period. III's waiting period was waived by FHLB, so final membership cancellation was effective on February 9, 2022. For ISIC, the effective date of its final membership cancellation will be February 2025.

Payments of interest and principal of the surplus notes are expressly subordinate to all policyholder claims and other obligations of LMIC. Accordingly, interest and principal payments are contingent upon prior approval of the Commissioner of Insurance of the Commonwealth of Massachusetts.

(6) UNPAID CLAIMS AND CLAIM ADJUSTMENT EXPENSES

The Company establishes reserves for payment of claims and claim adjustment expenses that arise from the policies issued. As required by applicable accounting rules, no reserves are established until a loss, including a loss from a catastrophe, occurs. The Company's reserves are segmented into three major categories: reserves for reported claims (estimates made by claims adjusters); incurred but not reported claims reserves ("IBNR") representing reserves for unreported claims and supplemental reserves for reported claims; and reserves for the costs to settle claims. The Company establishes its reserves net of salvage and subrogation by line of business or coverage and year in which losses occur.

Establishing loss reserves, including loss reserves for catastrophic events that have occurred, is an estimation process. Many factors can ultimately affect the final settlement of a claim and, therefore, the necessary reserve. Changes in the law, results of litigation, medical costs, the costs of repair materials and labor rates can all affect ultimate claim costs. In addition, time can be a critical part of reserving determinations since the longer the span between the incidence of a loss and the payment or settlement of the claim, the more variable the ultimate settlement can be. Accordingly, "short-tail" claims, such as property damage claims, tend to be easier to estimate than "long-tail" claims, such as workers compensation or general liability claims.

(dollars in millions)

As information develops that varies from past experience, provides additional data or augments data that previously was not considered sufficient for use in determining reserves, changes in the Company's estimate of ultimate liabilities may be required. The effects of these changes are reflected in current operating results.

In order to establish a reserve for IBNR claims, the actuarial teams within each of the SBUs use their experience and knowledge of the lines of business to estimate the potential future development of the incurred claims. The Company uses a number of actuarial methods and assumptions to develop an estimate of ultimate claim liabilities. Generally, these are a combination of exposure and experience based actuarial methods and review of other pertinent and available information from claims, underwriting, product and finance. Exposure based actuarial methods consider historical loss ratios and adjust for rate changes, premium and loss trends, industry trends and other information. These methods are typically used when developing an actuarial central estimate for more recent policy periods when claims data is insufficient to produce a reliable indication. As claims data becomes more reliable for a given policy period, more consideration is given to experience methods which review and monitor actual paid and reported development.

A comprehensive actuarial reserve review is performed for each product line at least once a year. The process and methods used for each product line vary depending on the circumstances and include input from claims, underwriting, product and finance. Each quarter the actuarial central estimate for each product line is reviewed and updated based upon development and presented to the reserving committee to conclude on the Company's best estimate of ultimate claim liabilities.

Activity in property and casualty unpaid claims and claim adjustment expenses of the Company are summarized as follows:

	2023	2022
Balance as of January 1	$78,598	$72,049
Less: unpaid reinsurance recoverables(1)	13,605	12,638
Net balance as of January 1	64,993	59,411
Balance attributable to acquisitions and dispositions(2)	-	1,524
Incurred attributable to:		
Current year	8,720	7,639
Prior years(3)	60	34
Discount accretion attributable to prior years	11	9
Total incurred	8,791	7,682
Paid attributable to:		
Current year	3,028	2,729
Prior years	5,155	4,297
Total paid	8,183	7,026
Amortization of deferred retroactive reinsurance gain	5	4
Net adjustment due to foreign exchange	58	(34)
Add: unpaid reinsurance recoverables(1)	13,599	12,967
Balance as of March 31	$79,263	$74,528

(1) In addition to the unpaid reinsurance recoverable balances noted above, and as a result of retroactive reinsurance agreements, the Company has recorded retroactive reinsurance recoverable balances of $4,273 and $4,192 as of March 31, 2023 and 2022 respectively.

(2) The balance attributable to acquisitions, mergers, and dispositions in 2023 represents our participation in bond reinsurance agreement with Mystic Re IV. The balance attributable to acquisitions, mergers, and dispositions in 2022 represents the impact of the termination of our participation in Syndicates 2014 and 1980 via reinsurance to close transactions with Riverstone, as well as the mutual merger with State Auto Group, and the acquisition of AmGeneral.

(3) Does not include decreases in allowance related to reinsurance recoverables due to prior year development of $3 and $2 as of March 31, 2023 and 2022 respectively.

In 2023, the change in incurred attributable to prior years, excluding asbestos and environmental and amortization of deferred retroactive loss, is primarily attributable to unfavorable development on commercial property, specialty and homeowners lines of business, partially offset by favorable development on personal auto and workers' compensation lines of business. In 2022, the change in incurred attributable to prior years, excluding asbestos and environmental and amortization of deferred retroactive loss, is primarily attributable to unfavorable development on casualty and general liability lines of business, partially offset by favorable development on workers' compensation.

In response to the COVID-19 pandemic, several states have passed amendments to expand Worker's Compensation coverage to ensure certain workers who contract the virus are eligible for compensation. In addition, some states have explored legislation that may expand the coverage obligations of certain insurance policies, such as business interruption policies. The Company continues to evaluate the potential exposures, but could experience increased claims frequency and severity depending on the terms and number of states implementing such changes.

(dollars in millions)

Asbestos and Environmental Reserves

The Company's asbestos and environmental reserves for unpaid claims and claim adjustment expenses, net of reinsurance before the NICO Reinsurance Transaction and including uncollectible reinsurance, were $1,174 and $1,199 as of March 31, 2023 and December 31, 2022, respectively.

(7) INCOME TAXES

The income tax provision is calculated under the liability method of accounting. The Company recognizes deferred income tax assets and liabilities for the expected future tax effects attributable to temporary differences between the financial statement and tax return bases of assets and liabilities based on enacted tax rates and other provisions of the tax laws. The effect of a change in tax laws or rates on deferred tax assets and liabilities is recognized in income in the period in which such change is enacted. Deferred tax assets are reduced by a valuation allowance if it is more likely than not that all or some portion of the deferred tax assets will not be realized.

The Company's effective tax rate on continuing operations differs from the U.S. Federal statutory rate of 21% primarily due to the impact of non-U.S. operations, partially offset by tax-exempt investment income.

For the year ended December 31, 2022, the Company established a partial valuation allowance of $62 on certain deferred tax assets related to unrealized losses in the available for sale securities portfolio. For the three-month period ended March 31, 2023, changes in market conditions resulted in a $37 partial release of the valuation allowance. The establishment and partial release of this valuation allowance were allocated to other comprehensive income.

On August 16, 2022, the U.S. enacted the Inflation Reduction Act ("IRA"). For tax years beginning after December 31, 2022, the IRA imposes a new corporate alternative minimum tax ("CAMT") on applicable corporations with average adjusted financial statement income in excess of $1,000 for the three prior tax years. Based on the guidance currently available, the Company expects to be an applicable corporation subject to the CAMT; however, it is not expected to have a material effect on the Company's consolidated results of operations or financial position. As Treasury issues further guidance related to the IRA, the Company will continue to evaluate any impacts.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

Balance at December 31, 2022	$97
Additions based on tax positions related to current year	1
Additions for tax positions of prior years	1
Translation	2
Balance at March 31, 2023	$101

Included in the tabular roll forward of unrecognized tax benefits are interest and penalties in the amount of $41 and $38 as of March 31, 2023 and December 31, 2022, respectively.

Included in the balance at March 31, 2023 is $84 related to tax positions that would impact the effective tax rate.

The Company recognizes interest and penalties related to unrecognized tax benefits in U.S. Federal, state, and foreign income tax expense. For the three months ended March 31, 2023 and 2022, the Company recognized $1 and $0 of interest and penalties, respectively. The Company had approximately $40 and $38 of interest and penalties accrued as of March 31, 2023 and December 31, 2022, respectively.

The U.S. Federal statute of limitations has expired through the 2018 tax year; however, it remains open for certain impacts of the Tax Cuts and Jobs Act of 2017. The Company has foreign entities that are open for examination in their local countries for tax years after 2013. Any adjustments that may result from the examinations of these income tax returns are not expected to have a material impact on the financial position, liquidity, or results of operations of the Company.

The Company does not expect any significant changes to its liability for unrecognized tax benefits during the next twelve months.

(dollars in millions)

(8) BENEFIT PLANS

The net benefit costs for the three months ended March 31, 2023 and 2022, include the following components:

Three months ended March 31,	**Pension Benefits**		**Supplemental Pension Benefits (1)**		**Postretirement Benefits**	
	2023	**2022**	**2023**	**2022**	**2023**	**2022**
Components of net periodic benefit costs:						
Service costs	$42	$40	$2	$2	$2	$4
Interest costs	86	51	5	3	10	6
Expected return on plan assets	(122)	(123)	-	-	-	-
Amortization of unrecognized:						
Net loss	38	32	1	6	(3)	3
Prior service cost	(6)	(5)	(1)	(1)	(3)	(3)
Net periodic benefit costs(2)	$38	$(5)	$7	$10	$6	$10

(1) The Company sponsors non-qualified supplemental pension plans to restore to selected highly compensated employees the pension benefits to which they would be entitled under the Company's U.S. tax qualified, defined benefit pension plan had it not been for limits imposed by the Internal Revenue Code. The supplemental plans are unfunded.

(2) All components of net periodic benefit costs are reported in operating costs and expenses on the accompanying consolidated statements of income.

The Company has contributed $0 to the qualified plans as of March 31, 2023, but expects to contribute approximately $145 during 2023.

(9) FAIR VALUE OF FINANCIAL INSTRUMENTS

Fair value is the price that would be received to sell an asset or would be paid to transfer a liability in an orderly transaction between market participants at the measurement date. In determining fair value, the Company primarily uses the market approach, which generally utilizes market transaction data for identical or similar instruments.

The hierarchy level assigned to each security in the Company's investments portfolio is based on the Company's assessment of the transparency and reliability of the inputs used in the valuation of each instrument at the measurement date. The highest priority is given to unadjusted quoted prices in active markets for identical assets (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). Securities are classified based on the lowest level of input that is significant to the fair value measurement. The Company recognizes transfers between levels at the end of each reporting period. The three hierarchy levels are defined as follows:

- Level 1 — Valuations based on unadjusted quoted market prices in active markets for identical assets or liabilities that the Company has the ability to access.
- Level 2 — Valuations based on observable inputs (other than Level 1 prices), such as quoted prices for similar assets or liabilities at the measurement date, quoted prices in markets that are not active, or other inputs that are observable, either directly or indirectly.
- Level 3 — Valuations based on inputs that are unobservable and significant to the overall fair value measurement and involve management judgment. The unobservable inputs reflect the Company's estimates of the assumptions that market participants would use in valuing the assets and liabilities.

The availability of observable inputs can vary from financial instrument to financial instrument and is affected by a wide variety of factors, including, for example, the type of financial instrument, whether the financial instrument is new and not yet established in the marketplace, and other characteristics particular to the financial instrument. To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires significantly more judgment. Accordingly, the degree of judgment exercised by management in determining fair value is greatest for instruments categorized in Level 3.

The Company is responsible for the determination of fair value and the supporting assumptions and methodologies. The Company gains assurance on the overall reasonableness and consistent application of valuation methodologies and inputs and compliance with accounting standards through the execution of various processes and controls designed to ensure that the Company's assets and liabilities are appropriately valued. For fair values received from third parties or internally estimated, the Company's processes are designed to determine that the valuation methodologies and inputs are appropriate and consistently applied, the assumptions are reasonable and consistent with the objective of determining fair value, and the fair values are accurately recorded. For example, on a continuing basis, the Company assesses the reasonableness of individual fair values that have stale security prices or that exceed certain thresholds as compared to previous fair values received from valuation service providers or brokers or derived from internal models. The Company performs procedures to understand and assess the methodologies, processes and controls of valuation service providers. In addition, the Company may validate the reasonableness of fair values by comparing information obtained from valuation service providers or brokers to other third party valuation sources for selected securities.

The Company used the following methods and assumptions in estimating the fair value of its financial instruments as well as the general classification of such financial instruments pursuant to the above fair value hierarchy:

Fixed Maturities
At each valuation date, the Company uses various valuation techniques to estimate the fair value of its fixed maturities portfolio. The primary method for valuing the Company's securities is through independent third-party valuation service providers. For positions where valuations are not available from independent third-party valuation service providers, the Company utilizes broker quotes and internal pricing methods to determine fair values. The Company obtains a single non-binding price quote from a broker familiar with the security who, similar to the Company's valuation service providers, may consider transactions or activity in similar securities, as applicable, among other information. The brokers providing price quotes are generally from the brokerage divisions of leading financial institutions with market making, underwriting and distribution expertise regarding the security subject to valuation. The evaluation and prioritization of these valuation sources is systematic and predetermined resulting in a single quote or price for each financial instrument. The following describes the techniques generally used to determine the fair value of the Company's fixed maturities by asset class:

U.S. Government and Agency Securities
U.S. government and agency securities consist primarily of bonds issued by the U.S. Treasury and mortgage pass-through agencies such as the Federal Home Loan Bank, the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation. As the fair values of the Company's U.S. Treasury securities are based on active markets and unadjusted market prices, they are classified within Level 1. The fair value of U.S. government agency securities is generally determined using observable market inputs that include quoted prices for identical or similar assets in markets that are not active, benchmark yields, reported trades, bids, offers and credit spreads. Accordingly, the fair value of U.S. government agency securities is primarily classified within Level 2.

Mortgage-Backed Securities
The Company's portfolio of residential and commercial MBS is originated by both agencies and non-agencies, the majority of which are pass-through securities issued by U.S. government agencies. The fair value of MBS is generally determined using observable market inputs that include quoted prices for identical or similar assets in markets that are not active, benchmark yields, contractual cash flows, prepayment speeds, collateral performance and credit spreads. Accordingly, the fair value of MBS is primarily classified within Level 2.

Asset-Backed Securities
ABS include mostly investment-grade bonds backed by pools of loans with a variety of underlying collateral, including automobile loan receivables, credit card receivables, and collateralized loan obligation securities originated by a variety of financial institutions. The fair value of ABS is generally determined using observable market inputs that include quoted prices for identical or similar assets in markets that are not active, benchmark yields, contractual cash flows, prepayment speeds, collateral performance and credit spreads. Accordingly, the fair value of ABS is primarily classified within Level 2.

Municipal Securities
The Company's municipal portfolio is comprised of bonds issued by U.S. domiciled state and municipal entities. The fair value of municipal securities is generally determined using observable market inputs that include quoted prices for identical or similar assets in markets that are not active, benchmark yields, binding broker quotes, issuer ratings, reported trades and credit spreads. Accordingly, the fair value of municipal securities is primarily classified within Level 2.

Corporate Debt and Other Securities
Corporate debt securities consist primarily of investment-grade debt of a wide variety of corporate issuers and industries. The fair value of corporate and other securities is generally determined using observable market inputs that include quoted prices for identical or similar assets in markets that are not active, benchmark yields, new issuances, issuer ratings, reported trades of identical or comparable securities, bids, offers and credit spreads. Accordingly, the fair value of corporate and other securities is primarily classified within Level 2. In the event third-party vendor valuation is not available, prices are determined using non-binding price quotes from a broker familiar with the security. In this instance, the valuation inputs are generally unobservable and the fair value is classified within Level 3.

Foreign Government Securities
Foreign government securities include bonds issued or guaranteed by foreign governments. The fair value of foreign government securities is generally determined using observable market inputs that include quoted prices for identical or similar assets in markets that are not active, benchmark yields, binding broker quotes, issuer ratings, reported trades of identical or comparable securities and credit spreads. Accordingly, the fair value of foreign government securities is primarily classified within Level 2. In the event third-party vendor valuation is not available, prices are determined using non-binding price quotes from a broker familiar with the security. In this instance, the valuation inputs are generally unobservable and the fair value is classified within Level 3.

Equity Securities
Equity securities include common and preferred stocks. Common stocks with fair values based on quoted market prices in active markets are classified within Level 1. Common stocks with fair values determined using observable market inputs that include quoted prices for identical or similar assets in markets that are not active are classified within Level 2. The fair value of preferred stock is generally determined using observable market inputs that include quoted prices for identical or similar assets in markets that are not active. Accordingly, the fair value of preferred stock is primarily classified within Level 2.

Short-Term Investments
The fair value of short-term investments is generally determined using observable market inputs that include quoted prices for identical or similar assets in markets that are not active, benchmark yields, new issuances, issuer ratings, reported trades of identical or comparable securities, bids, offers and credit spreads. Accordingly, the fair value of short-term investments is primarily classified within Level 2 of the fair value hierarchy.

Other Investments
Other investments include primarily foreign cash deposits, equity investments in privately held businesses and limited partnerships where the Company has elected the fair value option. Cash deposits are primarily valued using quoted prices for similar instruments in active markets; these assets are categorized within Level 2 of the fair value hierarchy. Equity investments in privately held businesses are valued using internal management estimates; they are categorized within Level 3 of the hierarchy. Loans, limited partnership and other equity method investments, which represent the remainder of the other investment balance on the accompanying consolidated balance sheet are not subject to these disclosures and therefore are excluded from the table in this note.

Other Assets and Other Liabilities
Other assets primarily consist of fixed maturities, short-term investments, and equity securities of captive companies sponsored by the Company. These assets are measured based on the methodology for individual securities as discussed above.

Additionally, other assets and other liabilities classified within Level 2 and Level 3 represent the Company's derivatives which can be exchange-traded or traded over-the-counter ("OTC"). OTC derivatives are valued using market transactions and other market evidence whenever possible, including market-based inputs to models, model calibration to market clearing transactions, broker or dealer quotations or alternative pricing sources with reasonable levels of price transparency. When models are used, the selection of a particular model to value an OTC derivative depends on the contractual terms of, and specific risks inherent in the instrument, as well as the availability of pricing information in the market. The Company generally uses similar models to value similar instruments. Valuation models require a variety of inputs, including contractual terms, market prices and rates, yield curves, credit curves, measures of volatility, prepayment rates and correlations of such inputs. For OTC derivatives that trade in liquid markets, such as generic forwards, swaps and options, model inputs can generally be corroborated by observable market data by correlation or other means, and model selection does not involve significant management judgment.

Life Insurance Obligations
Life insurance obligations include certain variable annuity contracts that provide guaranteed minimum income benefits. These benefits are accounted for as embedded derivatives and are bifurcated from the host contract and carried at fair value. The fair value of these embedded derivatives is computed on a recurring basis using assumptions predominately classified as Level 3 (significant unobservable) inputs. While some inputs are observable in the market, such as risk free rates, volatility and historical equity returns, the underlying future policyholder behavior inputs are highly unobservable. The significant policyholder behavior assumptions include lapse and the underlying annuitization rate.

(dollars in millions)

The following tables summarizes the Company's assets and liabilities that are measured at fair value on a recurring basis as of March 31, 2023 and December 31, 2022:

	As of March 31, 2023			
Assets, at Fair Value	**Level 1**	**Level 2**	**Level 3**	**Total**
U.S. government and agency securities	$8,064	$255	$-	$8,319
Residential MBS	-	5,921	-	5,921
Commercial MBS	-	4,167	81	4,248
Other MBS and ABS	-	4,663	50	4,713
U.S. state and municipal	-	6,750	318	7,068
Corporate and other	-	33,268	373	33,641
Foreign government securities	-	5,648	33	5,681
Reedemable Preferred Stock	-	-	80	80
Total fixed maturities, available for sale	8,064	60,672	935	69,671
Common stock	1,213	21	669	1,903
Preferred stock	-	1	-	1
Total equity securities	1,213	22	669	1,904
Short-term investments	5	1,273	10	1,288
Other investments	82	579	1,000	1,661
Other assets	-	-	9	9
Total assets	$9,364	$62,546	$2,623	$74,533
Liabilities, at Fair Value				
Life insurance obligations	-	-	(51)	(51)
Other liabilities	-	(81)	-	(81)
Total liabilities	$-	$(81)	$(51)	$(132)

	As of December 31, 2022			
Assets, at Fair Value	**Level 1**	**Level 2**	**Level 3**	**Total**
U.S. government and agency securities	$7,859	$251	$-	$8,110
Residential MBS	-	5,947	-	5,947
Commercial MBS	-	4,076	81	4,157
Other MBS and ABS	-	4,437	82	4,519
U.S. state and municipal	-	6,666	465	7,131
Corporate and other	-	30,885	378	31,263
Foreign government securities	-	5,370	33	5,403
Reedeemable Preferred Stock	-	-	80	80
Total fixed maturities, available for sale	7,859	57,632	1,119	66,610
Common stock	1,173	21	638	1,832
Preferred stock	-	-	1	1
Total equity securities	1,173	21	639	1,833
Short-term investments	11	520	1	532
Other investments	66	582	948	1,596
Other assets	-	-	9	9
Total assets	$9,109	$58,755	$2,716	$70,580
Liabilities, at Fair Value				
Life insurance obligations	-	-	(47)	(47)
Other liabilities	-	(101)	-	(101)
Total liabilities	$-	$(101)	$(47)	$(148)

(dollars in millions)

The following tables summarizes the fair values of assets on a recurring basis classified as Level 3 within the fair value hierarchy:

	As of March 31, 2023			As of December 31, 2022		
	Purchases	**Transfer in to Level 3**	**Transfer out of Level 3**	**Purchases**	**Transfer in to Level 3**	**Transfer out of Level 3**
Assets, at Fair Value						
U.S. government and agency securities	$-	$-	$-	$-	$-	$-
Residential MBS	-	-	-	-	-	-
Commercial MBS	-	-	-	31	-	(44)
Other MBS and ABS	-	-	(33)	31	32	(10)
U.S. state and municipal	-	-	(154)	15	181	-
Corporate and other	49	1	(17)	976	1	(108)
Foreign government securities	3	-	-	24	8	-
Reedemable Preferred Stock	-	-	-	55	24	-
Total fixed maturities	52	1	(204)	1,132	246	(162)
Common stock	109	-	(1)	2,516	66	(33)
Preferred stock	-	-	(1)	1	-	-
Total equity securities	109	-	(2)	2,517	66	(33)
Short-term investments	9	-	-	60	-	(1)
Other investments	63	7	(4)	699	-	(472)
Other assets	-	-	-	-	-	-
Total assets	$233	$8	$(210)	$4,408	$312	$(668)
Liabilities, at Fair Value						
Life insurance obligations	$2	$-	$-	$8	$-	$-
Total liabilities	$2	$-	$-	$8	$-	$-

Transfers into and out of Level 3 were primarily due to changes in the observability of pricing inputs.

The Company had no material assets or liabilities that were measured at fair value on a nonrecurring basis during the three months ended March 31, 2023.

Fair Value Option

The Company has elected to apply the fair value option to certain financial instruments in limited circumstances. The fair value option election is made on an instrument by instrument basis. All periodic changes in the fair value of the elected instruments are reflected in the accompanying consolidated statements of income. The impact of the fair value option election is 1% of total invested assets.

The Company has not applied ASC 820 to non-financial assets and liabilities.

(10) COMMITMENTS AND CONTINGENT LIABILITIES

Various lawsuits against the Company have arisen in the normal course of business. Contingent liabilities arising from litigation, income taxes, and other matters are not considered material in relation to the financial position of the Company.

As of March 31, 2023, the Company had unfunded commitments in traditional private equity partnerships, real estate, private credit, natural resources, and other of $2,355, $2,771, $2,146, $1,443 ($1,409 of which is related to energy transition and infrastructure), and $79, respectively.

As of March 31, 2023, the Company had commitments to purchase various residential MBS at a cost and fair value of $44.

The Company holds unfunded commitments related to commercial mortgage loans. The liability for expected credit losses related to these unfunded commitments is reported in Other Liabilities and is measured in a manner consistent with the approach of the funded mortgage loan portfolio. As of March 31, 2023 the amount of the liability for expected credit losses of unfunded commitments was $5.

(11) SUBSEQUENT EVENTS

Management has assessed material subsequent events through May 10, 2023, the date the financial statements were available to be issued.