



Liberty Mutual[®]
INSURANCE

**Management's Discussion & Analysis of
Financial Condition and Results of Operations**

Quarter Ended December 31, 2022

Management’s Discussion & Analysis of Financial Condition and Results of Operations

The following discussion highlights significant factors influencing results of operations and changes in financial position of Liberty Mutual Holding Company Inc., the parent corporation of the Liberty Mutual Insurance group of entities (the "Company" or "LMHC"), for the three and twelve months ended December 31, 2022 and 2021. This Management’s Discussion & Analysis of Financial Condition and Results of Operations (“MD&A”) should be read in conjunction with the Company’s December 31, 2022 Audited Consolidated Financial Statements to be posted shortly on the Company’s Investor Relations website at www.libertymutualgroup.com/investors. The Company’s discussions related to net income are presented in conformity with U.S. generally accepted accounting principles (“GAAP”) on an after-tax basis. All other discussions are presented on a pre-tax GAAP basis, unless otherwise noted. Further, the Company notes that it may make material information regarding the Company available to the public, from time to time, via the Company’s Investor Relations website at www.libertymutualgroup.com/investors (or any successor site).

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Cautionary Statement Regarding Forward Looking Statements

This report contains forward looking statements that are intended to enhance the reader's ability to assess the Company's future financial and business performance. Forward looking statements include, but are not limited to, statements that represent the Company's beliefs concerning future operations, strategies, financial results or other developments, and contain words and phrases such as "may," "expects," "should," "believes," "anticipates," "estimates," "intends" or similar expressions. Because these forward-looking statements are based on estimates and assumptions that are subject to significant business, economic and competitive uncertainties, many of which are beyond the Company's control or are subject to change, actual results could be materially different.

Some of the factors that could cause actual results to differ include, but are not limited to the following: the occurrence of catastrophic events (including terrorist acts, war or conflicts, civil unrest, hurricanes, hail, tornados, tsunamis, earthquakes, floods, snowfall and winter conditions); inadequacy of loss reserves; adverse developments involving asbestos, environmental or toxic tort claims and litigation; adverse developments in the cost, availability or ability to collect reinsurance; disruptions to the Company's relationships with its independent agents and brokers; financial disruption or a prolonged economic downturn; prolonged epidemic or pandemic in countries in which we operate; the performance of the Company's investment portfolios; a rise in interest rates; risks inherent in the Company's alternative investments in private limited partnerships ("LP"), limited liability companies ("LLC"), commercial mortgages and direct investments in natural resources; difficulty in valuing certain of the Company's investments; subjectivity in the determination of the amount of impairments taken on the Company's investments; unfavorable outcomes from litigation and other legal proceedings, including the effects of emerging claim and coverage issues and investigations by state and federal authorities; the Company's exposure to credit risk in certain of its business operations; the Company's inability to obtain price increases or maintain market share due to competition or otherwise; inadequacy of the Company's pricing models; changes to insurance laws and regulations; changes in the amount of statutory capital that the Company must hold to maintain its financial strength and credit ratings; regulatory restrictions on the Company's ability to change its methods of marketing and underwriting in certain areas; assessments for guaranty funds and mandatory pooling arrangements; a downgrade in the Company's claims-paying and financial strength ratings; the ability of the Company's subsidiaries to pay dividends to the Company; inflation, including inflation in medical costs and automobile and home repair costs; the cyclicity of the property and casualty insurance industry; political, legal, operational and other risks faced by the Company's international business; potentially high severity losses involving the Company's surety products; loss or significant restriction on the Company's ability to use credit scoring in the pricing and underwriting of personal lines policies; inadequacy of the Company's controls to ensure compliance with legal and regulatory standards; changes in U.S. federal, foreign or state tax laws; risks arising out of the Company's securities lending program; the Company's utilization of information technology systems and its implementation of technology innovations; difficulties with technology or data security; insufficiency of the Company's business continuity plan in the event of a disaster; the Company's ability to successfully integrate operations, personnel and technology from its acquisitions; insufficiency of the Company's enterprise risk management models and modeling techniques; the Company's ability to identify and accurately assess complex and emerging risks, and changing climate conditions. The Company's forward-looking statements speak only as of the date of this report or as of the date they are made and should be regarded solely as the Company's current plans, estimates and beliefs. For a detailed discussion of these and other cautionary statements, visit the Company's Investor Relations website at www.libertymutualgroup.com/investors. The Company undertakes no obligation to update these forward-looking statements.

In December 2019, a novel coronavirus commonly referred to as "COVID-19" surfaced in Wuhan, China. The outbreak has since spread to other countries, including the United States, and efforts to contain the spread of this coronavirus have intensified and are ongoing. The outbreak and any preventative or protective actions that governments, other third parties or we may take in respect of the coronavirus may result in a continued period of business disruption and reduced operations. The extent to which the coronavirus impacts our future results will depend on developments which are highly uncertain and cannot be predicted, including litigation developments, legislative or regulatory actions and intervention, the length and severity of the coronavirus (including of second waves), the level of acceptance of the vaccines, and the actions of government actors to contain the coronavirus or treat its impact, among others. Possible effects on our business and operations include: disruptions to business operations resulting from working from home or from closures of our corporate or sales offices and the offices of our agents and brokers and quarantines of employees, customers, agents, brokers and suppliers in areas affected by the outbreak; disruptions to business operations resulting from travel restrictions and reduced consumer spending on new homes or new

automobiles which could reduce demand for insurance; disruptions to business operations resulting from our customers having lower payrolls and revenues which could have an impact on insurance revenue; increased claims related to trade credit, general liability, workers compensation, and event cancellation coverage, among others; executive or legislative mandates or court decisions expanding property insurance policy coverage to cover business interruptions resulting from COVID-19 notwithstanding any exclusions set forth in such policies or conditions precedent generally required for liability under such policies; and disruption of the financial markets resulting in reductions in the value of our investment portfolio. A significant rise in the number of COVID-19 infections, infections in a wide range of countries and regions, or a prolongation of the outbreak, could create an adverse economic effect on the Company.

EXECUTIVE SUMMARY

The following highlights do not address all of the matters covered in the other sections of Management's Discussion & Analysis of Financial Condition and Results of Operations or contain all of the information that may be important to the investing public. This summary should be read in conjunction with the other sections of Management's Discussion & Analysis of Financial Condition and Results of Operations and the Company's 2022 Audited Consolidated Financial Statements.

Consolidated Results of Operations

\$ in Millions	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change	2022	2021	Change
Net written premium	\$11,524	\$11,028	4.5%	\$48,227	\$43,679	10.4%
Pre-tax operating income before limited partnerships income ¹	759	352	115.6	593	664	(10.7)
Limited partnerships income	144	916	(84.3)	706	3,708	(81.0)
Net realized losses	(32)	(305)	(89.5)	(794)	(222)	NM
Unit linked life insurance	(19)	(31)	(38.7)	118	(126)	NM
Acquisition & integration costs	(21)	(8)	162.5	(101)	(21)	NM
Restructuring costs	(17)	(46)	(63.0)	(22)	(193)	(88.6)
Consolidated net income	616	722	(14.7)	419	3,070	(86.4)
Less: Net income attributable to non-controlling interest	4	-	NM	5	2	150.0
Net income attributable to LMHC	612	722	(15.2)	414	3,068	(86.5)
Net income attributable to LMHC excluding unrealized impact ²	697	745	(6.4)	701	2,891	(75.8)
Cash flow provided by continuing operations	\$1,564	\$889	75.9%	\$5,576	\$5,570	0.1%

1 Limited partnerships income includes LP, LLC and other equity method income within net investment income in the accompanying Consolidated Statements of Income and revenue and expenses from direct investments in natural resources.

2 Excludes unrealized gains on equity securities, unit linked life insurance, and the corresponding tax impact.
NM = Not Meaningful

	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change (Points)	2022	2021	Change (Points)
Underlying combined ratio ¹	95.0%	95.1%	(0.1)	95.3%	93.3%	2.0
Combined ratio ²	96.9%	99.2%	(2.3)	101.6%	100.8%	0.8

1 The underlying combined ratio is computed as the combined ratio excluding the impact of catastrophes and prior accident year development. Catastrophes are defined as a natural catastrophe, civil unrest, terror event, war or conflict exceeding \$25 million in estimated ultimate losses, net of reinsurance, and before taxes. Catastrophe losses, where applicable, include the impact of accelerated earned catastrophe premiums and earned reinstatement premiums. Net incurred losses attributable to prior years is defined as incurred losses attributable to prior years (including prior year losses related to catastrophes, prior year catastrophe reinstatement premium, and prior year commission expense) including earned premium attributable to prior years.

2 The combined ratio, expressed as a percentage, is a measure of underwriting profitability. This measure should only be used in conjunction with, and not in lieu of, underwriting income and may not be comparable to other performance measures used by the Company's competitors. The combined ratio is computed as the sum of the following property and casualty ratios: the ratio of claims and claim adjustment expense less managed care income to earned premium; the ratio of insurance operating costs plus amortization of deferred policy acquisition costs less third-party administration income and fee income (primarily related to the Company's involuntary market servicing carrier operations) and installment charges to earned premium; and the ratio of policyholder dividends to earned premium. Provisions for uncollectible premium and reinsurance are not included in the combined ratio unless related to an asbestos and environmental commutation and certain other run off. Restructuring and acquisition and integration costs are not included in the combined ratio.

	As of December 31,	As of December 31,	
\$ in Millions	2022	2021	Change
Short-term debt ¹	\$547	\$473	15.6%
Long-term debt	10,053	9,181	9.5
Total debt	\$10,600	\$9,654	9.8%
Unassigned equity	\$29,822	\$28,776	3.6%
Accumulated other comprehensive loss	(7,830)	(960)	NM
Non-controlling interest	216	32	NM
Total equity	\$22,208	\$27,848	(20.3%)

¹ Short-term debt is the current maturities of the 4.95% Notes, due May 1, 2022 and the 4.25% Notes, due June 15, 2023.
 NM = Not Meaningful

Subsequent Events

Management has assessed material subsequent events through February 22, 2023.

CONSOLIDATED RESULTS OF OPERATIONS

The Company has identified consolidated pre-tax operating income (“PTOI”), and PTOI before limited partnerships income as non-GAAP financial measures. PTOI is defined by the Company as pre-tax income excluding net realized gains (losses), unit linked life insurance, loss on extinguishment of debt, discontinued operations, integration, other acquisition and restructuring related costs and cumulative effects of changes in accounting principles. Underlying PTOI is defined as PTOI excluding the impact of catastrophes and prior accident year development. Catastrophes are defined as a natural catastrophe, civil unrest, terror event, war or conflict exceeding \$25 million in estimated ultimate losses, net of reinsurance, and before taxes. Catastrophe losses, where applicable, include the impact of accelerated earned catastrophe premiums and earned reinstatement premiums. Net incurred losses attributable to prior years is defined as incurred losses attributable to prior years (including prior year losses related to catastrophes, prior year catastrophe reinstatement premium, and prior year commission expense) including earned premium attributable to prior years. PTOI before limited partnerships income is defined as PTOI excluding LP and LLC results recognized on the equity method and revenue and expenses from direct investments in natural resources. PTOI before limited partnerships income and PTOI are considered by the Company to be appropriate indicators of underwriting and operating results and are consistent with the way the Company internally evaluates performance. Net realized gains/(losses) and limited partnerships income results are significantly impacted by both discretionary and economic factors and are not necessarily indicative of operating results, and the timing and amount of integration, other acquisition and restructuring related costs and the extinguishment of debt are not connected to the management of the insurance and underwriting aspects of the Company’s business. Income taxes are impacted by permanent differences. References to Net Written Premium (“NWP”) represent the amount of premium recorded for policies issued during a fiscal period including audits, retrospectively rated premium related to loss sensitive policies, and assumed premium, less ceded premium. Assumed and ceded reinsurance premiums include premium adjustments for reinstatement of coverage when a loss has used some portion of the reinsurance provided, generally under catastrophe treaties (“reinstatement premium”), and changes in estimated premium. In addition, the majority of workers compensation premium is adjusted to the “booked as billed” method through the Corporate and Other segment. The Company believes that NWP is a performance measure useful to investors as it generally reflects current trends in the Company’s sale of its insurance products. The combined ratio is computed as the sum of the following property and casualty ratios: the ratio of claims and claim adjustment expense less managed care income to earned premium; the ratio of insurance operating costs plus amortization of deferred policy acquisition costs less third-party administration income and fee income (primarily related to the Company’s involuntary market servicing carrier operations) and installment charges to earned premium; and the ratio of policyholder dividends to earned premium. Provisions for uncollectible premium and reinsurance are not included in the combined ratio unless related to an asbestos and environmental commutation and certain other run off. Restructuring and acquisition and integration costs are not included in the combined ratio. The combined ratio, expressed as a percentage, is a measure of underwriting profitability. The underlying combined ratio is computed as the combined ratio excluding the impact of catastrophes and prior accident year development. This measure should only be used in conjunction with, and not in lieu of, underwriting income and may not be comparable to other performance measures used by the Company’s competitors.

The Company’s discussions related to net income are presented on an after-tax GAAP basis. All other discussions are presented on a pre-tax GAAP basis, unless otherwise noted.

On December 2, 2022, Liberty Mutual Group, Inc. (“LMGI”) issued €500 million 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 July 28, 2022, the Company completed its acquisition of Malaysian insurer AmGeneral. Liberty Insurance Berhad acquired 100% shares of AmGeneral, and AmBank Group’s share of the sale proceeds were in the form of cash and consideration shares, which resulted in AmBank Group retaining a 30% interest in the Liberty Insurance Berhad and AmGeneral businesses. The AmGeneral and Liberty Insurance Berhad operations will, at a subsequent date, be formally merged.

On June 6, 2022, Liberty Mutual Group, Inc. (“LMGI”) issued \$1,000 million 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 million of LMGI 4.95% Notes were paid at maturity.

On March 1, 2022, the Company completed its merger with State Automobile Mutual Insurance Company (“SAM”), a super-regional insurance company headquartered in Columbus, Ohio. Under the terms of the agreement, members of SAM became mutual members of the Company. The Company acquired all of the publicly held shares of common stock of SAM’s subsidiary, State Auto Financial Corporation (STFC), for \$52 per share in cash, totaling approximately \$980 million. 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. Financial results post acquisition date are included in the MD&A and Audited Consolidated Financial Statements.

Liberty Mutual Metals and Mining signed an agreement in August 2021 to sell a subsidiary entity (Baralaba Coal Company) and recorded an incremental impairment of \$10 million in Q4, bringing the total YTD impairment to \$509 million. The transaction closed in December 2021 with a realized loss incurred of \$30 million.

On June 8, 2021, it was announced that Independence Energy (“ICO”) was entering into a reverse takeover of Contango Oil and Gas, a public company, through an “Up-C” structure, whereby a new publicly traded company was established (Crescent Energy, ticker CRGY) with underlying ownership split 76% to ICO and its existing shareholders, and 24% to Contango’s shareholders. The merger transaction closed on December 9, 2021 at which point the Company exchanged its 31% ownership in ICO, for a 23.5% ownership in a new operating entity, Crescent Energy OpCo LLC, whose shares are exchangeable 1-for-1 with the public company. This transaction furthers the evolution of our energy holdings from a direct investing model to an experienced operator that provides product expertise and geographic diversification.

On August 16, 2021, LMGI issued \$500 million of Series F Junior Subordinated Notes, due 2051 (the “Series F Notes”). Interest is payable semi-annually at a fixed rate of 4.125%. The Series F Notes may be redeemed in whole or in part three months prior to and on December 15, 2026, after which the notes may be redeemed during the three-month period prior to and on each succeeding interest reset date. The interest reset dates are on each five-year anniversary of December 15, 2021 until December 15, 2051.

On February 1, 2021, LMGI issued \$800 million of Series E Junior Subordinated Notes, due 2061 (the “Series E Notes”). Interest is payable semi-annually at a fixed rate of 4.30%. The Series E Notes may be redeemed in whole or in part on February 1, 2026, after which the notes may be redeemed on any interest payment date thereafter until February 1, 2061.

The Company offered eligible employees an early retirement option, with all retirements occurring by December 2021. The Company calculated the cost of irrevocable acceptances of this special termination benefit to be \$577 million, which was recognized in the fourth quarter of 2020 and was reflected in restructuring costs in the Consolidated Statements of Income. A settlement loss of \$178 million was accrued through the fourth quarter of 2021 due to the volume of lump sum cash payments.

The Company’s two businesses are as follows:

- Global Retail Markets combines the Company’s local expertise in growth markets outside the U.S. with strong and scalable U.S. capabilities in order to take advantage of opportunities to grow its business globally. Global Retail Markets is organized into the following segments: U.S., West, East, and Reinsurance.
- Global Risk Solutions offers a wide array of property, casualty, specialty and reinsurance products distributed through brokers and independent agents globally. Global Risk Solutions is organized into the following market segments: Liberty Specialty Markets, Liberty Mutual Reinsurance, North America, Global Surety, and Other Global Risk Solutions.

Overview – Consolidated

Consolidated NWP by significant line of business was as follows:

\$ in Millions	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change	2022	2021	Change
Private passenger automobile	\$3,914	\$3,627	7.9%	\$16,184	\$14,901	8.6%
Homeowners	2,410	1,958	23.1	9,539	7,679	24.2
Global Risk Solutions specialty insurance ¹	1,110	1,276	(13.0)	4,220	4,382	(3.7)
Commercial property	630	591	6.6	2,596	2,266	14.6
Global Risk Solutions reinsurance	458	544	(15.8)	2,573	2,604	(1.2)
Global Risk Solutions casualty ²	789	599	31.7	2,399	2,206	8.7
Commercial automobile	627	521	20.3	2,334	1,848	26.3
Commercial multiple-peril	581	500	16.2	2,324	2,024	14.8
Workers compensation	443	366	21.0	1,936	1,618	19.7
Surety	275	257	7.0	1,295	1,141	13.5
Global Retail Markets general liability	274	232	18.1	1,164	968	20.2
Global Risk Solutions inland marine ³	149	148	0.7	593	574	3.3
Global Risk Solutions other reinsurance	(449)	65	NM	(140)	140	NM
Corporate reinsurance ⁴	(171)	(17)	NM	(759)	(222)	NM
Other ⁵	484	361	34.1	1,969	1,550	27.0
Total NWP	\$11,524	\$11,028	4.5%	\$48,227	\$43,679	10.4%

1 Global Risk Solutions specialty insurance includes marine, energy, construction, aviation, warranty and indemnity, directors and officers, errors and omissions, trade credit, contingent lines and other.

2 Global Risk Solutions casualty primarily includes general liability, excess & umbrella and environmental lines of business.

3 Global Risk Solutions inland marine includes handset protection coverage for lost or damaged wireless devices.

4 NWP associated with internal reinsurance assumed into Corporate, net of corporate external placements.

5 Primarily includes NWP from allied lines, domestic inland marine, internal reinsurance, and life and health reported within Global Retail Markets.

NM = Not Meaningful

NWP for the three months ended December 31, 2022 was \$11.524 billion, an increase of \$496 million over the same period in 2021.

Significant changes by major line of business for the three months ended December 31, 2022 include:

- Private passenger automobile NWP increased \$287 million. The increase reflects rate actions taken to offset rising personal lines severity and frequency trends and the acquisition of SAM partially offset by lower new business growth.
- Homeowners NWP increased \$452 million. The increase reflects rate increases taken to offset rising personal lines severity trends and the acquisition of SAM partially offset by lower new business growth.
- Global Risk Solutions casualty NWP increased \$190 million. The increase reflects a large loss portfolio transfer for an existing policyholder in December 2022.
- Commercial automobile NWP increased \$106 million. The increase reflects the acquisition of SAM.
- Workers compensation NWP increased \$77 million. The increase reflects favorable premium audits.
- Global Risk Solutions other reinsurance NWP decreased \$514 million. The decrease reflects higher cessions due to reinsurance program changes resulting in more coverage being purchased, higher volume on direct written business and premium adjustment on the casualty quota share and excess of loss treaties.

- Corporate reinsurance NWP decreased \$154 million. The decrease reflects higher ceded premium on external reinsurance treaties.

NWP for the twelve months ended December 31, 2022 was \$48.227 billion, an increase of \$4.548 billion over the same period in 2021.

Significant changes by major line of business for the twelve months ended December 31, 2022 include:

- Private passenger automobile NWP increased \$1.283 million. The increase reflects rate actions taken to offset rising personal lines severity and frequency trends, higher retention and the acquisition of SAM partially offset by lower new business growth.
- Homeowners NWP increased \$1.860 million. The increase reflects rate actions taken to offset rising personal lines severity trends, higher retention, and the acquisition of SAM partially offset by lower new business growth.
- Commercial automobile NWP increased \$486 million. The increase reflects the acquisition of SAM, expansion of an existing partnership, an increase in average written premium and favorable rate.
- Global Retail Markets general liability NWP increased \$196 million. The increase reflects the acquisition of SAM.
- Global Risk Solutions other reinsurance NWP decreased \$280 million. The decrease reflects higher cessions due to reinsurance program changes resulting in more coverage being purchased, higher volume on direct written business and premium adjustment on the casualty quota share and excess of loss treaties.
- Corporate reinsurance NWP decreased \$537 million. The decrease reflects higher ceded premium on external reinsurance treaties.

Consolidated NWP by business was as follows:

\$ in Millions	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change	2022	2021	Change
Global Retail Markets	\$8,392	\$7,237	16.0%	\$33,997	\$29,319	16.0%
Global Risk Solutions	3,283	3,831	(14.3)	14,953	14,602	2.4
Corporate and Other	(151)	(40)	NM	(723)	(242)	198.8
Total NWP	\$11,524	\$11,028	4.5%	\$48,227	\$43,679	10.4%
Foreign exchange effect on growth			(1.8)			(1.3)
NWP growth excluding foreign exchange ¹			6.3%			11.7%

¹ Determined by assuming constant foreign exchange rates between periods.
NM = Not Meaningful

Consolidated NWP by geographic distribution channels was as follows:

\$ in Millions	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change	2022	2021	Change
U.S.	\$9,367	\$8,484	10.4%	\$39,759	\$33,973	17.0%
International excluding foreign exchange ¹	2,361	2,544	(7.2)	9,042	9,706	(6.8)
Foreign exchange ¹	(204)	-	NM	(574)	-	NM
Total NWP	\$11,524	\$11,028	4.5%	\$48,227	\$43,679	10.4%

¹ Determined by assuming constant foreign exchange rates between periods.
NM = Not Meaningful

For a more complete description of the Company's business operations, products and distribution channels, and other material information, please visit the Company's Investor Relations web site at www.libertymutualgroup.com/investors.

Results of Operations – Consolidated

\$ in Millions	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change	2022	2021	Change
Revenues	\$13,127	\$12,221	7.4%	\$49,956	\$48,200	3.6%
Underlying PTOI before limited partnerships income	\$971	\$790	22.9	\$3,512	\$3,804	(7.7)
Catastrophes	(384)	(143)	168.5	(3,552)	(3,057)	16.2
Net incurred losses attributable to prior years:						
- Asbestos and environmental ¹	(96)	(151)	(36.4)	(96)	(150)	(36.0)
- All other ²	268	(163)	NM	729	67	NM
Current accident year re-estimation ³	-	19	NM	-	-	-
Pre-tax operating income before limited partnerships income	759	352	115.6	593	664	(10.7)
Limited partnerships income ⁴	144	916	(84.3)	706	3,708	(81.0)
Pre-tax operating income	903	1,268	(28.8)	1,299	4,372	(70.3)
Net realized losses	(32)	(305)	(89.5)	(794)	(222)	NM
Unit linked life insurance	(19)	(31)	(38.7)	118	(126)	NM
Acquisition & integration costs	(21)	(8)	162.5	(101)	(21)	NM
Restructuring costs	(17)	(46)	(63.0)	(22)	(193)	(88.6)
Pre-tax income	814	878	(7.3)	500	3,810	(86.9)
Income tax expense	198	156	26.9	81	740	(89.1)
Consolidated net income	616	722	(14.7)	419	3,070	(86.4)
Less: Net income attributable to non-controlling interest	4	-	NM	5	2	150.0
Net income attributable to LMHC	612	722	(15.2)	414	3,068	(86.5)
Net income attributable to LMHC excluding unrealized impact ⁵	697	745	(6.4)	701	2,891	(75.8)
Cash flow provided by continuing operations	\$1,564	\$889	75.9%	\$5,576	\$5,570	0.1%

1 Asbestos and environmental is gross of the related adverse development reinsurance (the “NICO Reinsurance Transaction”, which is described further in Reinsurance).

2 Net of earned premium and reinstatement premium attributable to prior years of \$283 million and \$436 million for the three and twelve months ended December 31, 2022, and \$118 million and \$271 million for the same periods in 2021.

3 Re-estimation of the current accident year loss reserves for the nine months ended September 30, 2022.

4 Limited partnerships income includes LP, LLC and other equity method income within net investment income in the accompanying Consolidated Statements of Income and revenue and expenses from direct investments in natural resources.

5 Excludes unrealized gains on equity securities, unit linked life insurance, and the corresponding tax impact.

NM = Not Meaningful

Limited Partnerships Income	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change	2022	2021	Change
\$ in Millions						
Limited partnerships income ¹	\$148	\$861	(82.8%)	\$718	\$3,666	(80.4%)
Direct investment in natural resources revenues ²	4	118	(96.6)	7	252	(97.2)
Direct investment in natural resources expenses ³	(8)	(63)	(87.3)	(19)	(210)	(91.0)
Total limited partnerships income	\$144	\$916	(84.3%)	\$706	\$3,708	(81.0%)

1 Included within net investment income in the accompanying Consolidated Statements of Income.

2 Included within fee & other revenues in the accompanying Consolidated Statements of Income.

3 Included within operating costs and expenses in the accompanying Consolidated Statements of Income.

Net Investment Income \$ in Millions	Three Months Ended December 31,		Twelve Months Ended December 31,	
	2022	2021	2022	2021
Taxable interest income	\$653	\$453	\$2,168	\$1,785
Tax-exempt interest income	35	36	150	144
Dividends	10	20	46	46
Limited partnerships income	148	861	718	3,666
Mortgage loans	48	22	143	84
Other investment (loss) income	(3)	5	16	12
Gross investment income	891	1,397	3,241	5,737
Investment expenses ¹	(99)	(94)	(375)	(322)
Total net investment income	\$792	\$1,303	\$2,866	\$5,415

1 Fees paid to external managers are included within the components of gross investment income.

Net Realized (Losses) Gains \$ in Millions	Sales & Settlements	Impairments	Unrealized (Losses) Gains	Total
Three Months Ended December 31, 2022:				
Fixed maturities	(\$66)	(\$5)	\$-	(\$71)
Equities	2	-	7	9
Derivatives	(1)	-	4	3
Other	60	(19)	(14)	27
Total	(\$5)	(\$24)	(\$3)	(\$32)
Three Months Ended December 31, 2021:				
Fixed maturities	(\$8)	(\$8)	\$-	(\$16)
Equities	52	-	98	150
Derivatives	(41)	-	4	(37)
Other	(293)	(15)	(94)	(402)
Total	(\$290)	(\$23)	\$8	(\$305)

Net Realized (Losses) Gains \$ in Millions	Sales & Settlements	Impairments	Unrealized (Losses) Gains	Total
Twelve Months Ended December 31, 2022:				
Fixed maturities	(\$226)	(\$33)	\$-	(\$259)
Equities	(60)	-	(615)	(675)
Derivatives	6	-	32	38
Other	71	(57)	88	102
Total	(\$209)	(\$90)	(\$495)	(\$794)
Twelve Months Ended December 31, 2021:				
Fixed maturities	\$275	(\$13)	\$-	\$262
Equities	45	-	409	454
Derivatives	23	-	16	39
Other	(296)	(612)	(69)	(977)
Total	\$47	(\$625)	\$356	(\$222)

Unrealized (Losses) Gains Related to Equity Securities ¹	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change	2022	2021	Change
\$ in Millions						
Net (losses) gains recognized during the period on equity securities	(\$7)	\$4	NM	(\$527)	\$340	NM
Less: Net (losses) gains recognized during the period on equity securities sold during the period	(1)	4	NM	(426)	8	NM
Unrealized (losses) gains recognized during the reporting period on equity securities still held at the reporting date	(\$6)	\$-	NM	(\$101)	\$332	NM

¹ Included equities and equity like securities classified as other.
NM = Not Meaningful

Fourth Quarter Results:

Pre-tax operating income before limited partnerships income for the three months ended December 31, 2022 was \$759 million, an increase of \$407 million over the same period in 2021. Underlying pre-tax operating income before limited partnerships income was \$971 million, an increase of \$181 million over the same period in 2021. The increase reflects higher earned premium driven by strong topline results in Global Retail Markets and higher net investment income excluding limited partnerships income. Favorability is partially offset by higher non-catastrophe losses in U.S. personal lines due to increased frequency and severity and higher current year losses in Global Risk Solutions. Including the impact of catastrophes, net incurred losses attributable to prior years, and current accident year re-estimation, the increase in pre-tax operating income before limited partnerships income reflects the previously mentioned drivers and favorable catastrophe loss development on events occurring earlier in the year and prior accident year weakening in Q4 versus strengthening in the prior period in Global Risk Solutions. This was partially offset by higher current year catastrophe losses due to Winter Storm Elliott in December.

Total limited partnership income, including operating income from direct investments in natural resources, for the three months ended December 31, 2022 was \$144 million, a decrease of \$772 million from the same period in 2021. The decrease reflects less favorable valuations across the limited partnership investments, primarily driven by private capital.

Revenues for the three months ended December 31, 2022 were \$13.127 billion, an increase of \$906 million over the same period in 2021. The major components of revenues are net premium earned, net investment income, net realized gains (losses), and fee and other revenues.

Net premium earned for the three months ended December 31, 2022 was \$12.106 billion, an increase of \$1.216 billion over the same period in 2021. The increase primarily reflects the premium earned associated with the changes in NWP previously discussed.

Net investment income including limited partnerships income for the three months ended December 31, 2022 was \$792 million, a decrease of \$511 million from the same period in 2021. The decrease reflects less favorable valuations across the limited partnership investments, primarily driven by private capital investments. The decrease was slightly offset by an increase in taxable interest income.

Net realized losses for the three months ended December 31, 2022 were \$32 million, a decrease of \$273 million from the same period in 2021. The net realized losses in the current period were primarily impacted by \$66 million net losses on fixed maturity sales and \$24 million impairments, offset by \$60 million gains on natural resource investments. The prior period was impacted by \$377 million losses on natural resource investments and \$41 million losses on derivatives, partially offset by \$98 million net change in equity unrealized gains and \$52 million net gains on equity sales.

Fee and other revenues for the three months ended December 31, 2022 were \$261 million, a decrease of \$72 million from the same period in 2021. The decrease primarily reflects lower natural resource revenues due to the Independence Energy "ICO" merger transaction that occurred later in 2021.

Claims, benefits and expenses for the three months ended December 31, 2022 were \$12.256 billion, an increase of \$998 million over the same period in 2021. The increase primarily reflects higher U.S. non-catastrophe and catastrophe losses in Global Retail Markets and unfavorable current year loss activity in Global Risk Solutions. Adding to the increase were claims, benefits and expenses related to the SAM and AmGeneral acquisitions. These were partially offset by favorable catastrophe loss development on events occurring earlier in the year and prior accident year weakening in Q4 2022 versus strengthening in Q4 2021 in Global Risk Solutions.

Income tax expense on continuing operations for the three months ended December 31, 2022, was \$198 million, an increase of \$42 million over the same period in 2021. The Company's effective tax rate for the three months ended December 31, 2022, was 24% compared to 18% for the same period in 2021. The change is driven primarily by the tax impact of permanent book-to-tax differences and non-U.S. operations as compared to the pre-tax income in the relevant periods.

Net income attributable to LMHC for the three months ended December 31, 2022 was \$612 million, a decrease of \$110 million from the same period in 2021.

Cash flow provided by continuing operations for the three months ended December 31, 2022 was \$1.564 billion, an increase of \$675 million over the same period in 2021. The increase reflects higher premium collections and lower CAT's paid, partially offset by unfavorable paid loss activity,

Year-to-date Results:

Pre-tax operating income before limited partnerships income for the twelve months ended December 31, 2022 was \$593 million, a decrease of \$71 million from the same period in 2021. Underlying pre-tax operating income before limited partnerships income was \$3.512 billion, a decrease of \$292 million from the same period in 2021. The decrease reflects higher non-catastrophe losses in U.S. personal lines and higher variable expenses, partially offset by higher earned premium driven by strong topline results in both Global Retail Markets and Global Risk Solutions. Including the impact of catastrophes and net incurred losses attributable to prior years, the decrease in pre-tax operating income before limited partnerships income reflects the previously mentioned drivers and additional catastrophe losses due to the inclusion of SAM catastrophes, partially offset by lower severity as well as greater prior year catastrophe and non-catastrophe reserve releases in Global Retail Markets and prior accident year weakening in 2022 versus strengthening in 2021 in Global Risk Solutions.

Total limited partnership income, including operating income from direct investments in natural resources, for the twelve months ended December 31, 2022 was \$706 million, a decrease of \$3.002 billion from the same period in 2021. The decrease reflects less favorable valuations across the limited partnership investments.

Revenues for the twelve months ended December 31, 2022 were \$49.956 billion, an increase of \$1.756 billion over the same period in 2021. The major components of revenues are net premium earned, net investment income, net realized gains (losses), and fee and other revenues.

Net premium earned for the twelve months ended December 31, 2022 was \$46.914 billion, an increase of \$4.973 billion over the same period in 2021. The increase primarily reflects the premium earned associated with the changes in NWP previously discussed.

Net investment income including limited partnerships income for the twelve months ended December 31, 2022 was \$2.866 billion, a decrease of \$2.549 billion from the same period in 2021. The decrease reflects less favorable valuations across the limited partnership investments, primarily driven by private capital investments. The decrease was slightly offset by an increase in taxable interest income.

Net realized losses for the twelve months ended December 31, 2022 were \$794 million, an increase of \$572 million over the same period in 2021. The net realized losses in the current period were impacted by \$615 million net change in equity unrealized losses and \$226 million net losses on fixed maturity sales, partially offset by \$67 million net change in unrealized gains on energy holdings and \$60 million gains on natural resource investments. The prior period was primarily driven by impairments and net losses on natural resource investments of \$610 million and \$332 million,

respectively. These losses were partially offset by \$409 million net change in equity unrealized gains, \$275 million net gains on fixed maturity sales, and \$45 million net gains on equity sales.

Fee and other revenues for the twelve months ended December 31, 2022 were \$970 million, a decrease of \$96 million from the same period in 2021. The decrease primarily reflects lower natural resource revenues due to the Independence Energy “ICO” merger transaction that occurred later in 2021.

Claims, benefits and expenses for the twelve months ended December 31, 2022 were \$49.451 billion, an increase of \$5.401 billion over the same period in 2021. The increase primarily reflects higher U.S. non-catastrophe losses in Global Retail Markets, claims, benefits, and expenses related to the SAM and AmGeneral acquisitions, unfavorable current year losses in Global Risk Solutions and higher variable expenses. These were partially offset by improved current accident year loss ratios due to rate in excess of loss trend in Global Risk Solutions, greater prior year catastrophe and non-catastrophe reserve releases in Global Retail Markets and prior accident year weakening in 2022 versus strengthening in 2021 in Global Risk Solutions.

Income tax expense on continuing operations for the twelve months ended December 31, 2022, was \$81 million, a decrease of \$659 million from the same period in 2021. The Company’s effective tax rate for the twelve months ended December 31, 2022, was 16% compared to 19% for the same period in 2021. The decrease is primarily driven by one-time impacts related to the non-U.S. operations as compared to the pre-tax income in the relevant periods.

Net income attributable to LMHC for the twelve months ended December 31, 2022 was \$414 million, a decrease of \$2.654 billion from the same period in 2021.

Cash flow provided by continuing operations for the twelve months ended December 31, 2022 was \$5.576 billion, an increase of \$6 million over the same period in 2021. The increase reflects favorable premium collections and lower losses paid, partially offset by unfavorable paid loss activity and expenses paid in Global Retail Markets.

	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change (Points)	2022	2021	Change (Points)
CONSOLIDATED						
Combined ratio						
Claims and claim adjustment expense ratio	66.5%	65.5%	1.0	66.9%	63.9%	3.0
Underwriting expense ratio	28.5	29.6	(1.1)	28.4	29.4	(1.0)
Underlying combined ratio	95.0	95.1	(0.1)	95.3	93.3	2.0
Catastrophes	3.3	1.3	2.0	7.7	7.4	0.3
Net incurred losses attributable to prior years:						
- Asbestos and environmental	0.8	1.4	(0.6)	0.2	0.4	(0.2)
- All other ¹	(2.2)	1.6	(3.8)	(1.6)	(0.3)	(1.3)
Current accident year re-estimation ²	-	(0.2)	0.2	-	-	-
Total combined ratio	96.9%	99.2%	(2.3)	101.6%	100.8%	0.8

1 Net of earned premium and reinstatement premium attributable to prior years.

2 Re-estimation of the current accident year loss reserves for the nine months ended September 30, 2022.

Fourth Quarter Results:

The consolidated underlying combined ratio for the three months ended December 31, 2022 was 95.0%, a decrease of 0.1 points from the same period in 2021. The decrease reflects a decrease in the expense ratio due to higher earned premium and lower employee related costs. This is partially offset by a higher claims and claim adjustment expense ratio due to higher non-catastrophe losses in the U.S., primarily due to personal auto, personal property, and business lines, and higher current year losses in Global Risk Solutions, partially offset by higher earned premium.

Including the impact of catastrophes, net incurred losses attributable to prior years, and current accident year re-estimation, the total combined ratio for the three months ended December 31, 2022 was 96.9%, a decrease of 2.3

points from the same period in 2021. The decrease reflects the changes in the underlying combined ratio previously mentioned and more favorable catastrophe loss development on events occurring earlier in the year and prior year weakening in Q4 2022 versus strengthening in Q4 2021 in Global Risk Solutions, partially offset by catastrophe losses from the Winter Storm Elliott in December.

Year-to-date Results:

The consolidated underlying combined ratio for the twelve months ended December 31, 2022 was 95.3%, an increase of 2.0 points over the same period in 2021. The increase reflects an increase in the claims and claim adjustment expense ratio due to higher non-catastrophe losses in the U.S., primarily due to personal auto, personal property and business lines, partially offset by higher earned premium in both Global Retail Markets and Global Risk Solutions and an improved current accident year loss ratio due to rate in excess of loss trend and business mix in Global Risk Solutions. This is partially offset by a lower expense ratio due to higher earned premium.

Including the impact of catastrophes and net incurred losses attributable to prior years, the total combined ratio for the twelve months ended December 31, 2022 was 101.6%, an increase of 0.8 points over the same period in 2021. The increase reflects the changes in the underlying combined ratio previously mentioned, partially offset by more favorable net incurred losses attributable to prior years driven by the prior year reserve releases discussed above.

GLOBAL RETAIL MARKETS

Overview – Global Retail Markets

Global Retail Markets combines the Company's local expertise in growth markets outside the U.S. with strong and scalable U.S. capabilities to take advantage of opportunities to grow its business globally. Global Retail Markets is comprised of four segments: U.S., West, East, and Reinsurance.

U.S. consists of Personal Lines and Business Lines. U.S. Personal Lines sells automobile, homeowners and other types of property and casualty insurance coverage to individuals in the United States. These products are distributed through approximately 1,710 licensed employee sales representatives, 890 licensed telesales counselors, independent agents, third-party producers, online, and sponsored affinity groups. U.S. Business Lines serves small commercial customers through an operating model that combines local underwriting, market knowledge and service with the scale advantages of a national company. Starting in March 2022, U.S. began including U.S. Personal and Business Lines coverages sold under our newly acquired SAM brand.

West sells property and casualty, health and life insurance products and services to individuals and businesses in Brazil, the Andes Market (Colombia, Chile, Ecuador) and the Western Europe Market (Spain, Portugal, and Ireland). Private passenger automobile insurance is the single largest line of business.

East sells property and casualty, health and life insurance products and services to individuals and businesses in the Asia Market (Thailand, Singapore, Hong Kong, Vietnam), Malaysia, India, and China. Private passenger automobile insurance is the single largest line of business. Starting in July 2022, Malaysia began including the coverages sold under our newly acquired AmGeneral brand.

Global Retail Markets Reinsurance consists of certain internal reinsurance programs.

On March 1, 2022, the Company completed the acquisition of SAM, a super-regional insurance holding company headquartered in Columbus, Ohio.

On July 28, 2022, the Company completed its acquisition of Malaysian insurer AmGeneral. Liberty Insurance Berhad acquired 100% shares of AmGeneral, and 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 will, at a subsequent date, be formally merged.

Global Retail Markets NWP by market segment was as follows:

\$ in Millions	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change	2022	2021	Change
U.S.	\$7,212	\$6,254	15.3%	\$29,816	\$25,518	16.8%
West	772	652	18.4	2,755	2,547	8.2
East	408	329	24.0	1,418	1,235	14.8
Global Retail Markets Reinsurance	-	2	NM	8	19	(57.9)
Total NWP	\$8,392	\$7,237	16.0%	\$33,997	\$29,319	16.0%
Foreign exchange effect on growth			(1.0)			(0.8)
NWP growth excluding foreign exchange ¹			17.0%			16.8%

¹ Determined by assuming constant foreign exchange rates between periods.
NM = Not Meaningful

Global Retail Markets NWP by line of business was as follows:

\$ in Millions	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change	2022	2021	Change
Private passenger automobile	\$3,914	\$3,627	7.9%	\$16,184	\$14,901	8.6%
Homeowners	2,410	1,958	23.1	9,539	7,679	24.2
Commercial multiple-peril	544	469	16.0	2,197	1,899	15.7
Commercial automobile	416	322	29.2	1,585	1,218	30.1
General liability	274	232	18.1	1,164	968	20.2
Commercial property	205	144	42.4	725	538	34.8
Workers compensation	142	123	15.4	626	557	12.4
Life and health	91	94	(3.2)	424	431	(1.6)
Other ¹	396	268	47.8	1,553	1,128	37.7
Total NWP	\$8,392	\$7,237	16.0%	\$33,997	\$29,319	16.0%

¹ Premium related to other personal and commercial lines including personal accident, bonds, small and medium enterprise, marine and cargo lines of business, and internal reinsurance.

Fourth Quarter Results:

NWP for the three months ended December 31, 2022 was \$8.392 billion, an increase of \$1.155 billion over the same period in 2021. This increase was driven by:

- U.S. personal lines driven by an increase in average written premium due to rate actions to offset rising personal lines severity and frequency trends.
- U.S. business lines driven by an increase in average written premium due to an increase in endorsements and exposure.
- The acquisition of SAM on March 1, 2022, which primarily contributes to growth in homeowners, private passenger auto, and commercial auto.
- The West region driven by higher results in private passenger auto in Brazil due to rate actions to offset rising severity and frequency trends.
- The East region driven by favorable results in India over the same period last year and strong performance across various lines of business in the Asia Market. Adding to the favorability was the acquisition of the Malaysian insurer AmGeneral on July 28, 2022.

Partially offsetting the premium increase was:

- Targeted underwriting actions across the regions to lower new business growth to address rising severity and frequency trends.

- The impact of foreign exchange as many international currencies weakened versus the U.S. dollar, most notably the euro and the Colombian peso.

Year-to-date Results:

NWP for the twelve months ended December 31, 2022 was \$33.997 billion, an increase of \$4.678 billion over the same period in 2021. This increase was driven by:

- U.S. personal lines driven by an increase in average written premium due to rate actions to offset rising personal lines severity and frequency trends.
- U.S. business lines driven by an increase in average written premium and the expansion of an existing partnership.
- The acquisition of SAM on March 1, 2022, which primarily contributes to growth in homeowners, private passenger auto, and commercial auto.
- The West region driven by higher results in private passenger auto in Brazil due to rate actions to offset rising severity and frequency trends and commercial property results in Chile.
- The East region driven by favorable results from China and India over the same period last year and strong performance across various lines of business in the Asia Market. Adding to the favorability was the acquisition of the Malaysian insurer AmGeneral on July 28, 2022.

Partially offsetting the premium increase was:

- Targeted underwriting actions across the regions to lower new business growth to address rising severity and frequency trends.
- The impact of foreign exchange as many international currencies weakened versus the U.S. dollar, most notably the euro, the Chilean peso, and the Thai baht, partially offset by strengthening of the Brazilian real.

Results of Operations – Global Retail Markets

\$ in Millions	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change	2022	2021	Change
Revenues	\$9,010	\$7,690	17.2%	\$34,011	\$30,008	13.3%
Underlying PTOI	\$525	\$597	(12.1)	\$1,658	\$2,794	(40.7)
Catastrophes	(485)	(376)	29.0	(2,538)	(2,339)	8.5
Net incurred losses attributable to prior years	178	182	(2.2)	612	451	35.7
Pre-tax operating income (loss)	\$218	\$403	(45.9)	(\$268)	\$906	NM

NM = Not Meaningful

Fourth Quarter Results:

Pre-tax operating income for the three months ended December 31, 2022 was \$218 million a decrease of \$185 million from the same period in 2021. Pre-tax operating income before catastrophes, net incurred losses attributable to prior years, and current accident year re-estimation was \$525 million, a decrease of \$72 million from the same period in 2021. The decrease was driven by unfavorable non-catastrophe losses in the U.S. primarily in personal auto due to increased frequency and severity and personal property due to higher severity, partially offset by higher earned premium. Inflationary trends have been a primary driver of the increase in severity in the quarter as auto severity was impacted by higher used car prices and upward pressure on repairable trends, and property was impacted by elevated material and labor costs. Including the impact of catastrophes and net incurred losses attributable to prior years, the change in pre-tax operating income was due to higher-than-expected catastrophe losses including losses related to Winter Storm Elliott in December.

Revenues for the three months ended December 31, 2022 were \$9.010 billion, an increase of \$1.320 billion over the same period in 2021. The increase was driven by higher earned premiums due to the topline impacts previously discussed. Adding to the favorability was the additional revenue related to the acquisitions of SAM and AmGeneral in the U.S. and Malaysia, respectively.

Claims, benefits, and expenses for the three months ended December 31, 2022 were \$8.774 billion, an increase of \$1.517 billion over the same period in 2021. The increase was driven primarily by higher U.S. non-catastrophe losses, and higher variable expenses in the U.S. due to the increase in topline. Adding to the increase were the claims, benefits, and expenses related to the acquisitions of SAM and AmGeneral.

Year-to-date Results:

Pre-tax operating (loss) income for the twelve months ended December 31, 2022 was (\$268) million versus \$906 million for the same period in 2021. Pre-tax operating income before catastrophes, net incurred losses attributable to prior years, and current accident year re-estimation was \$1.658 billion, a decrease of \$1.136 billion from the same period in 2021. The decrease was driven by higher non-catastrophe losses in the U.S. primarily in personal auto due to higher frequency and severity and personal property due to higher severity, partially offset by higher earned premium. Inflationary trends have been a primary driver of the increase in severity as auto severity was impacted by higher used car prices and upward pressure on repairable trends, and property was impacted by increasing material and labor costs. Including the impact of catastrophes and net incurred losses attributable to prior years, the change in pre-tax loss was driven by additional catastrophe losses related to the SAM acquisition and higher frequency of catastrophe events in the U.S. compared to the same time period in 2021. Partially offsetting the increase in pre-tax loss were greater 2022 prior year catastrophe reserve releases in the U.S. related to prior accident years that have favorably developed and prior year non-catastrophe reserve releases in U.S. and West.

Revenues for the twelve months ended December 31, 2022 were \$34.011 billion, an increase of \$4.003 billion over the same period in 2021. The increase was driven by higher earned premiums due to the topline impacts previously discussed. Adding to the favorability was the additional revenue related to the acquisitions of SAM and AmGeneral in the U.S. and Malaysia, respectively.

Claims, benefits, and expenses for the twelve months ended December 31, 2022 were \$34.389 billion, an increase of \$5.428 billion over the same period in 2021. The increase was driven by higher U.S. non-catastrophe losses, higher variable expenses in the U.S. due to the increase in topline. Adding to the increase were the claims, benefits, and expenses related to the acquisitions of SAM and AmGeneral. Partially offsetting the increase were greater 2022 prior year catastrophe reserve releases in the U.S. related to prior accident years that have favorably developed and prior year non-catastrophe reserve releases in U.S. and West.

	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change (Points)	2022	2021	Change (Points)
GLOBAL RETAIL MARKETS						
Combined ratio						
Claims and claim adjustment expense ratio	67.8%	66.2%	1.6	69.0%	64.0%	5.0
Underwriting expense ratio	28.2	27.9	0.3	27.5	28.4	(0.9)
Underlying combined ratio	96.0	94.1	1.9	96.5	92.4	4.1
Catastrophes	5.6	5.1	0.5	7.7	8.2	(0.5)
Net incurred losses attributable to prior years	(2.1)	(2.5)	0.4	(1.9)	(1.6)	(0.3)
Total combined ratio	99.5%	96.7%	2.8	102.3%	99.0%	3.3

Fourth Quarter Results:

The Global Retail Markets underlying combined ratio for the three months ended December 31, 2022 was 96.0%, an increase of 1.9 points over the same period in 2021. The increase was driven by an increase in the claims and claim adjustment expense ratio due to higher U.S. non-catastrophe losses in private passenger auto, personal property, and business lines.

Including the impact of catastrophes, net incurred losses attributable to prior years, and current accident year re-estimation, the total combined ratio for the three months ended December 31, 2022 was 99.5%, an increase of 2.8

points over the same period in 2021. The increase was driven by the previously mentioned increase in the underlying combined ratio as well as catastrophe losses from Winter Storm Elliott in December.

Year-to-date Results:

The Global Retail Markets underlying combined ratio for the twelve months ended December 31, 2022 was 96.5%, an increase of 4.1 points over the same period in 2021. The increase was driven by an increase in the claims and claim adjustment expense ratio due to higher U.S. non-catastrophe losses in private passenger auto, personal property, and business lines. The increase in the claims and claim adjustment expense ratio was partially offset by a decrease in the underwriting expense ratio, primarily driven by earned premium growth from rate driven actions and disciplined expense management.

Including the impact of catastrophes and net incurred losses attributable to prior years, the total combined ratio for the twelve months ended December 31, 2022 was 102.3%, an increase of 3.3 points over the same period in 2021. The increase was driven by the previously mentioned increase in the underlying combined ratio. Partially offsetting this increase was a decrease in catastrophe losses and more favorable net incurred losses attributable to prior years driven by the prior year reserve releases in U.S. and West mentioned above.

GLOBAL RISK SOLUTIONS

Overview – Global Risk Solutions

Global Risk Solutions (“GRS”) offers a wide array of property, casualty, specialty and reinsurance products and services distributed through brokers and independent agents globally. The segments for Global Risk Solutions are as follows:

- Liberty Specialty Markets (“LSM”) – Includes most Global Risk Solutions business outside of North America excluding Liberty Mutual Reinsurance.
- Liberty Mutual Reinsurance (“LM Re”) - Sells insurance for (Re)/insurers to transfer risk away from (Re)/insurance companies.
- North America (“NA”) – North America includes admitted and non-admitted property and casualty.
- Global Surety – A global leader providing surety guarantees to businesses ranging from multinational to local in most industry segments.
- Other Global Risk Solutions primarily consists of internal reinsurance programs, Ironshore international entities and a large global inland marine program.

Effective July 1, 2022, LM Re became a fourth segment of GRS, alongside NA, LSM and Global Surety. Previously, the business was embedded within LSM. LM Re will allow GRS to capitalize on the relative value and capital optimization between insurance and reinsurance, and strategically increase our reinsurance profile.

Global Risk Solutions NWP by market segment was as follows:

\$ in Millions	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change	2022	2021	Change
North America	\$1,850	\$1,686	9.7%	\$6,964	\$6,223	11.9%
Liberty Specialty Markets	1,014	1,146	(11.5)	3,722	3,951	(5.8)
Liberty Mutual Reinsurance	458	537	(14.7)	2,567	2,595	(1.1)
Global Surety	268	246	8.9	1,256	1,102	14.0
Other Global Risk Solutions	(307)	216	NM	444	731	(39.3)
Total NWP	\$3,283	\$3,831	(14.3%)	\$14,953	\$14,602	2.4%
Foreign exchange effect on growth			(3.4)			(2.2)
NWP growth excluding foreign exchange ¹			(10.9%)			4.6%

1 Determined by assuming constant foreign exchange rates between periods.
NM = Not Meaningful

Global Risk Solutions NWP by line of business was as follows:

\$ in Millions	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change	2022	2021	Change
Specialty insurance ¹	\$1,110	\$1,276	(13.0%)	\$4,220	\$4,382	(3.7%)
Reinsurance	458	544	(15.8)	2,573	2,604	(1.2)
Casualty ²	789	599	31.7	2,399	2,206	8.7
Commercial property	425	447	(4.9)	1,871	1,728	8.3
Surety	272	254	7.1	1,287	1,134	13.5
Workers compensation	281	268	4.9	1,274	1,079	18.1
Commercial automobile	211	199	6.0	749	630	18.9
Inland marine ³	149	148	0.7	593	574	3.3
Commercial multiple-peril	37	31	19.4	127	125	1.6
Other reinsurance	(449)	65	NM	(140)	140	NM
Total NWP	\$3,283	\$3,831	(14.3%)	\$14,953	\$14,602	2.4%

1 Includes marine, energy, construction, aviation, warranty and indemnity, directors and officers, errors and omissions, trade credit, contingent lines and other.

2 Primarily includes general liability, excess & umbrella and environmental lines of business.

3 Includes handset protection coverage for lost or damaged wireless devices.

NM = Not Meaningful

Fourth Quarter Results:

NWP for the three months ended December 31, 2022, was \$3.283 billion, a decrease of \$548 million from the same period in 2021.

The decrease was driven by:

- Higher cessions due to reinsurance program changes resulting in more coverage being purchased, higher volume on direct written business and premium adjustment on the casualty quota share and excess of loss treaties;
- De-risking of the portfolio in unprofitable and economically challenging products;
- Unfavorable foreign exchange due to strengthening of the U.S. dollar;
- Lower premium from business that is non-renewing;

Partially offset by:

- Renewal rate increases across most lines of business, totaling 10.9%;
- Growth in lines with inflation-sensitive exposure bases and premium audits;
- Higher casualty premium due to a large loss portfolio transfer for an existing policyholder in December 2022

Additionally, internal reinsurance changes in 2022 created offsetting differences amongst segments and lines.

Year-to-date Results:

NWP for the twelve months ended December 31, 2022, was \$14.953 billion, an increase of \$351 million over the same period in 2021.

The increase was driven by:

- Renewal rate increases across most lines of business, totaling 8.2%;
- Increase in retention of two points driven by areas with improved underwriting;
- Growth in lines with inflation-sensitive exposure bases and premium audits;
- Project based business impacting casualty and surety lines;
- Higher casualty premium due to a large loss portfolio transfer for an existing policyholder in December 2022

Partially offset by:

- Higher cessions due to reinsurance program changes resulting in more coverage being purchased, higher volume on direct written business and premium adjustment on the casualty quota share and excess of loss treaties;
- De-risking of the portfolio in unprofitable and economically challenging products
- Unfavorable foreign exchange due to strengthening of the U.S. dollar

Additionally, internal reinsurance changes in 2022 created offsetting differences amongst segments and lines.

Results of Operations – Global Risk Solutions

\$ in Millions	Three months ended December 31,			Twelve months ended December 31,		
	2022	2021	Change	2022	2021	Change
Revenues	\$3,990	\$3,962	0.7%	\$15,819	\$15,018	5.3%
Underlying PTOI	406	516	(21.3)	2,014	2,037	(1.1)
Catastrophes	116	14	NM	(1,095)	(1,168)	(6.3)
Net incurred losses attributable to prior years ¹	74	(271)	NM	65	(253)	NM
Current accident year re-estimation	-	19	NM	-	-	-
Pre-tax operating income	\$596	\$278	114.4%	\$984	\$616	59.7%

¹ Net of earned premium and reinstatement premium attributable to prior years of \$283 million and \$436 million for the three and twelve months ended December 31, 2022, and \$118 million and \$271 million for the same period in 2021.

NM = Not Meaningful

Fourth Quarter Results:

Pre-tax operating income for the three months ended December 31, 2022 was \$596 million, an increase of \$318 million over the same period in 2021. Underlying pre-tax operating income for the three months ended December 31, 2022 was \$406 million, a decrease of \$110 million from the same period in 2021. The decrease reflects higher current year losses, unfavorable foreign exchange and lower net investment income. Including the impact of catastrophes, net incurred losses attributable to prior years and current accident year re-estimation, the change in pre-tax operating income was driven by favorable catastrophe loss development on events occurring earlier in the year and prior accident year weakening in Q4 2022 versus strengthening in Q4 2021.

Revenues for the three months ended December 31, 2022 were \$3.990 billion, an increase of \$28 million over the same period in 2021. The increase primarily reflects higher premium earned due to favorable written premium in the first half of the year as well as prior year writings on long-tail lines partially offset by lower net investment income and premium adjustment on the casualty quota share and excess of loss treaties.

Claims, benefits and expenses for the three months ended December 31, 2022 were \$3.375 billion, a decrease of \$309 million from the same period in 2021. The decrease reflects favorable catastrophe loss development on events occurring earlier in the year, prior accident year weakening in Q4 2022 versus strengthening in Q4 2021 and loss adjustment on the casualty quota share and excess of loss treaties partially offset by unfavorable current year loss activity.

Year-to-date Results:

Pre-tax operating income for the twelve months ended December 31, 2022 was \$984 million, an increase of \$368 million over the same period in 2021. Underlying pre-tax operating income for the twelve months ended December 31, 2022 was \$2.014 billion, a decrease of \$23 million from the same period in 2021. The decrease reflects higher expenses driven by investments in infrastructure to support profitable growth, lower net investment income, unfavorable foreign exchange and higher current year losses partially offset by an improved current accident year loss ratio due to rate in excess of loss trend, business mix, profit margin on higher earned premium and a worker's compensation surplus refund from the state of Minnesota. Including the impact of catastrophes and net incurred losses

attributable to prior years, the change in pre-tax operating income was due to lower current year catastrophe losses as well as prior accident year weakening in 2022 versus strengthening in 2021.

Revenues for the twelve months ended December 31, 2022 was \$15.819 billion, an increase of \$801 million over the same period in 2021. The increase primarily reflects premium earned associated with the changes in NWP previously discussed and a worker's compensation surplus refund from the state of Minnesota partially offset by lower net investment income.

Claims, benefits and expenses for the twelve months ended December 31, 2022 was \$14.829 billion, an increase of \$432 million over the same period in 2021. The increase reflects higher losses due to growth, higher expenses driven by investments in infrastructure to support profitable growth and unfavorable current year losses. This is partially offset by an improved current accident year loss ratio due to rate in excess of loss trend, business mix, lower current year catastrophe losses, prior accident year weakening in 2022 versus strengthening in 2021 and loss adjustment on the casualty quota share and excess of loss treaties.

	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change (Points)	2022	2021	Change (Points)
GLOBAL RISK SOLUTIONS						
Combined Ratio						
Claims and claim adjustment expense ratio	62.3%	61.3%	1.0	61.5%	61.9%	(0.4)
Underwriting expense ratio	29.7	29.9	(0.2)	29.7	29.7	-
Dividend ratio	0.1	0.1	-	0.1	0.1	-
Underlying combined ratio	92.1	91.3	0.8	91.3	91.7	(0.4)
Catastrophes	(3.4)	(0.4)	(3.0)	7.8	8.7	(0.9)
Net incurred losses attributable to prior years ¹	(1.2)	7.8	(9.0)	(0.5)	1.8	(2.3)
Current accident year re-estimation	-	(0.5)	0.5	-	-	-
Total combined ratio	87.5%	98.2%	(10.7)	98.6%	102.2%	(3.6)

¹ Net of earned premium and reinstatement premium attributable to prior years.

Fourth Quarter Results:

The Global Risk Solutions underlying combined ratio for the three months ended December 31, 2022 was 92.1%, an increase of 0.8 points over the same period in 2021. The increase in the claims and claim adjustment expense ratio was primarily driven by higher current year losses.

Including the impact of catastrophes, net incurred losses attributable to prior years and current accident year re-estimation, the total combined ratio for the three months ended December 31, 2022 was 87.5%, a decrease of 10.7 points from the same period in 2021. The decrease was driven by favorable catastrophe loss development on events occurring earlier in the year and prior accident year weakening in Q4 2022 versus strengthening in Q4 2021.

Year-to-date Results:

The Global Risk Solutions underlying combined ratio for the twelve months ended December 31, 2022 was 91.3%, a decrease of 0.4 points from the same period in 2021. The decrease in the claims and claim adjustment expense ratio was primarily driven by an improved current accident year loss ratio due to rate in excess of loss trend and business mix partially offset by unfavorable current year losses. The underwriting expense ratio was flat versus prior year primarily driven by higher earned premium offset by higher expenses due to investments in infrastructure to support profitable growth.

Including the impact of catastrophes and net incurred losses attributable to prior years, the total combined ratio for the twelve months ended December 31, 2022 was 98.6%, a decrease of 3.6 points from the same period in 2021. The decrease was driven by lower current year catastrophe losses as well as prior accident year weakening in 2022 versus strengthening in 2021.

CORPORATE AND OTHER

Overview – Corporate and Other

Corporate and Other includes the following significant items:

- Certain internal discontinued operations, which comprises: the run-off of certain commercial lines business, the run-off of the California workers compensation business of Golden Eagle Insurance Corporation and certain distribution channels related to Prudential Property and Casualty Insurance Company, Prudential General Insurance Company and Prudential Commercial Insurance Company (together, “PruPac”) and Liberty Re annuity business.
- Cessions related to certain retroactive reinsurance agreements, including the NICO Reinsurance Transaction and NICO Casualty Reinsurance Transaction, which are described further in “Reinsurance”.
- Effective January 1, 2015, Corporate began assuming certain pre-2014 voluntary and involuntary workers compensation claims from the businesses. The covered business materially aligns with the workers compensation business covered by the retroactive reinsurance agreement defined as the NICO Reinsurance Transaction, which is described further in “Reinsurance”.
- Effective January 1, 2019, Corporate began assuming certain U.S. workers compensation, commercial auto, and general liability claims from the businesses. The covered business materially aligns with the casualty business covered by the retroactive reinsurance agreement defined as the NICO Casualty Reinsurance Transaction, which is described further in “Reinsurance,” with two notable differences: 1) the internal treaty attaches at held reserves at inception and does not include a loss corridor, and 2) the internal treaty includes umbrella claims related to Business Lines within Global Retail Markets.
- Effective September 30, 2020, Corporate began assuming certain pre-2018 construction defect liabilities from Global Risk Solutions.
- Reserve changes on certain other casualty and property lines of business.
- Interest expense on the Company’s outstanding debt.
- Certain risks of its businesses that the Company reinsures as part of its risk management program and pre-2019 and post-2020 risks on U.S. homeowners business covered by externally ceded homeowners’ quota share reinsurance treaties.
- The Company reports its written premium on workers compensation contracts on the "booked as billed" method. The businesses report workers compensation written premium on the "booked at inception" method. Corporate and Other results reflect the difference between these two methods.
- Costs associated with certain long-term compensation plans and other corporate costs not fully allocated to the businesses.
- Property and casualty operations’ investment income is allocated to the businesses based on planned ordinary investment income returns by investment category. The difference between allocated net investment income and actual net investment income is included in Corporate and Other.
- Investment-related realized gains (losses) and real estate impairments.
- Income related to limited partnership investments.
- Fee and other revenues include revenues from certain non-insurance subsidiaries, including Liberty Energy, Liberty Metals and Mining and Liberty Mutual Agriculture and Timber. These subsidiaries generate revenue from the production and sale of oil, gas, and other natural resources and related limited partnership investments.

Corporate and Other NWP by line of business was as follows:

\$ in Millions	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change	2022	2021	Change
Reinsurance, net	(\$171)	(\$17)	NM	(\$759)	(\$222)	NM
Workers compensation ¹	20	(25)	NM	36	(18)	NM
Other	-	2	(100.0)	-	(2)	(100.0)
Total NWP	(\$151)	(\$40)	NM	(\$723)	(\$242)	198.8%

1 Booked as billed adjustment.
NM = Not Meaningful

Fourth Quarter Results:

NWP for the three months ended December 31, 2022 was (\$151) million, an increase of \$111 million over the same period in 2021. The increase is driven by higher ceded premium on external reinsurance treaties, partially offset by the workers compensation booked as billed adjustment.

Year-to-date Results:

NWP for the twelve months ended December 31, 2022 was (\$723) million, an increase of \$481 million over the same period in 2021. The increase is driven by higher ceded premium on external reinsurance treaties.

Results of Operations – Corporate and Other

\$ in Millions	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2022	2021	Change	2022	2021	Change
Revenues	\$127	\$569	(77.7%)	\$126	\$3,174	(96.0%)
Underlying pre-tax operating income (loss) before limited partnerships income	40	(323)	NM	(160)	(1,027)	(84.4)
Catastrophes	(15)	219	NM	81	450	(82.0)
Net incurred losses attributable to prior years:						
-Asbestos and environmental ¹	(96)	(151)	(36.4)	(96)	(150)	(36.0)
-All other ^{1,2}	16	(74)	NM	52	(131)	NM
Pre-tax operating (loss) before limited partnerships income	(55)	(329)	(83.3)	(123)	(858)	(85.7)
Limited partnership income ³	144	916	(84.3)	706	3,708	(81.0)
Pre-tax operating income	\$89	\$587	(84.8)	\$583	\$2,850	(79.5%)

1 Asbestos and environmental is gross of the NICO Reinsurance Transaction, which is described further in "Reinsurance".

2 Net of earned premium attributable to prior years of zero for the three and twelve months ended December 31, 2022 and 2021.

3 Partnerships, LLC and other equity method income includes LP, LLC and other equity method income within net investment income in the accompanying Consolidated Statements of Income and revenue and expenses from direct investments in natural resources.

NM = Not Meaningful

Fourth Quarter Results:

Pre-tax operating income for the three months ended December 31, 2022 was \$89 million, a decrease of \$498 million from the same period in 2021. Underlying pre-tax operating income (loss) before limited partnerships income was \$40 million versus (\$323) million for the same period in 2021. The increase was driven by higher net investment income and lower employee related costs. Including the impact of catastrophes, net incurred losses attributable to prior years,

and limited partnerships income, the decrease in pre-tax operating income is primarily driven by lower limited partnerships income and lower recoveries on catastrophes.

Revenues for the three months ended December 31, 2022 were \$127 million, a decrease of \$442 million from the same period in 2021. The major components of revenues are net premium earned, net investment income (including limited partnerships income), net realized gains (losses), and fee and other revenues.

Net premium earned for the three months ended December 31, 2022 was (\$193) million, an increase of \$132 million over the same period in 2021. The increase primarily reflects the reinsurance earnings impact on external ceded placements.

Net investment income including limited partnerships income for the three months ended December 31, 2022 was \$373 million, a decrease of \$461 million from the same period in 2021. The decrease reflects less favorable valuations across the limited partnership investments, primarily driven by private capital investments.

Net realized losses for the three months ended December 31, 2022 were \$69 million, an increase of \$266 million from the same period in 2021. The net realized losses in the current period were primarily impacted by \$66 million net losses on fixed maturity sales and \$24 million impairments, offset by \$60 million gains on natural resource investments. The prior period was impacted by \$377 million losses on natural resource investments and \$41 million losses on derivatives, partially offset by \$98 million net change in equity unrealized gains and \$52 million net gains on equity sales.

Fee and other revenues for the three months ended December 31, 2022 were \$16 million, a decrease of \$115 million from the same period in 2021. The decrease was primarily driven by lower natural resource revenues due to the Independence Energy “ICO” merger transaction that occurred later in 2021.

Claims, benefits, and expenses for the three months ended December 31, 2022 were \$107 million, a decrease of \$210 million from the same period in 2021. The decrease primarily reflects lower employee related costs, partially offset by lower reinsurance recoveries related to catastrophe losses.

Year-to-date Results:

Pre-tax operating income for the twelve months ended December 31, 2022 was \$583 million, a decrease of \$2.267 billion from the same period in 2021. Underlying pre-tax operating loss before limited partnerships income was (\$160) million, a decrease of \$867 million from the same period in 2021. The decrease was driven by higher net investment income and lower employee related costs. Including the impact of catastrophes, net incurred losses attributable to prior years, and limited partnerships income, the decrease in pre-tax operating income is primarily driven by lower limited partnerships income, partially offset by favorable incurred losses attributable to prior years in the current period versus unfavorable in the prior period, specifically due to strengthening of casualty run-off reserves in 2021 that did not recur in 2022.

Revenues for the twelve months ended December 31, 2022 were \$126 million, a decrease of \$3.048 billion from the same period in 2021. The major components of revenues are net premium earned, net investment income (including limited partnerships income), net realized gains, and fee and other revenues.

Net premium earned for the twelve months ended December 31, 2022 was (\$473) million, an increase of \$171 million over the same period in 2021. The increase primarily reflects the reinsurance earnings impact on external ceded placements.

Net investment income including limited partnerships income for the twelve months ended December 31, 2022 was \$1.234 billion, a decrease of \$2.317 billion from the same period in 2021. The decrease reflects less favorable valuations across the limited partnership investments, primarily driven by private capital investments.

Net realized losses for the twelve months ended December 31, 2022 were \$690 million, an increase of \$322 million over the same period in 2021. The net realized losses in the current period were impacted by \$615 million net change in equity unrealized losses and \$226 million net losses on fixed maturity sales, partially offset by \$67 million net

change in unrealized gains on energy holdings and \$60 million gains on natural resource investments. The prior period was primarily driven by impairments and net losses on natural resource investments of \$610 million and \$332 million, respectively. These losses were partially offset by \$409 million net change in equity unrealized gains, \$275 million net gains on fixed maturity sales, and \$45 million net gains on equity sales.

Fee and other revenues for the twelve months ended December 31, 2022 were \$55 million, a decrease of \$238 million from the same period in 2021. The decrease was primarily driven by lower natural resource revenues due to the Independence Energy “ICO” merger transaction that occurred later in 2021.

Claims, benefits, and expenses for the twelve months ended December 31, 2022 were \$233 million, a decrease of \$459 million from the same period in 2021. The decrease primarily reflects lower employee related costs, partially offset by lower reinsurance recoveries related to catastrophe losses.

INVESTMENTS

General

The Company's investment strategy seeks long-term returns through disciplined security selection, portfolio diversity and an integrated approach to risk management. The Company selects and monitors investments to balance the goals of safety, stability, liquidity, growth and after-tax total return with its need to comply with regulatory investment requirements. A relatively safe and stable income stream is achieved by maintaining a broadly-based portfolio of investment grade bonds. These holdings are supplemented by investments in additional asset types with the objective of further enhancing the portfolio's diversification and expected returns. These additional asset types include commercial mortgages and other real estate financing investments, non-investment grade bonds, including leveraged loans, common and preferred stock, private equity and direct investments in natural resource ventures. Risk management is accomplished through asset liability management (including both interest rate risk and foreign currency risk), diversification, credit limits and a careful analytical review of each investment decision.

The Company's investment policy and strategy are reviewed and approved by the Investment Committee of its Board of Directors, which meets on a regular basis to review and consider investment activities, tactics and new investment classes. In addition, the Company predominantly uses a subsidiary investment advisor for managing and administering the investment portfolios of its domestic and foreign insurance operations.

Invested Assets (including cash and cash equivalents)

The following table summarizes the Company's invested assets by asset category as of December 31, 2022 and December 31, 2021:

Invested Assets by Type	As of December 31, 2022		As of December 31, 2021	
	Carrying Value	% of Total	Carrying Value	% of Total
\$ in Millions				
Fixed maturities, available for sale, at fair value	\$66,610	65.9%	\$73,106	70.8%
Equity securities	1,833	1.8	3,034	2.9
Limited partnership investments	12,346	12.2	11,134	10.8
Mortgage loans	3,632	3.6	2,659	2.6
Short-term investments	532	0.5	218	0.2
Other investments	3,062	3.0	2,267	2.3
Cash and cash equivalents	13,110	13.0	10,777	10.4
Total invested assets	\$101,125	100.0%	\$103,195	100.0%

Total invested assets as of December 31, 2022 were \$101.125 billion, a decrease of \$2.070 billion or 2.0% from December 31, 2021. The decrease was primarily related to a decrease in fixed maturities and equity securities, partially offset by an increase in limited partnership investments, mortgage loans, and cash and cash equivalents.

Fixed maturities as of December 31, 2022 were \$66.610 billion, a decrease of \$6.496 billion or 8.9% from December 31, 2021. The decrease was primarily driven by the unfavorable impact of the increase in treasury rates. As of December 31, 2022, included in fixed maturities are commitments to purchase various residential mortgage-backed securities at a cost and fair value of \$262 million and \$265 million, respectively.

Equity securities as of December 31, 2022 were \$1.833 billion (\$1.832 billion common stock and \$1 million preferred stock) versus \$3.034 billion as of December 31, 2021 (\$3.023 billion common stock and \$11 million preferred stock), a decrease of \$1.201 billion or 39.6% from December 31, 2021. Of the \$1.832 billion of common stock at December 31, 2022, \$633 million relates to securities associated with non-guaranteed unit linked life insurance where the policyholder bears the investment risk. The decrease in total equity securities is primarily due to the sale of equity ETFs.

The following table summarizes the Company's limited partnership investments as of December 31, 2022 and December 31, 2021:

Limited partnership investments	As of December 31, 2022		As of December 31, 2021		
	\$ in Millions	Carrying Value	% of Total	Carrying Value	% of Total
Traditional private equity		\$5,449	44.1%	\$5,535	49.8%
Real estate		3,050	24.7	2,065	18.5
Private credit		1,512	12.2	1,237	11.1
Natural resources – Energy		837	6.8	794	7.1
Natural resources – Other ¹		922	7.5	873	7.8
Other		576	4.7	630	5.7
Total limited partnership investments²		\$12,346	100%	\$11,134	100.0%

1 Included in Natural Resources – Other is \$- million and \$9 million of investments in metals & mining as of December 31, 2022 and December 31, 2021 respectively, \$24 million and \$132 million of investments in agriculture and timber as of December 31, 2022 and December 31, 2021 respectively, and \$898 million and \$732 million of investments in energy transition and infrastructure as of December 31, 2022 and December 31, 2021, respectively.

2 Included in total limited partnership investments are \$518 million and \$614 million of limited partnership investments where the Company has elected fair value option of as of December 31, 2022 and December 31, 2021, respectively.

Mortgage loans as of December 31, 2022 were \$3.632 billion (net of \$9 million of loan loss reserves or 0.2% of the outstanding loan portfolio), an increase of \$973 million or 36.6% over December 31, 2021. The increase is primarily driven by \$1.756 billion in funding partially offset by \$776 million in principal reductions. The entire mortgage loan portfolio is U.S.-based. The number of loans in the portfolio decreased from 3,285 at December 31, 2021 to 2,716 at December 31, 2022.

Cash and cash equivalents as of December 31, 2022 were \$13.110 billion, an increase of \$2.333 billion or 21.6% over December 31, 2021. The increase primarily reflects an increase in cash from operating activities, partially offset by a decrease in investing activities.

The following tables summarize the Company's available for sale portfolio by security type as of December 31, 2022 and December 31, 2021:

\$ in Millions	As of 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")

\$ in Millions	As of December 31, 2021			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. government and agency securities	\$11,421	\$78	(\$43)	\$11,456
Residential MBS	5,287	100	(19)	5,368
Commercial MBS	4,045	190	(19)	4,216
Other MBS and ABS	5,535	49	(33)	5,551
U.S. state and municipal	8,255	537	(12)	8,780
Corporate and other	31,986	847	(197)	32,636
Foreign government securities	5,051	132	(84)	5,099
Total securities available for sale	\$71,580	\$1,933	(\$407)	\$73,106

The following table summarizes the Company's mortgage and asset-backed fixed maturity portfolio by credit quality as of December 31, 2022:

Mortgage & Asset-Backed Fixed Maturities by Credit Quality ¹	As of December 31, 2022							
	AAA	AA	A	BBB	BB	B or Lower	Total	% of Total
\$ in Millions								
Residential MBS	\$5,945	\$ -	\$ -	\$ -	\$ -	\$2	\$5,947	40.7%
Commercial MBS	3,156	601	222	70	108	-	4,157	28.4
Other MBS and ABS	2,074	663	849	626	255	52	4,519	30.9
Total	\$11,175	\$1,264	\$1,071	\$696	\$363	\$54	\$14,623	100%
% of Total	76.4%	8.6%	7.3%	4.8%	2.5%	0.4%	100%	

¹ For purposes of this disclosure, credit quality is primarily based upon average credit ratings.

Approximately 63.1% of the Company's mortgage and asset-backed fixed maturity portfolio is explicitly backed by the U.S. government (SBA and GNMA) or by government-sponsored entities (FNMA and FHLMC). Approximately 76.4% of the holdings are rated AAA. Included in the commercial mortgage-backed securities at December 31, 2022, were \$3.237 billion in Agency CMBS and \$920 million Non-agency CMBS. Included in the Other MBS and ABS at December 31, 2022 were \$282 million AAA rated SBA Loans. The commercial mortgage-backed securities portfolio is well diversified and of high quality with approximately 75.9% rated AAA.

The following table summarizes the Company's U.S. state and municipal fixed maturity portfolio of securities which are obligations of states, municipalities, and political subdivisions (collectively referred to as U.S. state and municipal bonds) by credit quality as of December 31, 2022 and December 31, 2021:

U.S. State and Municipal by Credit Quality ¹	As of December 31, 2022			As of December 31, 2021		
	Fair Value	% of Total	Average Credit Rating	Fair Value	% of Total	Average Credit Rating
\$ in Millions						
State general obligation	\$1,489	20.9%	AA	\$1,969	22.4%	AA
Local general obligation	1,234	17.3	AA	1,735	19.8	AA
Revenue	4,278	60.0	A	4,971	56.6	A
Pre-refunded	130	1.8	AAA	105	1.2	AAA
Total U.S. state and municipal	\$7,131	100%	AA	\$8,780	100.0%	AA

¹ For purposes of this disclosure, credit quality is primarily based upon average credit ratings.

The municipal bond portfolio (taxable and tax-exempt) includes general obligation and revenue bonds issued by states, cities, counties, school districts, hospitals, educational institutions, and similar issuers. Included in the municipal bond portfolio at December 31, 2022 and December 31, 2021 were \$130 million and \$105 million, respectively, of pre-refunded bonds, which are bonds for which states or municipalities have established irrevocable trusts, which were created to satisfy their responsibility for payments of principal and interest.

The following table summarizes the Company's allocation of fixed maturities by credit quality as of December 31, 2022 and December 31, 2021:

Fixed Maturities by Credit Quality ¹	As of December 31, 2022		As of December 31, 2021	
	Fair Value	% of Total	Fair Value	% of Total
\$ in Millions				
AAA	\$21,970	33.0%	\$25,739	35.2%
AA+, AA, AA-	8,481	12.7	9,168	12.5
A+, A, A-	15,533	23.3	16,754	22.9
BBB+, BBB, BBB-	15,408	23.1	15,992	21.9
Total investment grade	61,392	92.1	67,653	92.5
BB+, BB, BB-	2,642	4.0	2,869	3.9
B+, B, B-	2,143	3.2	2,216	3.0
CCC or lower	261	0.4	237	0.4
Unrated ²	172	0.3	131	0.2
Total below-investment grade	5,218	7.9	5,453	7.5
Total fixed maturities	\$66,610	100.0%	\$73,106	100.0%

1 For purposes of this disclosure, credit quality is primarily based upon average credit ratings.

2 Includes bank loans acquired as part of the Ironshore acquisition and externally managed convertible securities.

The Company's holdings of below investment grade securities primarily consist of an actively managed diversified portfolio of high yield securities and leveraged loans within the domestic insurance portfolios and investments in emerging market sovereign and corporate debt primarily in support of the Company's international insurance operations. Overall, the average credit quality rating stands at A+ as of December 31, 2022.

The following table summarizes available for sale fixed maturity securities by contractual maturity at December 31, 2022 and December 31, 2021. Actual maturities may differ from contractual maturities because certain securities may be called or prepaid with or without call or prepayment penalties. Due to the potential for prepayment on MBS and ABS, they are not categorized by contractual maturity.

Fixed Maturities by Maturity Date	As of December 31, 2022		As of December 31, 2021	
	Fair Value	% of Total	Fair Value	% of Total
\$ in Millions				
One year or less	\$2,238	3.3%	\$3,888	5.3%
Over one year through five years	22,483	33.8	25,658	35.1
Over five years through ten years	19,479	29.2	19,803	27.1
Over ten years	7,787	11.7	8,622	11.8
MBS and ABS	14,623	22.0	15,135	20.7
Total fixed maturities	\$66,610	100.0%	\$73,106	100.0%

During 2022, after taking into consideration changes in investment opportunities and its view of the current and prospective business and economic environment, the Company has made only minor adjustments to the average duration of its investment portfolio. The average duration of the investment portfolio as of December 31, 2022 was 4.2 years.

The following tables summarize the Company's gross unrealized losses and fair value of fixed income securities by the length of time that individual securities have been in a continuous unrealized loss position as of December 31, 2022 and December 31, 2021 that are not deemed to be other-than-temporarily impaired:

	As of December 31, 2022			
\$ in Millions	Less Than 12 Months		12 Months or Longer	
Unrealized Losses & Fair Value by Security Type	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 December 31, 2021			
\$ in Millions	Less Than 12 Months		12 Months or Longer	
Unrealized Losses & Fair Value by Security Type	Unrealized Losses	Fair Value of Investments with Unrealized Losses	Unrealized Losses	Fair Value of Investments with Unrealized Losses
U.S. Government and agency securities	(\$32)	\$6,373	(\$11)	\$326
Residential MBS	(16)	1,755	(3)	126
Commercial MBS	(5)	431	(14)	152
Other MBS and ABS	(20)	2,993	(13)	95
U.S. state and municipal	(11)	916	(1)	29
Corporate and other	(143)	9,264	(54)	1,111
Foreign government securities	(55)	1,978	(29)	453
Total securities available for sale	(\$282)	\$23,710	(\$125)	\$2,292

Unrealized losses for fixed maturity securities increased from \$407 million as of December 31, 2021 to \$6.732 billion as of December 31, 2022. 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 Company has concluded that the gross unrealized losses of fixed maturity securities as of December 31, 2022 are temporary.

The following tables summarize the Company's issuer and sector exposure¹ as of December 31, 2022:

Top 10 Issuers	As of December 31, 2022				
\$ in Millions	Fixed Maturity	Equity	Short-Term	Total Exposure	% of Invested Assets
JP Morgan Chase & Co	\$658	\$-	\$-	\$658	0.66%
Citigroup Inc	655	-	-	655	0.65
Morgan Stanley	651	-	-	651	0.64
Bank of America Corp	646	-	-	646	0.64
Goldman Sachs Group Inc	628	-	-	628	0.62
Government of United Kingdom	574	-	-	574	0.57
Government of Canada	534	-	17	551	0.54
Government of Brazil	451	-	95	546	0.54
Wells Fargo & Co	450	-	-	450	0.44
Government of Australia	398	-	-	398	0.39
Total	\$5,645	\$-	\$112	\$5,757	5.69%

Top 10 Sectors	As of December 31, 2022				
\$ in Millions	Fixed Maturity	Equity	Short-Term	Total Exposure	% of Invested Assets
Banking	\$8,063	\$9	\$286	\$8,358	8.26%
Foreign Government	3,952	-	131	4,083	4.04
Real Estate	763	3,262	-	4,025	3.98
Technology	2,025	402	1	2,428	2.40
Electric Utility	1,684	352	6	2,042	2.02
Insurance	1,511	75	-	1,586	1.57
US Municipal - State & US Territory	1,567	-	-	1,567	1.55
Independent Energy	514	867	-	1,381	1.37
Healthcare	1,070	310	-	1,380	1.36
Food and Beverage	1,195	47	-	1,242	1.23
Total	\$22,344	\$5,324	\$424	\$28,092	27.78%

¹ Tables exclude U.S. Treasury and agency securities, mortgage-backed securities, ETFs, and municipal obligations that are pre-refunded or escrowed to maturity.

As of December 31, 2022, investments in the energy sector accounted for \$3.128 billion or 3.1% of total invested assets. The energy sector is comprised of investments in the following sub-sectors: independent energy, integrated energy, midstream, oil field services, and refining (*classification per Bloomberg Barclays Industry Groups*). Energy investments consist of investment grade bonds of \$1.846 billion, bonds that were rated below investment grade of \$413 million, publicly traded equity securities of \$2 million, and natural resources partnerships and other equity method investments of \$867 million. Agriculture and timber investments consist of natural resource partnerships of \$24 million. In addition, the Company has direct investments in agriculture and timber of \$194 million and oil and gas wells of \$4 million which are included in other assets on the Consolidated Balance Sheets.

The following table summarizes the Company's unfunded commitments as of December 31, 2022 and December 31, 2021:

Unfunded Commitments	As of December 31, 2022		As of December 31, 2021	
	Total	% of Total	Total	% of Total
\$ in Millions				
Traditional private equity	\$2,337	27.3%	\$1,614	23.3%
Real Estate	3,029	35.4	2,499	36.1
Private Credit	1,867	21.8	1,983	28.7
Natural resources – Energy	33	0.4	38	0.6
Natural resources – Energy transition and infrastructure	1,197	13.9	697	10.1
Natural resources – Timber and agriculture	24	0.3	24	0.3
Other	80	0.9	62	0.9
Total unfunded commitments	\$8,567	100.0%	\$6,917	100.0%

Unfunded commitments as of December 31, 2022 were \$8.567 billion, an increase of \$1.650 billion over December 31, 2021. The increase is primarily driven by new commitments net of contributions related to real estate, private equity investments, and energy, transition and infrastructure. The unfunded energy investment commitments at December 31, 2022 and December 31, 2021 of \$33 million and \$38 million, respectively, relate to energy partnerships.

LIQUIDITY AND CAPITAL RESOURCES

The liquidity requirements of the insurance subsidiaries are met primarily by funds generated from operations, asset maturities and income received on investments. Cash provided from these sources is used primarily for claims, claim adjustment expenses and operating expenses (underwriting and corporate benefit costs). There are certain cash outflows such as catastrophes and continued settlements of asbestos reserves that are unpredictable in nature and could create increased liquidity needs. The Company believes that the insurance subsidiaries' future business liquidity needs will be met from all the above sources. However, the Company maintains back up borrowing facilities as an additional contingent source of funds. These include:

- LMIC, Peerless Insurance Company ("PIC"), Liberty Mutual Fire Insurance Company ("LMFIC"), Employers Insurance Company of Wausau ("EICOW"), SAM, State Auto Property & Casualty Insurance Company ("SPC") and Rockhill Insurance Company ("RIC") are members of the Federal Home Loan Bank ("FHLB"). On December 29, 2022, Safeco Insurance Company of America ("SICOA") and Ohio Casualty Insurance Company ("OCIC"), became members of FHLB Boston. The Company has \$300 million of Federal Home Loan Bank borrowings with maturity dates through 2032. As of December 31, 2022, the outstanding Federal Home Loan Bank borrowings are fully collateralized. Ironshore Indemnity Insurance ("III") and Ironshore Specialty Insurance Company ("ISIC") memberships were cancelled on February 24th and 25th, 2020. III's membership was cancelled effective on February 9, 2022. For ISIC there is a five-year waiting period for final cancellation of membership, so the effective date of its membership cancellation will be February 2025.

Net cash flows are generally invested in marketable securities while keeping a certain amount in cash and short-term investments to meet unpredictable cash obligations. The Company monitors the duration of these investments, and purchases and sales are executed with the objective of having adequate cash available to satisfy its maturing liabilities. As the Company's investment strategy focuses on overall asset and liability durations, and not specific cash flows, asset sales may be required to satisfy obligations or rebalance asset portfolios. The Company's invested assets as of December 31, 2022 (including cash and cash equivalents) totaled \$101.125 billion.

Debt outstanding as of December 31, 2022 and December 31, 2021 was as follows:

Short-term debt:

\$ in Millions	As of December 31, 2022	As of December 31, 2021
4.95% Notes, due 2022 ¹	\$-	\$473
4.25% Notes, due 2023 ¹	547	-
Total short-term debt	\$547	\$473

(1) Short-term debt is the current maturities of the 4.95% Notes, due May 1, 2022 and the 4.25% Notes, due June 15, 2023.

Long-term debt:

\$ in Millions	As of December 31, 2022	As of December 31, 2021
4.25% Notes, due 2023 ¹	\$-	\$547
1.75% €500 Million Notes, due 2024	533	568
8.50% Surplus notes, due 2025	140	140
2.75% €750 Million Notes, due 2026	801	853
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	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	-
3.625% €500 Million Junior Subordinated notes, due 2059 ³	533	568
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	10,556	9,692
Unamortized discount	(437)	(453)
Long-term debt excluding unamortized debt issuance costs	10,119	9,239
Unamortized debt issuance costs	(66)	(58)
Total long-term debt	\$10,053	\$9,181

(1) Short-term debt is the current maturities of the 4.95% Notes, due May 1, 2022 and the 4.25% Notes, due June 15, 2023.

(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.

As part of its overall capital strategy, the Company previously announced that it may issue, repurchase or exchange debt depending on market conditions. Debt repurchases may be executed through open market or other appropriate transactions. The Company continues to evaluate market conditions and may periodically affect transactions in its debt, subject to applicable limitations.

Debt Transactions

On December 15, 2022, \$40 million of Rockhill Holding Company (“RHC”) Notes were redeemed.

On December 2, 2022, Liberty Mutual Group, Inc. (“LMGI”) issued €500 million 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 million of STFC Notes were redeemed.

On November 3, 2022, \$96 million of SPC FHLB borrowings were paid.

On September 21, 2022, \$19 million of SAM and \$21 million of SPC FHLB borrowings were paid.

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

On June 6, 2022, LMGI issued \$1,000 million 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 million of LMGI 4.95% Notes were paid at maturity.

On August 16, 2021, LMGI issued \$500 million of Series F Junior Subordinated Notes, due 2051 (the “Series F Notes”). Interest is payable semi-annually at a fixed rate of 4.125%. The Series F Notes may be redeemed in whole or in part three months prior to and on December 15, 2026, after which the notes may be redeemed during the three-month period prior to and on each succeeding interest reset date. The interest reset dates are on each five-year anniversary of December 15, 2021 until December 15, 2051.

On June 1, 2021, \$330 million of LMGI 5.00% Notes were paid at maturity.

On February 1, 2021, LMGI issued \$800 million of Series E Junior Subordinated Notes, due 2061 (the “Series E Notes”). Interest is payable semi-annually at a fixed rate of 4.30%. The Series E Notes may be redeemed in whole or in part on February 1, 2026, after which the notes may be redeemed on any interest payment date thereafter until February 1, 2061.

Interest Expense

Consolidated interest expense for the three and twelve months ended December 31, 2022 was \$131 million and \$506 million respectively, an increase of \$9 million and \$30 million over the same periods in 2021.

Holding Company Liquidity and Capital Resources

The Company conducts substantially all of its operations through its wholly owned insurance and service company subsidiaries, and therefore is primarily dependent on dividends, distributions, loans or other payments of funds from these entities to meet its current and future obligations. However, the subsidiaries are separate and distinct legal entities and have no obligation to make funds available to the Company, whether in the form of loans, dividends or other distributions. As of December 31, 2022, the Company, through its downstream subsidiaries LMGI and LMFE, had \$9.1 billion and \$533 million, respectively, of debt outstanding, excluding discount and issuance costs.

The insurance subsidiaries’ ability to pay dividends is restricted under applicable insurance law and regulations and may only be paid from unassigned surplus. Under the insurance laws of the domiciliary states of the insurance subsidiaries, an insurer may make an ordinary dividend payment if its surplus as regards to policyholders, following such dividend, is reasonable in relation to its outstanding liabilities, is adequate to its financial needs and does not exceed the insurer’s unassigned surplus. However, no insurer may pay an extraordinary dividend without the approval or non disapproval of the domiciliary insurance regulatory authority. Insurance subsidiaries owned directly by LMGI are LMIC, Liberty Mutual Personal Insurance Company (“LMPICO”), LMFIC, EICOW and SAM. Under the insurance laws of Massachusetts, the domiciliary state of LMIC, an extraordinary dividend is defined as a dividend whose fair market value, together with other dividends made within the preceding 12 months, exceeds the greater of 10% of the insurer’s surplus as regards policyholders as of the preceding December 31, or the insurer’s net income for the 12-month period ending on the preceding December 31. Under the insurance laws of New Hampshire, the domiciliary state of LMPICO, an extraordinary dividend is defined as (1) a dividend whose fair market value, together with other dividends paid within the preceding 12 months, exceeds the lesser of (a) 10% of the insurer’s surplus as regards policyholders as of the preceding December 31, or (b) the insurer’s net income, excluding realized capital gains, for the calendar year preceding the date of the dividend, but not including pro rata distributions of any class of the insurer’s own securities, or (2) the aggregate of the insurer’s net income from the previous two calendar years that has not already been paid out as dividends, excluding realized capital gains and any dividends paid in the previous two calendar years. Under the insurance laws of Wisconsin, the domiciliary state of LMFIC and EICOW, an extraordinary dividend is defined as a dividend whose fair market value, together with other dividends paid within the

preceding 12 months, exceeds the lesser of (a) 10% of the insurer’s surplus with regard to policyholders as of the preceding December 31, or (b) the greater of (1) the insurer’s net income for the calendar year preceding the date of the dividend, minus realized capital gains for that calendar year, or (2) the aggregate of the insurer’s net income for the three calendar years preceding the date of the dividend, minus realized capital gains for those calendar years and minus dividends paid within the first two of the preceding three calendar years. Under the insurance laws of Ohio, the domiciliary state of SAM, an extraordinary dividend is defined as a dividend whose fair market value, together with other dividends made within the preceding 12 months, exceeds the greater of 10% of the insurer’s surplus as regards policyholders as of the preceding December 31 or the insurer’s net income for the 12-month period ending on the preceding December 31. Changes in the extraordinary dividend regulation of the domiciliary states of LMIC, LMPICO, LMFIC, EICOW and SAM could negatively affect LMGI’s ability to pay principal and interest on its debt, as could a redomestication or merger of LMIC, LMPICO, LMFIC, EICOW or SAM to a different domiciliary state. The authorized control level risk-based capital (as of December 31, 2022) and 2023 available dividend capacity prior to needing regulatory approval for LMIC, LMFIC, EICOW and SAM were as follows:

\$ in Millions	RBC Ratio¹		Dividend Capacity²	Dividends Paid³
	2022	2021	2023	2022
RBC Ratios and Dividend Capacity				
LMIC	361%	389%	\$2,090	\$365
LMFIC	396%	560%	\$-	\$385
EICOW	399%	531%	\$-	\$330
SAM	2,189%	414%	\$113	\$-

1 Authorized control level risk-based capital as defined by the NAIC.

2 Represents the estimated maximum allowable dividend without prior regulatory approval in the state of domicile.

3 Dividends paid represent amounts paid during the twelve months ended December 31, 2022. Available dividend capacity as of December 31, 2022 is calculated as 2023 dividend capacity less dividends paid for the preceding 12 months. Dividends paid Jan 1, 2022 through December 31, 2022 for LMIC, LMFIC, EICOW and SAM were \$365 million, \$385 million, \$330 million and zero respectively.

LMGI also has access to the following sources of funding:

- An unsecured revolving credit facility of \$1 billion with an expiration date of April 18, 2027. To date, no funds have been borrowed under the facility.
- A management services agreement with LMIC pursuant to which LMGI is entitled to collect certain costs plus a management fee for services rendered by LMGI employees.
- Investment management agreements with affiliated entities pursuant to which an LMGI subsidiary investment advisor is entitled to recover annual expenses for investment management services performed by its employees.
- Liberty Corporate Services LLC (“LCS”), which through its subsidiaries collects fees and other revenues, primarily for claims administration, agency and IT services rendered for affiliated and non-affiliated entities. For the three and twelve months ended December 31, 2022, LCS recorded \$126 million and \$401 million, respectively, in pre-tax income.
- Approximately \$80 million of annual dividends related to non-redeemable perpetual preferred stock issuances by LMIC and LMFIC.

\$ in Millions	As of December 31, 2022	As of December 31, 2021
Total long-term debt	\$10,053	\$9,181
Unamortized discount and debt issuance costs	(503)	(511)
Total long-term debt excluding unamortized discount and debt issuance costs	\$10,556	\$9,692
Total equity excluding accumulated other comprehensive (loss) income	\$30,038	\$28,808
Total capital excluding accumulated other comprehensive (loss) income ¹	\$40,594	\$38,500
Debt-to-capital capitalization excluding accumulated other comprehensive (loss) income ¹	26.0%	25.2%
Statutory surplus	\$26,739	\$26,481

¹ Excludes unamortized discount and debt issuance costs

The total debt-to-capital capitalization ratio excluding accumulated other comprehensive loss is calculated by dividing (a) total debt excluding unamortized discount and debt issuance costs by (b) total capital excluding accumulated other comprehensive (loss) income. Net unrealized gains and losses on investments can be significantly impacted by both interest rate movements and other economic factors. Accordingly, in the opinion of the Company's management, the debt-to-total capital ratio calculated on this basis provides another useful metric for investors to understand the Company's financial leverage position. The Company's ratio of debt-to-capital (excluding accumulated other comprehensive (loss) income of 26.0% at December 31, 2022 was within the Company's target range.

REINSURANCE

Reinsurance Recoverables

The Company reported reinsurance recoverables of \$18.817 billion and \$17.776 billion at December 31, 2022 and December 31, 2021, respectively, net of allowance for doubtful accounts of \$140 million and \$123 million, respectively. Included in these balances are \$1.022 billion and \$874 million of paid recoverables and \$17.935 billion and \$17.025 billion of unpaid recoverables (including retroactive reinsurance), respectively.

S&P Rating ¹	As of December 31, 2022			
	Gross Recoverables ²	Collateral Held ³	Net Recoverables ⁴	% of Total Net Recoverables
\$ in Millions				
<u>Rated Entities</u>				
AAA	\$ -	\$ -	\$ -	-
AA+, AA, AA-	7,988	6,676	2,821	25%
A+, A, A-	5,118	660	4,535	40%
BBB+, BBB, BBB-	-	-	-	-
BB+ or below	-	-	-	-
Subtotal	13,106	7,336	7,356	65%
<u>Pools & Associations</u>				
State mandated involuntary pools and associations	2,991	-	2,991	26%
Voluntary	178	123	174	2%
Subtotal	3,169	123	3,165	28%
<u>Non-Rated Entities⁵</u>				
Captives & fronting companies	1,611	1,844	309	3%
Other	1,071	1,971	425	4%
Subtotal	2,682	3,815	734	7%
Grand Total	\$18,957	\$11,274	\$11,255	100%

1 Standard & Poor's ratings are as of December 31, 2022.

2 Gross recoverables are defined as paid and unpaid claims and claim adjustment expense including IBNR and before both bad debt reserve set aside for potential uncollectible reinsurance and consideration of collateral.

3 Collateral refers to letters of credit, trust accounts, and funds held against outstanding and potential future claims and claim adjustment expenses related to reinsurance recoverable balances.

4 Net recoverables are defined as the difference between the amount of gross recoverables and collateral held for each reinsurer at the ceding entity level. If the collateral held for a reinsurer at a ceding entity level is greater than the gross recoverable, net recoverables are reported as \$0.

5 Reinsurers not rated by Standard & Poor's.

Reinsurance Groups ¹	As of December 31, 2022		
	\$ in Millions	Gross Recoverables ²	Collateral Held ³
1. Berkshire Hathaway Insurance Group	\$5,059	\$5,900	\$638
2. Swiss Re Group	1,624	545	1,083
3. Nationwide Group	1,141	1	1,140
4. Everest Re Group	842	263	630
5. Lloyd's of London	584	-	584
6. Partner Re Group	473	86	387
7. Munich Re Group	437	11	427
8. Renaissance Re Holdings Group	344	119	231
9. CUMIS Insurance Society Group	337	-	337
10. Enstar Group Ltd	309	335	5
11. Hannover Re Group	309	71	238
12. Stonefort Reinsurance S.A.	292	359	-
13. Markel Corp	277	2	275
14. Exchange Indemnity Company	245	112	134
15. Chubb Ltd.	220	132	136
State Mandated Involuntary pools and associations	2,991	-	2,991
Voluntary pools and associations	178	123	174
All Other	3,295	3,215	1,845
Total Reinsurance Recoverables	\$18,957	\$11,274	\$11,255

1 Reinsurance Groups are defined as all reinsurance subsidiaries owned by a common parent.

2 Gross recoverables are defined as paid and unpaid claims and claim adjustment expense including IBNR and before both bad debt reserve set aside for potential uncollectible reinsurance and consideration of collateral.

3 Collateral refers to letters of credit, trust accounts, and funds held against outstanding and potential future claims and claim adjustment expenses related to reinsurance recoverable balances.

4 Net recoverables are defined as the difference between the amount of gross recoverables and collateral held for each reinsurer at the ceding entity level. If the collateral held for a reinsurer at a ceding entity level is greater than the gross recoverable, net recoverables are reported as \$0.

Approximately 94% and 93% of the Company's reinsurance recoverable balance, net of collateral held and including voluntary and involuntary pools and associations, was from reinsurers rated A- or better from A.M. Best and Standard & Poor's, respectively, at December 31, 2022. Collateral held against outstanding gross reinsurance recoverable balances was \$11.274 billion at December 31, 2022.

The remaining 6% and 7% of the Company's net reinsurance recoverable balance is well diversified. No single reinsurer rated below A- or not rated by A.M. Best or Standard & Poor's accounts for more than 1% of GAAP equity. In addition, the average net reinsurance recoverable balance from individual reinsurers rated below A- or not rated by A.M. Best and Standard & Poor's was approximately \$1 million as of December 31, 2022.

The reinsurance recoverables from state mandated involuntary pools and associations primarily represent the Company's servicing carrier business. As a servicing carrier, the Company retains no direct underwriting risk but instead cedes 100% of the involuntary market premium and losses back to the pool. Payment of losses is shared by the pool participants in proportion to their pool participation. Reinsurer credit risk with respect to any such involuntary pool or association is a function of the creditworthiness of all the pool participants.

The Company's reinsurance recoverables from Nationwide Indemnity Company have been fully guaranteed by its parent, Nationwide Mutual Insurance Company, which has a financial strength rating of A+ from Standard & Poor's and A+ from A.M. Best.

Adverse Development Reinsurance

On November 5, 2019, LMIC entered into a reinsurance transaction with 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, commercial auto liability and general liability excluding umbrella and warranty liabilities. The first layer of the contract attaches at \$300 million below applicable held reserves at inception of \$8.342 billion of combined aggregate reserves. The second layer of the contract provides adverse development coverage for \$1.000 billion above a retention equal to \$8.742 billion. The contract includes a sublimit of \$100 million 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 million of existing undiscounted liabilities, paid NICO total consideration of \$462 million and recorded a pre-tax loss of \$173 million. This contract is accounted for on a retroactive basis.

In general terms, the covered business includes post December 31, 2018 development for Global Retail Markets U.S. Business Lines and Global Risks Solutions National Insurance segment on: (1) certain workers compensation liabilities arising under policies on the books 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 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 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 GAAP 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 million, deferred gains are now being recorded. The Company reported deferred gain amortization of \$53 million and \$37 million for the twelve months ended December 31, 2022 and 2021, respectively. As of December 31, 2022 and 2021, deferred gains were \$218 million and \$226 million. Limits remaining on the contract as of December 31, 2022 were \$543 million.

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 million of held reserves at inception, for which the Company established reinsurance recoverables on the Consolidated Balance Sheet. The second layer of the contract provides adverse development coverage for 95% of \$500 million above a retention equal to \$3.006 billion, 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 million for certain construction liability liabilities. The Company paid NICO consideration of \$550 million, 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 million and zero as of December 31, 2022.

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, attaching at \$12.522 billion of combined aggregate reserves, with an aggregate limit of \$6.500 billion and sublimits of \$3.100 billion for asbestos and environmental liabilities and \$4.507 billion 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 billion of existing undiscounted liabilities under this retroactive reinsurance agreement. NICO will provide \$3.180 billion of additional aggregate adverse development reinsurance. The Company paid NICO total consideration of \$3.046 billion and recorded a pre-tax loss of \$128 million. 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. This 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.

The Company reported the net position of the contract as a loss of \$92 million as of December 31, 2021. As the aggregate of workers compensation and asbestos and environmental development, including the impact of an updated estimate for discount held as of the inception of the agreement, has exceeded the original pre-tax loss of \$128 million, deferred gains are now being recorded. The Company reported deferred gain amortization of \$15 million for the twelve months ended December 31, 2022. As of December 31, 2022, deferred gains were \$26 million. Limits remaining on the contract in total, and for asbestos and environmental liabilities, respectively, were \$3.175 billion and \$368 million as of December 31, 2022.

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

For the year ended December 31, 2022 the Company had property catastrophe reinsurance coverage for its domestic business and certain specialty operations including: 1) hurricanes and earthquake reinsurance covering a substantial portion of \$3.1 billion of loss in excess of \$500 million 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' U.S. exposures. This program provides significant reinsurance protection in excess of \$330 million per occurrence retention, including coverage for terrorism events and/or losses for a single event at a single insured location in excess of \$75 million. These contracts generally exclude acts of terrorism which are "certified" by the U.S. government where such certified terrorism events involve the intentional use of nuclear, chemical, or biological materials.

Catastrophe Bond Reinsurance

On June 16, 2021, the Company entered into a multi-year property catastrophe reinsurance agreement, effective July 1, 2021, with Mystic Re IV Ltd. ("Mystic IV"), a Bermuda domiciled reinsurer, to provide a total of \$300 million 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 December 21, 2020, the Company entered into a multi-year property catastrophe reinsurance agreement, effective January 1, 2021, with Mystic Re IV, a Bermuda domiciled reinsurer, to provide a total of \$300 million 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 million excess of \$22 million. 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 million excess of \$14 million.

CRITICAL ACCOUNTING ESTIMATES

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 working interests in oil and gas properties, (4) valuation of goodwill and intangible assets, (5) deferred income tax valuation allowance, and (6) pension and postretirement benefit obligations.

While the amounts included in the Consolidated Financial Statements reflect management's best estimates and assumptions, these amounts ultimately could vary.

For additional discussion, please refer to footnote 1 in the Company's December 31, 2022 Audited Consolidated Financial Statements.

Unpaid Claims and Claim Adjustment Expenses

Property and casualty insurance unpaid claims and claim adjustment expenses represent the Company's best estimate of amounts necessary to settle all outstanding claims, including claims that are incurred but not reported as of the reporting date. The Company's reserve projections are based primarily on detailed analysis of the facts in each case, experience with similar cases and various historical development patterns. Consideration is given to such historical patterns as field reserving trends and claims settlement practices, loss payments, pending levels of unpaid claims and product mix, as well as court decisions, economic conditions and public attitudes. All of these factors can affect the estimation of reserves.

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.

For additional discussion, please refer to footnote 6 in the Company's December 31, 2022 Audited Consolidated Financial Statements.

Asbestos and Environmental

As a result of the significant uncertainty inherent in determining a company's asbestos and environmental liabilities and establishing related reserves, the amount of reserves required to adequately fund the Company's asbestos and environmental claims cannot be accurately estimated using conventional reserving methodologies based on historical data and trends. As a result, the use of conventional reserving methodologies frequently has to be supplemented by subjective considerations including managerial judgment. In that regard, the estimation of asbestos claims and associated liabilities and the analysis of environmental claims considered prevailing applicable law and certain inconsistencies of court decisions as to coverage, plaintiffs' expanded theories of liability, and the risks inherent in major litigation and other uncertainties, the Company believes that in future periods it is possible that the outcome of the continued uncertainties regarding asbestos and environmental related claims could result in an aggregate liability that differs from current reserves and would be covered under the NICO Reinsurance Transaction subject to treaty terms and conditions.

For additional discussion, please refer to footnote 6 in the Company's December 31, 2022 Audited Consolidated Financial Statements.

Reinsurance Recoverables

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 estimated uncollectible reinsurance recoverables. 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. Accordingly, the establishment of reinsurance recoverables and the related allowance for uncollectible reinsurance recoverables is also an inherently uncertain process involving estimates. Changes in these estimates could result in additional charges to the accompanying Consolidated Statements of Income.

Ceded transactions that transfer risk but are retroactive are included in reinsurance recoverables. The excess of estimated liabilities for claims and claim costs over the consideration paid net of experience adjustments is established as a deferred credit at inception. The deferred amounts are subsequently amortized using the effective interest method over the expected settlement period. The periodic amortization is reflected in the accompanying Consolidated Statements of Income through benefits, claims and claim adjustment expenses. In transactions where the consideration paid exceeds the estimated liabilities for claims and claim costs a loss is recognized. If the adverse development net of experience adjustments exceeds the original loss, deferred gains are recorded. The deferred gains are subsequently recognized into earnings over the expected settlement period of the reserves.

For additional discussion, please refer to footnote 5 in the Company's December 31, 2022 Audited Consolidated Financial Statements.

Fair Value Determination

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. Securities are classified into three hierarchy levels: Level 1, Level 2 or Level 3.

Regarding fair value measurements, as of December 31, 2022, excluding other assets, the Company reflected \$9.109 billion (12.9%) as level 1 (quoted prices in active markets) primarily consisting of U.S. Treasuries and common equity securities. The majority of the Company's invested assets are reported as level 2 (quoted prices from other observable inputs). As of December 31, 2022, the Company reported \$58.755 billion (83.3%) as level 2, consisting primarily of fixed maturity securities. Finally, the Company reported \$2.707 billion (3.8%) as level 3 (unobservable inputs), primarily consisting of international and privately held securities for which a market price is not readily observable.

For additional discussion, please refer to footnote 10 in the Company's December 31, 2022 Audited Consolidated Financial Statements.

Impairment Losses on Investments

The Company reviews fixed maturity securities and other investments which include limited partnerships and other equity method investments (primarily traditional private equity, natural resource and real estate) for impairment on a quarterly basis. These investments are 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.

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.

For additional discussion, please refer to footnote 1 in the Company's December 31, 2022 Audited Consolidated Financial Statements.

Goodwill and Intangible Assets

Goodwill is tested for impairment at least annually using either a qualitative or a quantitative process. Election of the approach can be made at the reporting unit level. The reporting unit has the option to skip the qualitative test and move directly to completion of the quantitative process. As of December 31, 2022, the Company has two reporting units – Global Retail Markets and Global Risk Solutions.

Indefinite-lived intangible assets held by the Company are reviewed for impairment on at least an annual basis using a qualitative process. The classification of the asset as indefinite-lived is reassessed, and an impairment is recognized if the carrying amount of the asset exceeds its fair value.

The Company recognized \$21 million of intangibles impairments related to Ironshore distribution channel in 2022.

For additional discussion, please refer to footnote 1 in the Company's December 31, 2022 Audited Consolidated Financial Statements.

Deferred Income Taxes

The income tax provision is calculated under the liability method of accounting. Deferred income tax assets and liabilities are recorded based upon the difference between the financial statement and tax bases of assets and liabilities at the enacted tax rates. The principal assets and liabilities giving rise to such differences are insurance loss reserves, unearned premiums, employee benefits, net unrealized losses on investments, and deferred policy acquisition costs.

Consistent with our overall investment policy and strategy, the Company implemented a tax planning strategy in 2022 to support the realization of a majority of the deferred tax assets associated with unrealized losses on fixed maturity investments.

For additional discussion, please refer to footnote 8 in the Company's December 31, 2022 Audited Consolidated Financial Statements.

Pension and Postretirement Benefit Obligations

On an annual basis, the Company reviews the discount rate assumption used to determine the benefit obligations and the composition of various yield curves to ensure that the assumed discount rate reflects the Company's best estimate of the rate of return inherent in a portfolio of high-quality debt instruments that would provide the cash flows necessary to settle the Company's projected benefit payments.

The discount rate assumption used to determine the benefit obligations was based on a yield curve approach where the cash flows related to the benefit plans' liability stream were discounted at an interest rate specifically applicable to the timing of the cash flows. The service cost is calculated by discounting the future cash flows attributable to the current year of service using spot rates specifically applicable to the timing of the cash flows. Interest cost is determined by multiplying each benefit obligation cash flow by the spot rate applicable to that timing of the cash flow.

In choosing the expected long-term rate of return on plan assets, the Company's Retirement Committee considered the historical returns of equity and fixed income markets in conjunction with current economic and financial market conditions.

For additional discussion, please refer to footnote 9 in the Company's December 31, 2022 Audited Consolidated Financial Statements.

ABOUT THE COMPANY

Boston-based LMHC, the parent corporation of the Liberty Mutual Insurance group of entities, is a diversified global insurer and sixth largest global property and casualty insurer based on 2021 gross written premium. The Company also ranks 78th on the Fortune 100 list of largest corporations in the U.S. based on 2021 revenue. As of December 31, 2022, LMHC had \$160.316 billion in consolidated assets, \$138.108 billion in consolidated liabilities, and \$50.0 billion in annual consolidated revenue.

LMHC, through its subsidiaries and affiliated companies, offers a wide range of property and casualty insurance products and services to individuals and businesses alike. In 2001 and 2002, the Company formed a mutual holding company structure, whereby the three principal mutual insurance companies, LMIC, LMFIC and EICOW, each became separate stock insurance companies under the ownership of LMHC. In 2022, SAM, formerly a mutual insurance company, also became a stock insurance company under the ownership of LMHC.

Functionally, the Company conducts substantially all of its insurance business through two business units, with each operating independently of the other in certain areas such as sales, underwriting, and claims, but, as appropriate, collaborating in other areas such as actuarial and financial. Management believes this structure provides increased synergy to the Company and permits each business unit to execute its business strategy and/or to make acquisitions without impacting or disrupting the operations of the other business unit.

LMHC employs over 50,000 people in 29 countries and economies around the world. For a full description of the Company's business operations, products and distribution channels, please visit Liberty Mutual's Investor Relations web site at www.libertymutualgroup.com/investors