



## Report of Independent Registered Public Accounting Firm

The Board of Directors  
Liberty Mutual Holding Company Inc.

### **Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of Liberty Mutual Holding Company Inc. (the Company) as of December 31, 2022 and 2021, the related consolidated statements of income, comprehensive (loss) income, changes in total equity and cash flows for each of the three years in the period ended December 31, 2022, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 and 2021, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the auditing standards of the Public Company Accounting Oversight Board (United States) (PCAOB) and in accordance with auditing standards generally accepted in the United States of America, the Company’s internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 23, 2023 expressed an unqualified opinion thereon.

### **Basis for Opinion**

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audits. We are required to be independent with respect to the Company in accordance with the relevant ethical requirements relating to our audit.

We conducted our audits in accordance with the auditing standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting

principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

## **Critical Audit Matters**

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved especially challenging, subjective or complex judgments. The communication of the critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

### *Valuation of incurred but not reported reserves*

#### *Description of the Matter*

For property and casualty insurance products, the Company establishes reserves for unpaid losses and loss adjustment expenses to provide for the estimated costs of paying claims under insurance policies written by the Company. These reserves include estimates for both claims that have been reported and claims that have been incurred but not reported and include estimates of all losses and loss adjustment expenses associated with processing and settling these claims. At December 31, 2022, the liability for incurred but not reported (IBNR) reserves represented a significant portion of the \$78,598 million of reserves for unpaid claims and claim adjustment expenses. As discussed in Notes 1 and 6 of the consolidated financial statements, this estimation process is based significantly on the assumption that past developments are an appropriate predictor of future events and involves a variety of actuarial techniques that analyze experience, trends, and other relevant factors.

The subjectivity and uncertainty of estimating the ultimate cost to settle the liabilities for reported and unreported claims is caused by various factors including, frequency and severity of claims, economic conditions such as the legal, regulatory, judicial, inflation and social environment, policy pricing including terms and conditions, as well as changes in the claims handling process. As such, performing audit procedures to evaluate unpaid losses and loss adjustment expenses required a high degree of auditor judgment and an increased extent of effort, including the involvement of our actuarial specialists.

*How We  
Addressed the  
Matter in Our  
Audit*

We obtained an understanding, evaluated the design, and tested the operating effectiveness of internal controls over management's process to estimate the IBNR reserves balance, including, among others, controls over inputs, methods, and assumptions in the Company's estimation process.

To test the Company's estimate of IBNR reserves, we evaluated the methods and assumptions used by the Company. With the assistance of our actuarial specialists, we compared the Company's prior year assumptions of expected development of ultimate loss to actual losses incurred during the current year to identify potential management bias in the determination of the unpaid losses and loss adjustment expenses. We evaluated management's application of actuarial reserving methods and aforementioned factors, including actuarial assumptions and judgments impacting loss reserves. We independently projected reserves for selected lines of business using actual historical data and loss development patterns, as well as industry data and other benchmarks, and compared management's actuarially determined reserves to these independent estimates. We compared management's internally prepared actuarial analyses to internal experience and related industry trends for selected lines of business.

*Valuation of investments in securities*

*Description of  
the Matter*

A subset of the Company's \$66,610 million fixed-income and \$15,408 million other investment portfolios exhibit higher estimation uncertainty when determining fair value. Investments in fixed maturities classified as available-for-sale and certain other investments are reported at fair value in the consolidated financial statements. As discussed in Note 10 of the consolidated financial statements, for certain securities, the Company obtains prices from third party valuation service providers, or uses broker quotes and internal pricing models. Each of those sources use not directly observable or unobservable inputs, such as credit spreads and interest rates beyond the observable curve, depending on the characteristics of the securities. As a result, determining the fair value for those securities required significantly more judgement.

Auditing the fair value of the securities that exhibit higher estimation uncertainty was especially challenging due to the judgment involved in determining the fair value, including inputs and assumptions that are not directly observable or unobservable in the market.

*How We  
Addressed the  
Matter in Our  
Audit*

We obtained an understanding, evaluated the design, and tested the operating effectiveness of controls over management's valuation process for securities that exhibit higher estimation uncertainty. This included, among other procedures, testing management's review and approval process over validating the fair value from third party valuation service providers and the assumptions used in determining the fair value for internally priced securities.

To test the Company's fair value calculations, we compared the valuation methods used by the Company to the methods used in prior periods and those used in the industry. With the assistance of our valuation specialists, we tested the fair value calculation for securities that exhibit higher estimation uncertainty, including, among other procedures, independently calculating a reasonable range of fair values for a sample of securities using assumptions based on independently obtained information or available transaction data for similar investments. We compared the ranges to management's estimates of fair value for the sample of selected securities.

### **Other Information**

Management is responsible for the other information. The other information comprises the Q4 2022 Management's Discussion and Analysis of Financial Condition and Results of Operations, the Q4 2022 Earnings Release, and Q4 2022 Earnings Presentation, but does not include the consolidated financial statements and our auditor's report thereon. Our opinion on the consolidated financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the consolidated financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.



We have served as the Company's auditor since 1996.

February 23, 2023



**Liberty Mutual Insurance**

175 Berkeley Street  
Boston, MA 02116  
617-357-9500

**Management's Report on the Effectiveness of  
Internal Control over Financial Reporting**

**The Board of Directors  
Liberty Mutual Holding Company Inc.**

Management of Liberty Mutual Holding Company Inc. (the Company) is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control over financial reporting is a process designed to provide reasonable assurance to our management and Board of Directors regarding the reliability of financial reporting and the preparation of the consolidated financial statements in accordance with U.S. generally accepted accounting principles.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2022, based on the framework established in Internal Control – Integrated Framework published by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2013 Framework).

Based on its assessment, management concluded that the Company's internal control over financial reporting was effective to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company's consolidated financial statements as of December 31, 2022.

Management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of State Auto Group, which is included in the 2022 consolidated financial statements of the Company and constituted 3% and 4% of total assets and equity, respectively, as of December 31, 2022, and 4% of revenues for the year then ended.

Ernst & Young LLP, our independent registered public accounting firm, has issued its report on the effectiveness of the Company's internal control over financial reporting, which follows this report.

*Sweeney, Timothy*

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Tim Sweeney, President and Chief Executive Officer

*CL Peirce*

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Christopher L. Peirce, Executive Vice President and Chief Financial Officer

## **ATTACHMENT A**

### **Liberty Mutual Holding Company Inc. Addendum to Management's Report on the Effectiveness of Internal Control over Financial Reporting For the Year Ended December 31, 2022**

For purposes of this addendum, the "Section 404 Report" means Management's Report on the Effectiveness of Internal Control over Financial Reporting and the Report of the Independent Registered Public Accounting Firm on the effectiveness of internal control over financial reporting contained in the Liberty Mutual Holding Company, Inc. (LMHC) annual financial statements. Accordingly, as required by Section 16C of the Annual Financial Reporting Model Regulation, management of LMHC hereby affirms that the only material processes with respect to the preparation of the audited statutory financial statements of the Group of insurers that were excluded from the Section 404 Report are the processes discussed below. Management of LMHC hereby affirms that all other material processes with respect to the preparation of the audited statutory financial statements of the Group of insurers were included in the Section 404 Report.

The following statutory financial reporting processes were reviewed separately from the internal controls reported by the Group of insurers in its Section 404 Report:

- Accumulation of statutory financial statements and footnotes
- Calculation of investment in affiliates
- Calculation of deferred income taxes
- Calculation of nonadmitted assets
- Calculation of Schedule F penalty
- Calculation of goodwill capacity
- Preparation of Schedule P
- Allocation of results due to pooling



## Report of Independent Registered Public Accounting Firm

The Board of Directors  
Liberty Mutual Holding Company Inc.

### **Opinion on Internal Control over Financial Reporting**

We have audited Liberty Mutual Holding Company Inc.'s (the Company's) internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) (the COSO criteria). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on the COSO criteria.

As indicated in the accompanying Management's Report on the Effectiveness of Internal Control Over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of State Auto Group, which is included in the 2022 consolidated financial statements of the Company and constituted 3% and 4% of total assets and equity, respectively, as of December 31, 2022, and 4% of revenues for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of State Auto Group.

We also have audited, in accordance with the auditing standards of the Public Company Accounting Oversight Board (United States) (the PCAOB) and in accordance with auditing standards generally accepted in the United States of America, the consolidated balance sheets of the Company as of December 31, 2022 and 2021, the related consolidated statements of income, comprehensive (loss) income, changes in total equity, and cash flows for each of the three years in the period ended December 31, 2022, and the related notes (collectively referred to as the "financial statements") and our report dated February 23, 2023 expressed an unqualified opinion thereon.

### **Basis for Opinion**

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on the Effectiveness of Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are required to be independent with respect to the Company in accordance with the relevant ethical requirements relating to our audit.

We conducted our audit in accordance with the auditing standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

### **Definition and Limitations of Internal Control Over Financial Reporting**

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

*Ernst + Young LLP*

February 23, 2023

**LIBERTY MUTUAL HOLDING COMPANY INC.**

**Consolidated Statements of Income**

(dollars in millions)

Years Ended December 31,

	2022	2021	2020
<b>Revenues</b>			
Premiums earned	\$ 46,914	\$ 41,941	\$ 39,491
Net investment income	2,866	5,415	2,594
Fee and other revenues	970	1,066	921
Net realized (losses) gains	(794)	(222)	790
Total revenues	<u>49,956</u>	<u>48,200</u>	<u>43,796</u>
<b>Claims, Benefits and Expenses</b>			
Benefits, claims and claim adjustment expenses	34,434	29,932	28,501
Operating costs and expenses	8,114	7,298	7,304
Amortization of deferred policy acquisition costs	6,366	6,309	5,827
Interest expense	506	476	441
Interest credited to policyholders	31	35	35
Total claims, benefits and expenses	<u>49,451</u>	<u>44,050</u>	<u>42,108</u>
Acquisition & integration costs	(101)	(21)	(18)
Restructuring costs	(22)	(193)	(626)
Unit linked life insurance	118	(126)	(30)
Income from continuing operations before income tax expense and non-controlling interest	500	3,810	1,014
Income tax expense	81	740	237
Consolidated net income from continuing operations	<u>419</u>	<u>3,070</u>	<u>777</u>
Discontinued operations (net of income tax benefit of \$0, \$0, and \$1 in 2022, 2021, and 2020, respectively)	-	-	(17)
Consolidated net income	<u>419</u>	<u>3,070</u>	<u>760</u>
Less: Net income attributable to non-controlling interest	5	2	2
Net income attributable to Liberty Mutual Holding Company Inc.	<u>\$ 414</u>	<u>\$ 3,068</u>	<u>\$ 758</u>
<b>Net Realized (Losses) Gains</b>			
Other-than-temporary impairment losses	\$ (90)	\$ (625)	\$ (307)
Other net realized (losses) gains	(209)	47	969
Valuation changes on equity investments, derivatives, other	(495)	356	128
Total net realized (losses) gains	<u>\$ (794)</u>	<u>\$ (222)</u>	<u>\$ 790</u>

See accompanying notes to the audited consolidated financial statements

**LIBERTY MUTUAL HOLDING COMPANY INC.**  
**Consolidated Statements of Comprehensive (Loss) Income**  
(dollars in millions)

Years Ended December 31,

	2022	2021	2020
Consolidated net income	\$ 419	\$ 3,070	\$ 760
Other comprehensive (loss) income, net of taxes:			
Unrealized (losses) gains on securities	(6,392)	(1,632)	1,436
Change in pension and post retirement plans funded status	(239)	658	153
Foreign currency translation and other adjustments <sup>(1)</sup>	(249)	(205)	(11)
Other comprehensive (loss) income, net of taxes	(6,880)	(1,179)	1,578
Consolidated comprehensive (loss) income	(6,461)	1,891	2,338
Less: Comprehensive (loss) income attributable to non-controlling interest	(5)	1	3
Comprehensive (loss) income attributable to Liberty Mutual Holding Company Inc.	\$ (6,456)	\$ 1,890	\$ 2,335

(1) Excludes the \$189 of NCI related to AmGeneral Insurance Berhad Acquisition.

See accompanying notes to the audited consolidated financial statements

## LIBERTY MUTUAL HOLDING COMPANY INC.

## Consolidated Balance Sheets

(dollars in millions)

	December 31,	
	2022	2021
<b>Assets:</b>		
Investments		
Fixed maturities, available for sale, at fair value (amortized cost of \$73,234 and \$71,580)	\$ 66,610	\$ 73,106
Equity securities	1,833	3,034
Short-term investments	532	218
Mortgage loans	3,632	2,659
Other investments	15,408	13,401
Total investments	88,015	92,418
Cash and cash equivalents	13,110	10,777
Premium and other receivables	16,356	14,972
Reinsurance recoverables	18,817	17,776
Deferred tax asset	1,930	-
Deferred acquisition costs	4,213	3,994
Goodwill	5,776	5,672
Prepaid reinsurance premiums	2,669	2,053
Other assets	9,430	8,381
Total assets	\$ 160,316	\$ 156,043
<b>Liabilities:</b>		
Unpaid claims and claim adjustment expenses and future policy benefits:		
Property and casualty	\$ 78,598	\$ 72,049
Life	1,540	1,934
Other policyholder funds and benefits payable	14	16
Unearned premiums	28,058	24,950
Funds held under reinsurance treaties	356	309
Short-term debt	547	473
Long-term debt	10,053	9,181
Accrued postretirement and pension benefits	3,003	2,685
Payable for investments purchased and loaned	3,034	5,102
Deferred tax liability	-	201
Other liabilities	12,905	11,295
Total liabilities	138,108	128,195
<b>Equity:</b>		
Unassigned equity	29,822	28,776
Accumulated other comprehensive (loss) income	(7,830)	(960)
Total policyholders' equity	21,992	27,816
Non-controlling interest	216	32
Total equity	22,208	27,848
Total liabilities and equity	\$ 160,316	\$ 156,043

See accompanying notes to the audited consolidated financial statements

## LIBERTY MUTUAL HOLDING COMPANY INC.

## Consolidated Statements of Changes in Total Equity

(dollars in millions)

	Unassigned Equity	Accumulated Other Comprehensive (Loss) Income	Total Policyholders' Equity	Non-Controlling Interest	Total Equity
<b>Balance, January 1, 2020</b>	\$ 24,950	(1,359)	23,591	28	23,619
Comprehensive income:					
Consolidated net income	758	-	758	2	760
Other comprehensive income, net of taxes	-	1,577	1,577	1	1,578
Total comprehensive income	758	1,577	2,335	3	2,338
<b>Balance, December 31, 2020</b>	\$ 25,708	\$ 218	\$ 25,926	\$ 31	\$ 25,957
Comprehensive loss:					
Consolidated net income	3,068	-	3,068	2	3,070
Other comprehensive loss, net of taxes	-	(1,178)	(1,178)	(1)	(1,179)
Total comprehensive income	3,068	(1,178)	1,890	1	1,891
<b>Balance, December 31, 2021</b>	\$ 28,776	\$ (960)	\$ 27,816	\$ 32	\$ 27,848
Cumulative effect from the adoption of ASU 2016-02, Leases	90	-	90	-	90
Net increase due to mutual mergers and acquisitions	542	-	542	189	731
Comprehensive loss:					
Consolidated net income	414	-	414	5	419
Other comprehensive loss, net of taxes	-	(6,870)	(6,870)	(10)	(6,880)
Total comprehensive income (loss)	414	(6,870)	(6,456)	(5)	(6,461)
<b>Balance, December 31, 2022</b>	\$ 29,822	\$ (7,830)	\$ 21,992	\$ 216	\$ 22,208

LIBERTY MUTUAL HOLDING COMPANY INC.

Consolidated Statements of Cash Flows

(dollars in millions)

	Years Ended December 31,		
	2022	2021	2020
<b>Cash flows from operating activities:</b>			
Consolidated net income	\$ 419	\$ 3,070	\$ 760
Less loss from Liberty Life Assurance Company of Boston, net of tax expense	-	-	(17)
Income from operations excluding Liberty Life Assurance Company of Boston discontinued operations	419	3,070	777
Adjustments to reconcile consolidated net income to net cash provided by operating activities:			
Depreciation and amortization	907	730	824
Realized losses (gains)	794	222	(790)
Undistributed private equity investment gains	(476)	(3,451)	(719)
Premium, other receivables, and reinsurance recoverables	(2,736)	(2,395)	(2,494)
Deferred acquisition costs	(258)	(281)	(206)
Liabilities for insurance reserves	7,279	7,135	7,096
Taxes payable, net of deferred	(421)	449	42
Other, net	68	91	1,918
Total adjustments	5,157	2,500	5,671
Net cash provided by operating activities	5,576	5,570	6,448
<b>Cash flows from investing activities:</b>			
Purchases of investments	(42,322)	(83,541)	(75,601)
Sales and maturities of investments	41,283	77,345	70,710
Property and equipment purchased, net	(114)	(43)	(116)
Cash (paid for) provided by mutual merger, acquisitions and disposals	(1,069)	-	12
Other investing activities	(1,326)	(340)	886
Net cash used in investing activities	(3,548)	(6,579)	(4,109)
<b>Cash flows from financing activities:</b>			
Net activity in policyholder accounts	(24)	(77)	(49)
Debt financing, net	856	978	448
Net securities lending activity and other financing activities	(395)	2,746	390
Net cash provided by financing activities	437	3,647	789
Effect of exchange rate changes on cash	(132)	(85)	127
Net increase in cash and cash equivalents	2,333	2,553	3,255
Cash and cash equivalents, beginning of year	10,777	8,224	4,969
Cash and cash equivalents, end of period	\$ 13,110	\$ 10,777	\$ 8,224
Supplemental disclosure of cash flow information:			
Income taxes paid	\$ 463	\$ 234	\$ 140
<b>Non-cash transactions</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>
Investing activities:			
Purchase of investments	\$ -	\$ -	\$ 927
Sale of fixed assets and other	-	-	927

See accompanying notes to the audited consolidated financial statements

# LIBERTY MUTUAL HOLDING COMPANY INC.

## Notes to Consolidated Financial Statements

(dollars in millions)

### (1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### Basis of Presentation

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

The accompanying consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles (“GAAP”). The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. The Company’s principal estimates include (1) unpaid claims and claim adjustment expense reserves, including asbestos and environmental liability reserves and loss sensitive premium attributable to prior years, (2) reinsurance recoverables and associated uncollectible allowance, (3) fair value determination and other-than temporary impairments of the investment portfolio, (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.

#### Nature of Operations

The Company conducts substantially all of its business through two businesses: Global Retail Markets and Global Risk Solutions. A summary of each business follows:

Global Retail Markets (“GRM”), with \$34,011 of revenues in 2022, combines 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. GRM 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, the Internet, 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 State Auto Mutual (“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. 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 Risk Solutions (“GRS”), with \$15,819 of revenues in 2022, offers a wide array of property, casualty, specialty and reinsurance Product and service distributed through brokers and independent agents globally. The segments for GRS are as follows: Liberty Specialty Markets, Liberty Mutual Reinsurance (“LM Re”), North America, Global Surety, and Other Global Risk Solutions. The Liberty Specialty Markets segment includes most GRS business outside of North America and global reinsurance. GRS combined National Insurance (“NI”) and North America Specialty (“NAS”) to form a single North America segment. This includes admitted and non-admitted property and casualty in North America. The Global Surety segment is a global leader providing surety guarantees to businesses ranging from multinational to local in most industry segments. The Other Global Risk Solutions segment primarily consists of internal reinsurance programs, Ironshore international entities and a large global inland marine program.

#### Adoption of New Accounting Standards

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

#### Future Adoption of New Accounting Standards

The Company will adopt the FASB issued ASU 2016-13, Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments (“ASU 2016-13”). ASU 2016-13 replaces the current incurred loss model with an expected credit loss model, which measures

# LIBERTY MUTUAL HOLDING COMPANY INC.

## Notes to Consolidated Financial Statements

(dollars in millions)

credit losses on financial instruments measured at amortized cost and will require companies to recognize an allowance for expected credit losses. In addition, ASU 2016-13 also amends the credit loss measurement guidance for available-for-sale debt securities and beneficial interests in securitized financial assets. This amendment removes certain factors to consider when determining whether credit losses should be recognized and will require companies to recognize expected credit losses through an allowance. ASU 2016-13 is effective for nonpublic business entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2022. The Company expects to recognize an after-tax cumulative effect adjustment of approximately \$60, which will decrease retained earnings on January 1, 2023, and increase the allowance for credit losses. The adjustment is primarily driven by the Company's investments in commercial mortgage loans.

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

### Investments

Fixed maturity securities classified as available for sale are debt securities that have principal payment schedules, are held for indefinite periods of time, and are used as a part of the Company's capital strategy or sold in response to risk and reward characteristics, liquidity needs or similar economic factors. These securities are reported at fair value with changes in fair values, net of deferred income taxes, reported in accumulated other comprehensive income.

Equity securities include common equities and non-redeemable preferred stocks and are reported at quoted fair values. Changes in fair values, net of deferred income taxes, are reported in net income.

Realized gains and losses on sales of investments are recognized in income using the specific identification method. The Company reviews fixed maturity securities, and other investments for impairment on a quarterly basis. Securities are reviewed for both quantitative and qualitative considerations including, but not limited to, (1) the extent of the decline in fair value below book value, (2) the duration of the decline, (3) significant adverse changes in the financial condition or near term prospects for the investment or issuer, (4) significant changes in the business climate or credit ratings of the issuer, (5) general market conditions and volatility, (6) industry factors, (7) the past impairment of the security holding or the issuer, and (8) changes in foreign exchange.

For fixed maturity securities that the Company does not intend to sell or for which it is more likely than not that the Company would not be required to sell before an anticipated recovery in value, the Company separates impairments into credit loss and non-credit loss components. The determination of the credit loss component of the impairment charge is based on the Company's best estimate of the present value of the cash flows expected to be collected from the fixed maturity security compared to its amortized cost and is reported as part of net realized gains. The non-credit component, the residual difference between the credit impairment component and the fair value, is recognized in other comprehensive income. The factors considered in making an evaluation of credit versus non-credit other-than-temporary impairments include: (1) failure of the issuer of the security to make scheduled interest or principal payments (including the payment structure of the fixed maturity security and the likelihood the issuer will be able to make payments that increase in the future), (2) performance indicators of the underlying assets in the security (including default and delinquency rates), (3) vintage, (4) geographic concentration, (5) impact of foreign exchange rates on foreign currency denominated securities, and (6) industry analyst reports, sector credit ratings and volatility of the security's fair value.

For fixed maturity securities the Company intends to sell or for which it is more likely than not that the Company will be required to sell before an anticipated recovery in value, the full amount (fair value less amortized cost) of the impairment is included in net realized gains (losses).

Upon recognizing an other-than-temporary impairment, the new cost basis of the investment is the previous amortized cost basis less the other-than-temporary impairment recognized in net realized gains. The new cost basis is not adjusted for any subsequent recoveries in fair value; however, for fixed maturity securities the difference between the new cost basis and the expected cash flows is accreted to net investment income over the remaining expected life of the investment.

Cash equivalents are short-term, highly liquid investments that are both readily convertible into known amounts of cash and so near to maturity that they present insignificant risk of changes in value due to changing interest rates. The Company's cash equivalents include debt securities purchased with maturities of three months or less at acquisition and are carried at amortized cost, which approximates fair value.

Short-term investments are debt securities with maturities at acquisition between three months and one year, are considered available for sale, and are reported at fair value with changes in fair values, net of deferred income taxes, reported in accumulated other comprehensive income.

Any VIE for which the Company is the primary beneficiary is consolidated into the Company's financial statements.

Other investments are comprised of loans, limited partnerships and other alternative investments. Loans are reported at amortized cost less an allowance for potentially uncollectible amounts. Limited partnerships and other alternative investments are reported using the equity method of accounting and, accordingly, the Company's share of earnings are included in net investment income. Due to the availability of financial statements, other alternative investments and limited partnership investment income is generally recorded on a three-month lag. The Company elects the fair value option on certain other investments and these investments are carried at fair value. Accordingly, changes in fair value are included in net investment income or net realized gains in the accompanying consolidated statements of income. Also included in other investments are equity investments in privately held businesses that are carried at fair value with changes in fair value reported in other comprehensive income.

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Mortgage loans are held for investment and stated at amortized cost less an allowance for loan loss for potentially uncollectible amounts.

Net investment income primarily consists of interest, dividends, and income from limited partnerships and certain other alternative investments. Interest income is recognized on an accrual basis using the effective interest method and dividend income is recognized at the ex-dividend date. Interest income for mortgage-backed fixed maturity securities is recognized using a constant effective yield based on anticipated prepayments over the economic life of the security. The mortgage-backed portfolio is accounted for under the retrospective method and prepayment assumptions are based on market expectations. When actual prepayments differ significantly from anticipated prepayments, the effective yield is recalculated to reflect actual payments to date and anticipated future payments and any resulting adjustment is included in net investment income.

#### Derivatives

All derivatives are recognized on the balance sheet at fair value and reported as other invested assets, other assets, or other liabilities. At the inception of the contract, the Company designates the derivative as (1) a hedge of a fair value of a recognized asset (“fair value hedge”), (2) an economic hedge (“non-designated derivative”), or (3) a cash flow hedge.

The Company participated in foreign exchange forward contracts, exchange traded futures, and options in 2022 and 2021, as well as participated in commodity swaps and commodity options in 2020. Hedge accounting was applied for certain instruments when the derivative is highly effective in offsetting the change in fair value of the hedged item. Changes in fair value were recorded in other comprehensive income. For instruments where hedge accounting was not applied changes in fair value were recorded in net realized gains (losses) on the consolidated statements of income. These derivatives were not material to the Company’s financial statements.

The Company entered into interest rate swap agreements that are classified as cash flow hedges. The effective portion of the gain or loss on these instruments is reported as a component of other comprehensive income and reclassified into earnings in the same period in which the hedged items affect earnings. The Company’s cash flow hedges are 100% effective and are not material to the financial statements.

The Company owns fixed maturity securities that may have call, put or conversion options embedded. These derivatives are not related to hedging and are not material to the Company’s financial statements.

#### Net Investment Hedge Instruments

The Company has designated non-derivative foreign currency denominated long-term debt and the related accrued interest as hedges of its net investment in certain foreign operations. Accordingly, the foreign currency translation of the debt instrument and accrued interest is recorded in accumulated other comprehensive loss, offsetting the foreign currency translation adjustment of the related net investment that is also recorded in accumulated other comprehensive loss. As of December 31, 2022, the Company had €2,250 of outstanding long-term debt and approximately € 34 of accrued interest designated as non-derivative hedges of its net investment in certain foreign operations. As of December 31, 2022, the foreign currency translation of the debt instrument and accrued interest recorded in accumulated other comprehensive loss was \$90.

#### Securities Lending

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

#### 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. As of December 31, 2022, the Company has two reporting units – Global Retail Markets and Global Risk Solutions. The reporting unit has the option to skip the qualitative test and move directly to completion of the quantitative process. The qualitative approach can be used to evaluate if there are any indicators of impairment. Through this process, the reporting unit must determine if there is indication that it is more likely than not that the fair value of the reporting unit is less than its carrying amount, including goodwill. If it is determined that there is an indication of potential impairment, the reporting unit must complete the quantitative process. The quantitative approach is a two-step process. The first step is performed to identify potential impairment and, if necessary, the second step is performed for the purpose of measuring the amount of impairment, if any. Impairment is recognized only if the carrying amount is not recoverable from the discounted cash flows using a “market” rate and is measured as the difference between the carrying amount and the implied fair value. Other changes in the carrying amount of goodwill are primarily caused by acquisitions, dispositions, and foreign currency translation adjustments. In 2022, goodwill increased by \$104 driven primarily by the acquisition of the State Auto Group and Malaysian insurer AmGeneral Insurance Berhad. These increases were offset by LIHI International Holding Inc. (“LIHI”) foreign exchange adjustments.

The Company recognized \$21 of intangibles impairments related to Ironshore distribution channel in 2022 and no goodwill or intangibles impairment in 2021.

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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.

Intangible assets that have finite useful lives are amortized over their useful lives. The carrying amounts of intangible assets with finite useful lives are reviewed regularly for indicators of impairment in value. Impairment is recognized only if the carrying amount of the intangible asset is not recoverable from its undiscounted cash flows and is measured as the difference between the carrying amount and the fair value of the asset.

The Company has intangible assets included in other assets on the accompanying consolidated balance sheets related to State Auto Group, AmGeneral Insurance Berhad, AmTrust, QBE Holdings service agreement fees, Ironshore, Safeco, and Ohio Casualty Corporation (“Ohio Casualty”) acquisitions that occurred in 2022, 2019, 2018, 2017, 2008, and 2007, respectively. The following table summarizes the carrying value of intangible assets the Company recognized in other assets on the consolidated balance sheets as of December 31, 2022 and 2021.

	Carrying Value December 31, 2022	Carrying Value December 31, 2021	Period (years)	Method
Safeco agency relationship	\$30	\$71	15	Straight-line
Ohio Casualty agency relationship	35	42	20	Straight-line
Safeco trade name	229	229	Not subject to amortization	Not subject to amortization
Ironshore trade name	44	48	15	Straight-line
Ironshore distribution channel	168	202	18-20	Straight-line
Licenses <sup>(1)</sup>	141	94	Not subject to amortization	Not subject to amortization
QBE Holdings service agreement fees	9	14	6	Straight-line
AmTrust distribution channel	59	63	15-20	Straight-line
AmTrust value of business acquired	5	5	12	Over the life
AmTrust trade name	2	2	15	Straight-line
AmTrust developed technology	-	1	3	Straight-line
State Auto Group agency relationship	28	-	10	Straight-line
State Auto Group trade name	2	-	1	Straight-line
State Auto Group IDs	12	-	5	Straight-line
State Auto Group value of business acquired	21	-	1	Straight-line
AmGeneral Insurance value of business acquired	12	-	1	Straight-line
AmGeneral Insurance trade name	12	-	20	Straight-line
AmGeneral Bancassurance distribution channel	37	-	20	Straight-line
AmGeneral Insurance other distribution network	9	-	20	Straight-line
<b>Total intangible assets</b>	<b>\$855</b>	<b>\$771</b>		

(1) Includes Safeco, Ohio Casualty, Ironshore and State Auto.

The Company recognized \$204, \$73 and \$85 of amortization expense on intangible assets related to these acquisitions for the years ended December 31, 2022, 2021, and 2020, respectively. Amortization expense is reflected in operating costs and expenses on the accompanying consolidated statements of income. Estimated amortization expense is expected to be \$107, \$40, \$38, \$37 and \$32 for the years ended December 31, 2023 through 2027, respectively. The intangible assets above are net of accumulated amortization of \$1,097 and \$893 as of December 31, 2022 and 2021, respectively.

#### Deferred Acquisition Costs

Costs that are directly related to the successful acquisition or renewal of insurance contracts are deferred and amortized over the respective policy terms. All other acquisition related costs, including market research, training, administration, unsuccessful acquisition or renewal efforts, and product development are charged to expense as incurred. For short-duration contracts, acquisition costs include commissions, underwriting expenses and premium taxes. For long-duration insurance contracts, these costs include first year commissions in excess of annual renewal commissions and variable sales and underwriting expenses. Deferred acquisition costs are reviewed annually for recoverability. Investment income is considered in the recoverability assessment.

For short-duration contracts, acquisition costs are amortized in proportion to earned premiums. For traditional long-duration contracts, acquisition costs are amortized over the premium paying period of the related policies using assumptions consistent with those used in computing policy benefit reserves. For universal life insurance and investment products, acquisition costs are amortized in relation to expected gross profits.

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For long-duration contracts, to the extent unrealized gains or losses on fixed income securities carried at fair value would result in an adjustment of estimated gross profits had those gains or losses actually been realized, the related impact on unamortized deferred acquisition costs is recorded net of tax as a change in unrealized gains or losses and included in accumulated other comprehensive income.

### Real Estate and Other Fixed Assets

The costs of buildings, furniture, and equipment are depreciated, principally on a straight-line basis, over their estimated useful lives (a maximum of 39.5 years for buildings, 10 years for furniture, and 3-5 years for equipment). Expenditures for maintenance and repairs are charged to income as incurred while expenditures for improvements are capitalized and depreciated.

### Insurance Liabilities and Reserves

For short-duration contracts, the Company establishes reserves for unpaid claims and claim adjustment expenses covering events that occurred in 2022 and prior years. These reserves reflect estimates of the total cost of claims reported but not yet paid and the cost of claims not yet reported, as well as the estimated expenses necessary to settle the claims. Reserve estimates are based on past loss experience modified for current claim trends, as well as prevailing social, economic and legal conditions. Final claim payments, however, may ultimately differ from the established reserves, since these payments might not occur for several years. Reserve estimates are continually reviewed and updated, and any resulting adjustments are reflected in current operating results. The Company does not discount reserves other than discounting on the long-term indemnity portion of workers compensation settled claims, the long-term disability portion of group accident and health claims as permitted by insurance regulations in certain states, the long-term portion of certain workers compensation claims of foreign subsidiaries, reserves related to periodic payment orders on certain automobile policies and specific asbestos structured settlements. Reserves are reduced for estimated amounts of salvage and subrogation and deductibles recoverable from policyholders. The Company discounts the long-term indemnity portion of workers compensation claims at risk-free discount rates determined by reference to the U.S. Treasury yield curve. The weighted average discount rates were 4.5% and 4.5% for 2022 and 2021, respectively. The held discounted reserves on these unpaid workers compensation claims, net of all reinsurance, as of December 31, 2022 and 2021, were \$912 and \$960, respectively.

For long-duration contracts, measurement of liabilities is based on generally accepted actuarial techniques and requires assumptions about mortality, lapse rates, and assumptions about future returns on related investments. Annuity and structured settlement contracts without significant mortality or morbidity risk are accounted for as investment contracts, whereby the premium received plus interest credited less policyholder withdrawals represents the investment contract liability. Implied credited interest rates for foreign structured settlement contracts in force were between 1.0% and 6.0% for each of the years ending December 31, 2022 and 2021. Credited rates for foreign universal life contracts in force were between 0.0% and 6.0% for each of the years ending December 31, 2022 and 2021. Liabilities for future policy benefits for traditional life policies have been computed using the net level premium method based upon estimated future investment yields (between 0.5% and 6.0% in 2022 and 2021), mortality assumptions (based on the Company's experience relative to standard industry mortality tables) and withdrawal assumptions (based on the Company's experience).

### Policyholder Dividends

Policyholder dividends are accrued using an estimate of the ultimate amount to be paid in relation to premiums earned based on the related insurance policies.

For domestic property-casualty insurance, certain insurance contracts, primarily workers compensation policies, are issued with dividend plans to be paid subject to approval by the insurer's board of directors. The premium related to such policies approximated 0.2%, 0.3% and 0.3% of domestic property-casualty insurance premiums written for the years ended December 31, 2022, 2021, and 2020, respectively. Additionally, certain jurisdictions impose excess profits taxes, which limit the profitability of particular lines of business, and any excess is returned to the policyholder in the form of a dividend.

For life insurance, dividends to participating policyholders are calculated as the sum of the difference between the assumed mortality, interest and loading, and the actual experience of the Company. As a result of statutory regulations, the major portion of earnings from participating policies inures to the benefit of the participating policyholders and is excluded from consolidated net income and total equity.

### Guaranty Funds

Liabilities for guaranty fund and other insurance-related assessments are accrued when an assessment is probable, when it can be reasonably estimated, and when the event obligating the entity to pay an imposed or probable assessment has occurred. The liabilities for guaranty fund assessments are based on preceding year premium or multiple year's premiums depending upon the state law. Additionally, for those states that have loss-based assessments, liabilities for workers' compensation loss-based assessments are reserved based on workers' compensation loss reserves and workers' compensation paid losses. Liabilities for guaranty funds and other insurance-related assessments are not discounted and are included as part of other liabilities in the accompanying consolidated balance sheets. As of December 31, 2022 and 2021, the liability balance was \$86 and \$87, respectively. As of December 31, 2022 and 2021, included in other assets were \$2 and \$1, respectively, of related assets for premium tax offsets or policy surcharges. The related asset is limited to the amount that is determined based on future premium collections or policy surcharges from policies in force. Current Guaranty Fund Association assessments are expected to be paid over one year while loss-based assessments are expected to be paid over a period ranging from one year to the life expectancy of certain workers' compensation claimants and the recoveries are expected to occur over the same period of time. Premium tax offsets are expected to be realized within one year.

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### Long-Term Incentive and Performance Based Incentive Plans

The Company maintains short-term and long-term incentive compensation plans. Long-term plans vest over the requisite service period, are based upon notional units and are accounted for under ASC 718, *Compensation – Stock Compensation*, using the intrinsic value method. Additionally, the Company provides performance-based incentive compensation to the majority of employees meeting the participation requirements of the respective plans. Compensation cost related to these plans is determined in accordance with plan formulas and recorded over the years the employee service is provided.

### Revenue Recognition

For short-duration insurance contracts, premiums are reported as earned income generally on a pro-rata basis over the terms of the related policies. For retrospectively rated policies and contracts, premium estimates are continually reviewed and updated and any resulting adjustments are reflected in current operating results. For traditional long-duration insurance contracts (including term and whole life contracts and annuities), premiums are earned when due. For loss portfolio transfers, premiums are fully recognized as written and earned at contract inception. For annuities and structured settlements without significant mortality or morbidity risk (investment contracts) and universal life contracts (long-duration contracts with terms that are not fixed or guaranteed), revenues represent investment income earned on the related assets. Universal life and annuity contract revenues also include mortality, surrender, and administrative fees charged to policyholders.

### Reinsurance

All assets and liabilities related to ceded reinsurance contracts are reported on a gross basis in the accompanying consolidated balance sheets. Prospective reinsurance premiums, claims, and claim adjustment expenses are accounted for on a basis consistent with the terms of the reinsured contracts. The accompanying consolidated statements of income reflect premiums, benefits, and settlement expenses net of reinsurance ceded.

Transactions that do not transfer risk are included in other assets or other liabilities. 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. In transactions involving an acquisition whereas a reinsurance contract is entered into contemporaneously with the acquisition, the contract is accounted for as prospective reinsurance.

Amounts recoverable from reinsurers include unpaid losses estimated in a manner consistent with the claim liabilities associated with the reinsured business. The Company evaluates reinsurance collectability, and a provision for uncollectible reinsurance is recorded where necessary.

### Translation of Foreign Currencies

The Company translates the financial statements of its foreign operations into U.S. dollars from the functional currency designated for each foreign unit, generally the currency of the primary economic environment in which that operation does its business. Assets and liabilities are translated into U.S. dollars at period-end exchange rates, while income and expenses are translated using average rates for the period. Translation adjustments are recorded as a separate component of accumulated other comprehensive income, net of tax, to the extent applicable. Foreign currency amounts are re-measured to the functional currency, and the resulting foreign exchange gains or losses are reflected in earnings.

### Income Taxes

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

No additional income taxes have been provided for any undistributed foreign earnings or outside basis differences as these amounts continue to be indefinitely reinvested. Determining the amount of any related unrecognized deferred tax liability is not practicable.

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

As of December 31, 2022, the U.S. Treasury Department and the Internal Revenue Service (“IRS”) are still in the process of issuing various regulations in accordance with the Tax Cuts and Jobs Act of 2017. Accordingly, future adjustments to the financial statements may be necessary as regulations are issued.

Global intangible low-taxed income (“GILTI”) is treated by the Company as a period expense.

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Notes to Consolidated Financial Statements

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**Fee and Other Revenues**

Fee and other revenues primarily consist of revenues from the Company's energy production operations, universal life cost of insurance and administrative fees, and service fees generated from processing business for involuntary assigned risk pools, self-insured customers, and risk retention groups. Service fees are earned on a pro-rata basis over the term of the related policies. The Company accounts for oil and gas sales from its interests in producing wells under the sales method. The sales method requires that the Company recognize revenue based on the amount of natural gas and oil sold to purchasers on its behalf, which may be different from the Company's entitled production based on its interest in the properties. Fee income from service contracts are recognized as the Company completes its performance obligations, which is primarily on a pro-rata basis over the contract service period or the underlying policy periods.

**Discontinued Operations**

Disposal of businesses that are considered strategic shifts in the Company's operations are reflected as discontinued operations in the accompanying consolidated financial statements.

**Accumulated Other Comprehensive (Loss) Income**

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

The components of accumulated other comprehensive (loss) income excluding non-controlling interest, net of related deferred acquisition costs and taxes, for the years ended December 31, 2022 and 2021 are as follows:

	<b>As of December 31,</b>	
	<b>2022</b>	<b>2021</b>
Unrealized (loss) gain on securities	\$(5,373)	\$1,019
Foreign currency translation and other adjustments	(1,200)	(961)
Pension and post retirement liability funded status	(1,257)	(1,018)
Accumulated other comprehensive loss	<u>\$(7,830)</u>	<u>\$(960)</u>

The following tables presents the changes in the components of other comprehensive (loss) income for the years ended December 31, 2022, 2021 and 2020, respectively.

	<b>Unrealized loss on securities</b>	<b>Change in pension and post retirement plans funded status</b>	<b>Foreign currency translation and other adjustments<sup>(1)</sup></b>	<b>Total</b>
<b>Year ended December 31, 2022</b>				
Unrealized change arising during the period	\$(8,301)	\$(422)	\$(209)	\$(8,932)
Less: Reclassification adjustments included in consolidated net income	(259)	(111)	-	(370)
Total other comprehensive (loss) income, before income tax expense (benefit)	(8,042)	(311)	(209)	(8,562)
Less: Income tax (benefit) expense	(1,650)	(72)	40	(1,682)
Total accumulated other comprehensive (loss) income	<u>\$(6,392)</u>	<u>\$(239)</u>	<u>\$(249)</u>	<u>\$(6,880)</u>

(1) Includes \$(10) of non-controlling interest

	<b>Unrealized loss on securities</b>	<b>Change in pension and post retirement plans funded status</b>	<b>Foreign currency translation and other adjustments<sup>(1)</sup></b>	<b>Total</b>
<b>Year ended December 31, 2021</b>				
Unrealized change arising during the period	\$(1,819)	\$662	\$(182)	\$(1,339)
Less: Reclassification adjustments included in consolidated net income	262	(172)	-	90
Total other comprehensive (loss) income, before income tax expense (benefit)	(2,081)	834	(182)	(1,429)
Less: Income tax (benefit) expense	(449)	176	23	(250)
Total accumulated other comprehensive (loss) income	<u>\$(1,632)</u>	<u>\$658</u>	<u>\$(205)</u>	<u>\$(1,179)</u>

(1) Includes \$(1) of non-controlling interest

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	<b>Unrealized gains on securities</b>	<b>Change in pension and post retirement plans funded status</b>	<b>Foreign currency translation and other adjustments<sup>(1)</sup></b>	<b>Total</b>
<b>Year ended December 31, 2020</b>				
Unrealized change arising during the period	\$2,811	\$(28)	\$(26)	\$2,757
Less: Reclassification adjustments included in consolidated net income	993	(222)	-	771
Total other comprehensive income (loss), before income tax expense (benefit)	1,818	194	(26)	1,986
Less: Income tax expense (benefit)	382	41	(15)	408
Total accumulated other comprehensive income (loss)	<u>\$1,436</u>	<u>\$153</u>	<u>\$(11)</u>	<u>\$1,578</u>

(1) Includes \$1 of non-controlling interest

**(2) ACQUISITIONS, MERGERS AND DISPOSITIONS**

**ACQUISITIONS**

**AmGeneral Insurance Berhad**

On July 19, 2021, the Company announced they will be applying for regulatory approval to acquire Malaysian insurer AmGeneral Insurance Berhad. The acquisition closed July 28, 2022. As a result of the transaction, Liberty Insurance Berhad acquired 100% 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. The table below details the preliminary allocation of assets acquired and liabilities assumed. The fair values listed below are the Company's best estimates as of December 31, 2022, and are subject to adjustments as additional information becomes available to complete the allocation.

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

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.

See footnote 1 for the carrying value of intangible assets the Company recognized in other assets on the consolidated balance sheet as a result of the AmGen acquisition as of December 31, 2022.

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#### **MERGERS**

##### **State Auto**

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

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

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

See footnote 1 for the carrying value of intangible assets the Company recognized in other assets on the consolidated balance sheet as a result of the State Auto merger as of December 31, 2022.

#### **DISPOSITIONS**

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

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Notes to Consolidated Financial Statements

(dollars in millions)

(3) INVESTMENTS

*Components of Net Investment Income*

	Years Ended December 31,		
	2022	2021	2020
Taxable interest income	\$2,168	\$1,785	\$1,744
Tax-exempt interest income	150	144	158
Dividends	46	46	35
Limited partnerships income	718	3,666	843
Mortgage loans	143	84	86
Other investments	16	12	5
Gross investment income	3,241	5,737	2,871
Investment expenses <sup>(1)</sup>	(375)	(322)	(277)
Net investment income	\$2,866	\$5,415	\$2,594

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

*Components of Net Realized (Losses) Gains*

	Years Ended December 31,		
	2022	2021	2020
Fixed maturities			
Gross realized gains	\$181	\$604	\$1,307
Gross realized losses	(440)	(342)	(314)
Equities			
Gross realized gains	226	552	303
Gross realized losses	(901)	(98)	(170)
Derivatives			
Gross realized gains	104	170	139
Gross realized losses	(66)	(131)	(153)
Other			
Gross realized gains	423	144	100
Gross realized losses	(321)	(1,121)	(422)
Net realized (losses) gains	\$(794)	\$(222)	\$790

Included in the above realized (losses) gains are unrealized (losses) gains related to equity securities still held of \$(101), \$332 and \$164 for the twelve months ended December 31, 2022, 2021 and 2020, respectively.

During the years ended December 31, 2022, 2021, and 2020, the Company recorded \$(90), \$(625), and \$(307) of impairment losses, respectively. Included in the impairment losses are impairment charges for assets measured at fair value on a non-recurring basis which are summarized in the following table for the years ended December 31, 2022, 2021, and 2020:

	Years ended December 31,		
	2022	2021	2020
Natural Resources	\$(21)	\$(613)	\$(237)
Real Estate	(10)	-	(14)
Software	(5)	(2)	(15)
Intangible	(21)	-	-
Total	\$(57)	\$(615)	\$(266)

The Company tests for impairment on its natural resource investments by comparing the undiscounted cash flows expected to be generated by a project to the property's carrying value. When a property's carrying value is greater than the expected future cash flows, impairment expense is recognized to the extent that the carrying value of the property exceeds its discounted expected cash flows.

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In employing the discounted cash flow method described above, key inputs regarding natural resource investments are commodity prices, locational basis difference, production, project development costs and the discount rate which are based on management's expectations about outcomes with respect to these variables. Specifically, the Company uses a long term forward price curve and applies a discount rate to the projected future cash flows. Regarding the sensitivity of the key inputs, an increase in the locational basis difference, project development costs or discount rate will lead to a decrease in fair value, and an increase in prices or production will lead to an increase in fair value.

During the years ended December 31, 2022, 2021, and 2020, proceeds from sales of fixed maturities available for sale were \$28,596, \$64,426, and \$59,850 respectively. The gross realized gains (losses) on sales of fixed maturities available for sale totaled \$169 and \$(406) in 2022, \$523 and \$(313) in 2021, \$1,254 and \$(239) in 2020. During the years ended December 31, 2022, 2021, and 2020, proceeds from sales of equities were \$3,142, \$638, \$1,789, respectively. The gross realized gains (losses) on sales of equities totaled \$164 and \$(237) in 2022, \$73 and \$(44) in 2021, and \$61 and \$(66) in 2020.

**Components of Change in Net Unrealized Investment (Losses) Gains**

	<b>Years Ended December 31,</b>		
	<b>2022</b>	<b>2021</b>	<b>2020</b>
Fixed maturities	\$(8,148)	\$(2,141)	\$1,780
Equities	-	-	-
Other	7	15	60
Adjustments to deferred acquisition costs	99	45	(22)
Net change in unrealized investment (losses) gains	(8,042)	(2,081)	1,818
Less: Deferred income tax expense (benefit)	1,650	449	382
Net change in unrealized investment (losses) gains, net of tax	\$(6,392)	\$(1,632)	\$1,436

**Available for Sale Investments**

The amortized cost, gross unrealized gains and losses and fair values of available for sale investments as of December 31, 2022 and 2021, are as follows:

<b>December 31, 2022</b>	<b>Amortized Cost</b>	<b>Gross Unrealized Gains</b>	<b>Gross Unrealized Losses</b>	<b>Fair Value</b>
U.S. government and agency securities	\$8,885	\$2	\$(777)	\$8,110
Residential MBS <sup>(1)</sup>	6,547	5	(605)	5,947
Commercial MBS	4,457	10	(310)	4,157
Other MBS and ABS <sup>(2)</sup>	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

<b>December 31, 2021</b>	<b>Amortized Cost</b>	<b>Gross Unrealized Gains</b>	<b>Gross Unrealized Losses</b>	<b>Fair Value</b>
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

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

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

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Approximately 63% of the Company's mortgage and asset-backed fixed maturity portfolio is explicitly backed by the U.S. government (Government National Mortgage Association "GNMA" and Small Business Association "SBA") or by government-sponsored entities (Federal Home Loan Mortgage Corporation "FHLMC" and Federal National Mortgage Association "FNMA"). Approximately 76.4% of the holdings are rated AAA. The commercial MBS portfolio is well diversified and of high quality with approximately 76% rated AAA.

As of December 31, 2022, no single issuer, excluding U.S. Treasuries, agency securities and MBS, accounted for more than 0.66% of invested assets.

As of December 31, 2022 and 2021, the fair value of common stock associated with non-guaranteed unit linked products where the policyholder bears the investment risk were approximately \$633 and \$805, respectively.

As of December 31, 2022 and 2021, securities carried at \$2,644 and \$2,846, respectively, were on deposit with state regulatory authorities as required by law.

As of December 31, 2022 and 2021, the fair values of fixed maturity securities and equity securities loaned were approximately \$3,281 and \$4,714, respectively. Cash and short-term investments received as collateral in connection with the loaned securities were approximately \$2,917 and \$3,580 as of December 31, 2022 and 2021, respectively. Investments other than cash and short-term investments received as collateral in connection with the loaned securities were approximately \$434 and \$1,234 as of December 31, 2022 and 2021, respectively.

The amortized cost and fair value of fixed maturities as of December 31, 2022, by contractual maturity are as follows:

	<u>Amortized Cost</u>	<u>Fair Value</u>
Due to mature:		
One year or less	\$2,270	\$2,238
Over one year through five years	24,129	22,483
Over five years through ten years	21,933	19,479
Over ten years	8,986	7,787
MBS and ABS of government and corporate agencies	15,916	14,623
Total fixed maturities	<u>\$73,234</u>	<u>\$66,610</u>

Expected maturities may differ from contractual maturities as borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

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

December 31, 2022	<u>Less Than 12 Months</u>		<u>12 Months or Longer</u>	
	<u>Unrealized Losses</u>	<u>Fair Value of Investments with Unrealized Losses</u>	<u>Unrealized Losses</u>	<u>Fair Value of Investments with Unrealized Losses</u>
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	<u>\$(3,352)</u>	<u>\$41,630</u>	<u>\$(3,380)</u>	<u>\$20,708</u>

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December 31, 2021	Less Than 12 Months		12 Months or Longer	
	Unrealized Losses	Fair Value of Investments with Unrealized Losses	Unrealized Losses	Fair Value of Investments with Unrealized Losses
U.S. government and agency securities	\$(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

As of December 31, 2022, there were 3,476 securities that were in an unrealized loss position for 12 months or longer. The Company monitors the difference between the amortized cost and estimated fair value of fixed maturity securities to ascertain whether declines in value are temporary in nature. The Company currently does not have the intent to sell 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.

**Variable Interest Entities**

The Company invests in limited partnerships and other entities subject to VIE analysis under the VIE subsections of ASC 810, *Consolidation*. The Company analyzes each investment to determine whether it is a VIE, and if so, whether the Company is the primary beneficiary or a significant interest holder based on a qualitative and quantitative assessment. The Company evaluates the design of the entity, the risks to which the entity was designed to expose the variable interest holder and the extent of the Company's control of and variable interest in the VIE. As of December 31, 2022 and 2021, respectively, the Company has determined that it was not the primary beneficiary of any of its VIEs except for the Company's investment in its India joint venture which is deemed immaterial.

The Company has variable interests in VIEs for which it is not the primary beneficiary and accounts for these VIEs under the equity method in accordance with ASC 323, *Investments – Equity Method and Joint Ventures*. The VIEs are principally private equity limited partnerships in which the Company has invested as a passive limited partner. The partnerships were deemed to be VIEs because the equity holders as a group lack the power to direct the activities that most significantly impact the respective entity's economic performance. The VIEs generate variability primarily from investment portfolio performance and that variability is passed to equity holders. The net carrying value of non-consolidated VIEs in which the Company has a variable interest was \$11,554 and \$10,080 as of December 31, 2022 and 2021, respectively, and the Company's maximum exposure to loss was \$18,279 and \$14,884 as of December 31, 2022 and 2021, respectively. The assets are included primarily in other investments in the accompanying consolidated balance sheets. Maximum exposure to loss includes the carrying value and unfunded commitment of the VIE. There is no recourse provision to the general credit of the Company for any VIE beyond the full amount of the Company's loss exposure.

**Limited Partnership Investments**

As of December 31, 2022 and 2021, the carrying values of limited partnership investments were \$12,346 and \$11,134, respectively. These investments consist of traditional private equity partnerships, real estate partnerships, natural resources partnerships (primarily energy, metals and mining, and agriculture and timber), other partnership funds, and equity method investments. Included in the carrying values of limited partnership investments are \$518 million and \$614 million of limited partnership investments where the Company has elected the fair value option as of December 31, 2022, and 2021, respectively. The Company's investments in limited partnership investments are long-term in nature. The Company believes these investments offer the potential for superior long-term returns and are appropriate in the overall context of a diversified portfolio.

**Investments in Mortgage Loans**

As of December 31, 2022 and 2021, the carrying values of mortgage loans were \$3,632 and \$2,659, respectively. The carrying values reflect allowances for loan losses of \$9 and \$2 as of December 31, 2022 and 2021, respectively. The number of loans in the portfolio decreased from 3,285 as of December 31, 2021, to 2,716 as of December 31, 2022.

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**(4) DEFERRED ACQUISITION COSTS**

The following reflects the policy acquisition costs deferred for amortization against future income and related amortization charged to income:

	Years Ended December 31,		
	2022	2021	2020
Balance at beginning of year	\$3,994	\$3,766	\$3,574
Acquisition costs deferred and other	6,585	6,537	6,019
Amortization charged to income	(6,366)	(6,309)	(5,827)
Balance at end of year	\$4,213	\$3,994	\$3,766

**(5) REINSURANCE**

In the ordinary course of business, the Company assumes reinsurance and also cedes reinsurance to other insurers to reduce overall risk, including exposure to large losses and catastrophic events. The Company is also a member of various involuntary pools and associations and serves as a servicing carrier for residual market organizations.

A summary of reinsurance financial data reflected within the accompanying consolidated statements of income is presented below:

P&C	2022		2021		2020	
	Written	Earned	Written	Earned	Written	Earned
Direct	\$52,398	\$50,625	\$46,283	\$44,567	\$43,014	\$42,176
Assumed	4,177	3,895	3,490	3,396	3,478	3,117
Ceded	8,398	7,656	6,150	6,081	5,924	5,859
Net premiums	\$48,177	\$46,864	\$43,623	\$41,882	\$40,568	\$39,434

Life & Annuity	2022		2021		2020	
	Written	Earned	Written	Earned	Written	Earned
Direct	\$51	\$51	\$58	\$59	\$57	\$59
Assumed	1	1	1	2	1	1
Ceded	2	2	3	2	2	3
Net premiums	\$50	\$50	\$56	\$59	\$56	\$57

The Company reported reinsurance recoverables of \$18,817 and \$17,776 as of December 31, 2022 and 2021, respectively, net of allowance for doubtful accounts of \$140 and \$123, respectively. The following table summarizes the Company's reinsurance recoverables by reinsurers' Standard & Poor's ("S&P") rating (or the rating of any guarantor) as of December 31, 2022:

S&P Rating	Reinsurance Recoverables	Collateral Held	Net Recoverables <sup>(1)</sup>
AAA	\$ -	\$ -	\$ -
AA+, AA, AA-	7,988	6,676	2,821
A+, A, A-	5,118	660	4,535
BBB+, BBB, BBB-	-	-	-
BB+ or below	-	-	-
Involuntary pools	2,991	-	2,991
Voluntary pools	178	123	174
Other <sup>(2)</sup>	2,682	3,815	734
Gross recoverables <sup>(3)</sup>	\$18,957	\$11,274	\$11,255
Less: allowance	140		
Net recoverables	\$18,817		

(1) Net recoverables represent gross recoverables less applicable collateral that can be specifically applied against recoverable balances.

(2) Includes \$1,071 and \$1,611 of reinsurance recoverables from non-rated reinsurers and captive and program business, respectively.

(3) Includes \$1,022 and \$17,935 of paid and unpaid reinsurance recoverables, respectively.

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The Company remains contingently liable in the event reinsurers are unable to meet their obligations for paid and unpaid reinsurance recoverables and unearned premiums ceded under reinsurance agreements.

The 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.

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.

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

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

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

As the aggregate development on the contract has exceeded the original pre-tax loss of \$173, deferred gains are now being recorded. The Company reported deferred gain amortization of \$53 and \$37 at December 31, 2022 and 2021, respectively. As of December 31, 2022 and 2021, deferred gains were \$218 and \$226. Limits remaining on the contract as of December 31, 2022, were \$543.

In conjunction with the Ironshore acquisition and effective May 1, 2017, the Company entered into a reinsurance transaction with NICO on a combined aggregate excess of loss agreement providing coverage for substantially all of Ironshore's reserves related to losses occurring prior to January 1, 2017. The first layer of the contract transfers \$400 of held reserves at inception, for which the Company established reinsurance recoverables on the consolidated balance sheets. The second layer of the contract provides adverse development coverage for 95% of \$500 above a retention equal to \$3,006, minus paid losses between January 1, 2017 and May 1, 2017, which retention approximates the total held reserves on the covered business on Ironshore's opening balance sheet. The contract includes a sublimit of \$277 for certain construction liability liabilities. The Company paid NICO consideration of \$550, including interest accrued at the time of the settlement. The contract is accounted for on a prospective basis. Limits remaining on the contracts in total, and for construction liability liabilities, respectively, were \$456 and zero as of 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 (the "NICO Reinsurance Transaction"), attaching at \$12,522 of combined aggregate reserves, with an aggregate limit of \$6,500 and sublimits of \$3,100 for asbestos and environmental liabilities and \$4,507 for certain workers compensation liabilities. At the closing of the NICO Reinsurance Transaction, but effective as of January 1, 2014, the Company ceded \$3,320 of existing undiscounted liabilities under this retroactive reinsurance agreement. NICO will provide \$3,180 of additional aggregate adverse development reinsurance. The Company paid NICO total consideration of \$3,046 and recorded a pre-tax loss of \$128. With respect to the ceded asbestos and environmental business, NICO has been given authority to handle claims, subject to the Company's oversight and control. With respect to the ceded workers compensation business, the Company will continue to handle claims. The contract is accounted for on a retroactive basis.

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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 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, deferred gains are now being recorded. The Company reported deferred gain amortization of \$15 at December 31, 2022. As of December 31, 2022, deferred gains were \$26. Limits remaining on the contract in total, and for asbestos and environmental liabilities, respectively, were \$3,175 and \$368 as of December 31, 2022.

In addition, the Company has an aggregate reinsurance recoverable from Nationwide Indemnity Company in the amount of \$1,136 and \$1,222 as of December 31, 2022 and 2021, respectively. The reinsurance recoverable is guaranteed by Nationwide Mutual Insurance Company, which has a financial strength rating of A+ from S&P. Additionally, the Company has significant reinsurance recoverable concentrations with Swiss Re Group, Berkshire Hathaway Insurance Group, Everest Re Group and Lloyd's of London totaling \$1,083, \$638, \$630, and \$584, respectively, as of December 31, 2022, net of offsetting collateral under the contracts.

### Catastrophe Exposure

The Company writes insurance and reinsurance contracts that cover catastrophic events, both natural and man-made. Although the Company purchases reinsurance to mitigate its exposure to certain catastrophic events, claims from catastrophic events could cause substantial volatility in its financial results for any fiscal year and have a material adverse effect on its financial condition.

On November 26, 2002, the Terrorism Risk Insurance Act of 2002 ("the Terrorism Act") was enacted into Federal law and established the Terrorism Risk Insurance Program ("the Program"), a temporary Federal program in the Department of the Treasury, that provided for a system of shared public and private compensation for certain insured losses resulting from acts of terrorism or war committed by or on behalf of a foreign interest. The Program was scheduled to terminate on December 31, 2005. In December 2005, the Terrorism Risk Insurance Extension Act of 2005 ("the Terrorism Extension Act") was enacted into Federal law, reauthorizing the prior program through December 31, 2007, while reducing the Federal role under the Program. In December 2007, the Terrorism Risk Insurance Program Reauthorization Act of 2007 was enacted into Federal law, extending coverage to include domestic acts of terrorism and reauthorizing the Program through December 31, 2014. In January 2015, the Terrorism Risk Insurance Program Reauthorization Act of 2015 ("the 2015 Reauthorization") was enacted into Federal law, extending the effectiveness of the Terrorism Act through December 31, 2020, while further reducing the Federal role under the program. In December 2019, the Terrorism Risk Insurance Program Reauthorization Act of 2019 ("the 2019 Reauthorization") was enacted into Federal law, further extending the effectiveness of the Terrorism Act through December 31, 2027. The five acts are hereinafter collectively referred to as "the Acts."

For a loss to be covered under the Program (subject losses), the loss must meet certain aggregate industry loss minimums and must be the result of an event that is certified as an act of terrorism by the U.S. Secretary of the Treasury. The annual aggregate industry loss minimum is \$100 through 2015. The original Program excluded from participation certain of the following types of insurance: Federal crop insurance, private mortgage insurance, financial guaranty insurance, medical malpractice insurance, health or life insurance, flood insurance, and reinsurance. The Terrorism Extension Act exempted from coverage certain additional types of insurance, including commercial automobile, professional liability (other than directors and officers), surety, burglary and theft, and farm-owners multi-peril. In the case of a war declared by Congress, only workers compensation losses are covered by the Acts. The Acts generally require that all commercial property casualty insurers licensed in the United States participate in the Program. The 2015 Reauthorization increased the loss minimum by \$20 annually until it reaches \$200 in 2020, and will remain at that threshold thereafter until 2027 as a result of the 2019 Reauthorization. Under the 2015 Reauthorization, a participating insurer was entitled through 2015 to be reimbursed by the Federal Government for 85% of subject losses, after an insurer deductible, subject to an annual cap. Under the 2015 Reauthorization, the Federal reimbursement percentage decreases by 1% annually starting at 85% in 2016 to 80% in 2020, and will remain at that threshold thereafter until 2027 as a result of the 2019 Reauthorization. The 2019 Reauthorization did not change the program cap of \$100,000 or the Company's deductible which remains at 20% of the Company's prior year earned premium for the covered lines.

The deductible for any calendar year is equal to 20% of the insurer's direct earned premiums for covered lines for the preceding calendar year. The Company's estimated deductible under the Program is \$2,113 for 2023. The annual cap limits the amount of aggregate subject losses for all participating insurers to \$100,000. Once subject losses have reached the \$100,000 aggregate during a program year, participating insurers will not be liable under the Program for additional covered terrorism losses for that program year. The Company has had no terrorism-related losses since the Program was established. Because the interpretation of the Acts is untested, there is substantial uncertainty as to how they will be applied to specific circumstances. It is also possible that future legislative action could change the Acts. Further, given the unpredictable frequency and severity of terrorism losses, as well as the limited terrorism coverage in the Company's own reinsurance program, future losses from acts of terrorism, particularly "unconventional" acts of terrorism involving nuclear, biological, chemical or radiological events, could be material to the Company's operating results, financial position and/or liquidity in future periods. The Company will continue to manage this type of catastrophic risk by monitoring and controlling terrorism risk aggregations to the best of its ability.

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#### **Catastrophes**

Catastrophes are an inherent risk of the property-casualty insurance business and have contributed to material period-to-period fluctuations in the Company's results of operations and financial position. Catastrophe losses are severe losses resulting from natural and man-made events, including risks such as fire, earthquake, windstorm, explosion, terrorism, and other similar events. The extent of losses from a catastrophe is a function of both the total amount of insured exposure in an area affected by the event and the severity of the event. The level of catastrophe losses experienced in any period cannot be predicted and can be material to the results of operations and financial position of the Company.

#### **Non Catastrophe Reinsurance**

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

#### **Catastrophe Reinsurance**

The Company has property catastrophe reinsurance coverage for its domestic business and certain specialty operations including: 1) hurricanes and earthquake reinsurance covering a substantial portion of \$3,100 of loss in excess of \$500 of retained loss in the United States, Canada and the Caribbean, excluding certain reinsurance exposures; 2) aggregate excess of loss programs; and 3) quota share reinsurance programs. These programs are structured to meet the Company's established tolerances under its Enterprise Risk Management Program.

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

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

#### **Catastrophe Bond Reinsurance**

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

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

#### **Florida Hurricane Catastrophe Fund**

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

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

#### **(6) UNPAID CLAIMS AND CLAIM ADJUSTMENT EXPENSES**

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

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(dollars in millions)

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

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

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

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

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

	2022	2021	2020
Balance as of January 1	\$72,049	\$67,465	\$61,848
Less: unpaid reinsurance recoverables <sup>(1)</sup>	12,638	11,322	11,444
Net balance as of January 1	59,411	56,143	50,404
Balance attributable to acquisitions and dispositions <sup>(2)</sup>	1,646	(441)	(11)
Incurred attributable to:			
Current year	34,485	29,509	27,405
Prior years <sup>(3)</sup>	(138)	342	1,042
Discount accretion attributable to prior years	5	43	21
Total incurred	34,352	29,894	28,468
Paid attributable to:			
Current year	17,241	15,204	13,278
Prior years	12,607	10,595	9,855
Total paid	29,848	25,799	23,133
Amortization of deferred retroactive reinsurance gain	16	14	25
Net adjustment due to foreign exchange	(584)	(400)	401
Add: unpaid reinsurance recoverables <sup>(1)(4)</sup>	13,605	12,638	11,311
Balance as of December 31	\$78,598	\$72,049	\$67,465

<sup>(1)</sup> In addition to the unpaid reinsurance recoverable balances noted above, and as a result of retroactive reinsurance agreements, the Company has recorded retroactive reinsurance recoverable balances of \$4,304, \$4,233, and \$3,779 as of December 31, 2022, 2021, and 2020, respectively.

<sup>(2)</sup> The balance attributable to acquisitions, mergers, and dispositions in 2022 represents the impact of the termination of our participation in Syndicates 2014 and 1980 via reinsurance to close transactions with Riverstone, as well as the mutual merger with State Auto Group, and the acquisition of AmGeneral. The balance attributable to acquisitions, mergers and dispositions in 2021 represents the impact of the termination of our participation in Syndicate 4000 via a reinsurance to close transaction with Riverstone. The balance attributable to acquisitions, mergers and dispositions in 2020 represents the disposition of Russian insurance affiliate. On December 24, 2019, UKH entered into an agreement to sell its entire 99.99% interest in its Russian insurance affiliate, Liberty Insurance (JSC) to PJSC Sovcombank. The transaction closed on February 6, 2020.

<sup>(3)</sup> Does not include decreases in allowance related to reinsurance recoverables due to prior year development of (\$1), \$11, and (\$13) as of December 31, 2022, 2021, and 2020, respectively.

<sup>(4)</sup> Includes (\$11) related to Ironshore’s ADC recovery adjustment as of December 31, 2020.

In 2022, the change in incurred attributable to prior years, excluding asbestos and environmental and amortization of deferred retroactive loss, is primarily attributable to favorable development on personal auto, specialty, workers’ compensation, and surety lines of business, partially offset by unfavorable development on casualty/general liability, commercial auto, and reinsurance. In 2021, the change in incurred attributable to prior years, excluding asbestos and environmental and amortization of deferred retroactive loss, is primarily attributable to unfavorable development on casualty runoff reserves and reinsurance lines of business, partially offset by favorable development on personal auto, workers’ compensation, and homeowners. In 2020, the change in incurred attributable to prior years, excluding asbestos and environmental and amortization of deferred

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retroactive gain, is primarily attributable to unfavorable development on the casualty runoff reserves, commercial multi-peril, and specialty lines of business, partially offset by favorable development on workers' compensation and homeowners.

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

For certain commercial lines of insurance, the Company offers experience-rated insurance contracts whereby the ultimate premium is dependent upon the claims incurred. As of December 31, 2022 and 2021, the Company held \$1,925 and \$1,916, respectively, of unpaid claims and claim adjustment expenses related to experience-rated contracts. Premiums receivable included accrued retrospective and unbilled audit premiums of \$170 and \$173 as of December 31, 2022 and 2021, respectively. For the years ended December 31, 2022, 2021, and 2020, the Company recognized an increase of premium income of \$436, \$271, and \$301, respectively, relating to prior years.

Unpaid claims and claim adjustment expenses are recorded net of anticipated salvage and subrogation of \$1,346 and \$1,180 as of December 31, 2022 and 2021, respectively.

As of December 31, 2022 and 2021, the reserve for unpaid claim reserves was reduced by \$7,802 and \$7,056, respectively, for large dollar deductibles. Large dollar deductibles billed and recoverable were \$365 and \$298 as of December 31, 2022 and 2021, respectively.

The following is information about incurred and paid claims development as of December 31, 2022, net of reinsurance, as well as cumulative claim frequency and the total of incurred-but-not-reported liabilities plus expected development on reported claims included within the net incurred claims amounts.

Supplementary information provided includes information about incurred and paid claims development for the years ended December 31, 2013, to 2021, and information about average historical claims duration as of December 31, 2022. Due to the composition of the Company, comprising organically grown and acquired business, there is a mixture of claim count definitions. However, these definitions have been consistently applied throughout the history shown. We have disclosed our claim count methodologies below, unless it is impracticable to do so.

Disclosures about claim development by accident year are presented for the number of years for which claims incurred typically remain outstanding, up to 10 years.

The impact of current and prior year acquisitions and dispositions are presented on a retrospective basis.

**GRM - Private Passenger Auto<sup>(2)</sup>**

*(Claim counts in whole numbers)*

Incurred claims and allocated claim adjustment expenses, net of reinsurance

As of December 31, 2022					Total of incurred but not reported liabilities plus expected development on reported claims	Cumulative number of reported claims <sup>(1)</sup>
AY	-----Supplemental and unaudited-----  2019	2020	2021	2022		
2019	8,834	8,753	8,741	8,650	516	4,277,751
2020	-	7,934	7,693	7,540	904	3,507,795
2021	-	-	9,454	9,363	1,032	4,178,895
2022	-	-	-	11,505	3,271	4,123,576
			<b>Total</b>	<b>\$37,058</b>		

(1) Note that 100% of claim count information is disclosed on a per occurrence basis.

(2) Excludes State Auto Private Passenger Auto.

LIBERTY MUTUAL HOLDING COMPANY INC.

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(dollars in millions)

Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance

AY	-----Supplemental and unaudited-----			
	2019	2020	2021	2022
2019	4,956	6,466	7,208	7,740
2020	-	4,100	5,413	6,036
2021	-	-	5,396	7,366
2022	-	-	-	6,602
			<b>Total</b>	27,744
			All net outstanding liabilities prior to 2019, net of reinsurance	1,349
			<b>Liabilities for unpaid claims and claim adjustment expense</b>	<b>\$10,663</b>

Average annual percentage payout of incurred claims (*Supplemental and unaudited*)

Year 1	Year 2	Year 3	Year 4
56.7%	18.6%	8.4%	6.1%

GRM BL - Commercial Multiple-Peril ("CMP")

(Claim counts in whole numbers)

Incurred claims and allocated claim adjustment expenses, net of reinsurance<sup>(2)</sup>

As of December 31, 2022

AY	-----Supplemental and unaudited-----										Total of incurred but not reported liabilities plus expected development on reported claims	Cumulative number of reported claims <sup>(1)</sup>
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
2013	1,037	1,024	992	998	1,001	1,014	1,024	1,034	1,035	1,012	50	55,054
2014	-	1,066	1,028	1,028	1,026	1,024	1,045	1,056	1,058	1,065	13	50,708
2015	-	-	1,007	1,007	1,000	1,018	1,011	1,017	1,021	1,038	13	46,266
2016	-	-	-	1,005	974	987	986	1,012	1,022	1,039	13	43,918
2017	-	-	-	-	1,097	1,109	1,042	1,084	1,073	1,080	39	44,662
2018	-	-	-	-	-	1,251	1,142	1,184	1,171	1,189	61	40,620
2019	-	-	-	-	-	-	1,177	1,173	1,148	1,126	120	38,330
2020	-	-	-	-	-	-	-	1,294	1,196	1,167	297	33,991
2021	-	-	-	-	-	-	-	-	977	999	316	27,039
2022	-	-	-	-	-	-	-	-	-	986	502	19,519
									<b>Total</b>	<b>\$10,701</b>		

(1) Note that 100% of claim count information is disclosed on a per occurrence basis.

(2) Prior to 2018, the US Business Lines and National Insurance businesses now reported in GRM and GRS, respectively, were managed under the former Commercial Insurance SBU. Accident year development was not explicitly analyzed separately between the two books of business, but rather in total from a Commercial Insurance perspective.

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Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance

AY	As of December 31, 2022									
	Supplemental and unaudited									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2013	333	569	687	789	865	907	933	947	951	955
2014	-	382	632	749	871	957	1,006	1,023	1,030	1,041
2015	-	-	362	588	718	847	917	956	984	1,005
2016	-	-	-	353	581	722	831	912	950	989
2017	-	-	-	-	395	689	798	856	935	995
2018	-	-	-	-	-	403	706	826	929	1,040
2019	-	-	-	-	-	-	374	622	748	867
2020	-	-	-	-	-	-	-	420	649	745
2021	-	-	-	-	-	-	-	-	324	534
2022	-	-	-	-	-	-	-	-	-	297
										<b>Total</b>
										8,468
										All net outstanding liabilities prior to 2013, net of reinsurance
										279
										Liabilities for unpaid claims and claim adjustment expense
										<u>\$2,512</u>

Average annual percentage payout of incurred claims (Supplemental and unaudited)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
34.0%	22.9%	11.1%	9.9%	7.8%	4.4%	2.7%	1.4%	0.7%	0.5%

GRS NI - Commercial Multiple-Peril ("CMP")

(Claim counts in whole numbers)

Incurred claims and allocated claim adjustment expenses, net of reinsurance<sup>(2)</sup>

As of December 31, 2022

AY	Supplemental and unaudited										Total of incurred but not reported liabilities plus expected development on reported claims	Cumulative number of reported claims <sup>(1)</sup>
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
2013	114	120	120	111	114	106	109	111	110	111	2	8,496
2014	-	68	58	61	66	70	76	74	74	77	3	3,413
2015	-	-	32	33	30	32	37	37	38	41	3	2,268
2016	-	-	-	52	48	51	68	69	69	70	2	3,135
2017	-	-	-	-	157	157	187	178	181	182	2	3,498
2018	-	-	-	-	-	86	115	107	113	124	3	2,861
2019	-	-	-	-	-	-	151	150	133	135	5	3,099
2020	-	-	-	-	-	-	-	137	103	104	5	4,279
2021	-	-	-	-	-	-	-	-	146	121	19	4,876
2022	-	-	-	-	-	-	-	-	-	60	31	5,013
										<b>Total</b>		<b>\$1,025</b>

(1) Note that 100% of claim count information is disclosed on a per claimant basis.

(2) Prior to 2018, the US Business Lines and National Insurance businesses now reported in GRM and GRS, respectively, were managed under the former Commercial Insurance SBU. Accident year development was not explicitly analyzed separately between the two books of business, but rather in total from a Commercial Insurance perspective.

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(dollars in millions)

Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance

AY	As of December 31, 2022									
	<i>Supplemental and unaudited</i>									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2013	20	54	70	81	91	101	104	106	107	108
2014	-	33	45	49	57	61	65	70	71	73
2015	-	-	12	22	24	27	29	32	34	36
2016	-	-	-	17	36	41	50	60	63	63
2017	-	-	-	-	44	97	148	154	168	173
2018	-	-	-	-	-	23	49	86	96	110
2019	-	-	-	-	-	-	50	97	109	119
2020	-	-	-	-	-	-	-	45	74	87
2021	-	-	-	-	-	-	-	-	53	88
2022	-	-	-	-	-	-	-	-	-	16
									<b>Total</b>	\$873
										3
										<b>\$155</b>

All net outstanding liabilities prior to 2013, net of reinsurance

Liabilities for unpaid claims and claim adjustment expense

Average annual percentage payout of incurred claims (*Supplemental and unaudited*)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
30.6%	26.7%	14.1%	8.3%	8.9%	5.4%	3.6%	2.5%	1.8%	1.0%

GRM BL - Workers Compensation

(Claim counts in whole numbers)

Incurred claims and allocated claim adjustment expenses, net of reinsurance

As of December 31, 2022

AY	<i>Supplemental and unaudited</i>										Total of incurred but not reported liabilities plus expected development on reported claims	Cumulative number of reported claims <sup>(2)</sup>
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 <sup>(1)</sup>		
2013	491	450	450	483	488	488	483	483	483	483	76	39,317
2014	-	391	384	390	407	409	403	403	403	403	35	30,460
2015	-	-	340	342	355	356	340	339	339	339	55	26,555
2016	-	-	-	316	324	322	299	298	298	298	44	24,885
2017	-	-	-	-	335	333	299	297	297	297	45	24,641
2018	-	-	-	-	-	373	650	431	431	431	38	26,186
2019	-	-	-	-	-	-	407	642	406	409	46	22,733
2020	-	-	-	-	-	-	-	388	581	391	131	15,794
2021	-	-	-	-	-	-	-	-	376	546	247	13,874
2022	-	-	-	-	-	-	-	-	-	340	190	9,711
										<b>Total</b>	\$ 3,937	

(1) Gross of retroactive reinsurance recoverable of \$4,832 for all lines of business (See Note 5 for further discussion).

(2) Note that 100% of claim count information is disclosed on a per occurrence basis.

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(dollars in millions)

Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance

As of December 31, 2022

AY	-----Supplemental and unaudited-----									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2013	92	201	256	291	323	340	354	367	373	377
2014	-	71	161	214	243	261	275	289	301	307
2015	-	-	61	142	187	224	238	248	254	260
2016	-	-	-	58	132	170	197	213	221	228
2017	-	-	-	-	57	131	172	193	210	218
2018	-	-	-	-	-	61	240	292	319	340
2019	-	-	-	-	-	-	93	177	228	262
2020	-	-	-	-	-	-	-	71	134	171
2021	-	-	-	-	-	-	-	-	62	109
2022	-	-	-	-	-	-	-	-	-	59
									<b>Total</b>	<b>\$2,331</b>
										<b>1,106</b>
										<b>\$2,712</b>

Average annual percentage payout of incurred claims (*Supplemental and unaudited*)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
17.7%	22.9%	12.3%	8.0%	5.2%	3.0%	2.6%	2.5%	1.4%	0.8%

The aggregate amount of discount related to the time value of money deducted to derive the liabilities as of December 31, 2022 and 2021, were \$75 and \$80, respectively. Prior to 2018, the US Business Lines and National Insurance businesses now reported in GRM and GRS, respectively, were managed under the former Commercial Insurance SBU. Discount related to time value of money was not explicitly analyzed separately between the two books of business, but rather in total from a Commercial Insurance perspective. Calendar year 2017 and prior discount related to time value of money is reported in GRS NI – Workers Compensation.

The amounts of discount accretion recognized for the years ended December 31, 2022, 2021 and 2020, were \$10, \$9 and \$9, respectively. These amounts are included in the financial statement line item benefits, claims and claim adjustment expenses.

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(dollars in millions)

GRS NI - Workers Compensation

(Claim counts in whole numbers)

Incurring claims and allocated claim adjustment expenses, net of reinsurance

As of December 31, 2022

AY	<i>Supplemental and unaudited</i>										Total of incurred but not reported liabilities plus expected development on reported claims	Cumulative number of reported claims <sup>(2)</sup>
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 <sup>(1)</sup>		
2013	1,638	1,630	1,621	1,576	1,562	1,542	1,525	1,499	1,449	1,440	520	229,319
2014	-	1,180	1,161	1,132	1,108	987	951	931	890	885	165	192,228
2015	-	-	1,033	1,035	1,012	870	848	839	794	789	177	167,159
2016	-	-	-	947	942	846	815	793	761	755	166	154,968
2017	-	-	-	-	962	914	880	882	840	830	212	156,711
2018	-	-	-	-	-	929	573	782	764	754	234	165,989
2019	-	-	-	-	-	-	792	678	904	906	260	175,302
2020	-	-	-	-	-	-	-	769	609	801	341	179,168
2021	-	-	-	-	-	-	-	-	773	590	281	202,816
2022	-	-	-	-	-	-	-	-	-	785	500	185,312
<b>Total</b>										<b>\$8,535</b>		

(1) Gross of retroactive reinsurance recoverable of \$4,852 for all lines of business (See Note 5 for further discussion).

(2) Note that 100% of claim count information is disclosed on a per claimant basis.

Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance

As of December 31, 2022

AY	<i>Supplemental and unaudited</i>										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
2013	209	462	591	673	732	768	794	802	808	809	
2014	-	159	343	452	522	561	588	608	623	619	
2015	-	-	131	293	385	454	494	521	532	531	
2016	-	-	-	126	294	387	442	476	505	507	
2017	-	-	-	-	130	289	386	443	485	516	
2018	-	-	-	-	-	121	208	295	354	398	
2019	-	-	-	-	-	-	127	303	405	483	
2020	-	-	-	-	-	-	-	94	224	301	
2021	-	-	-	-	-	-	-	-	94	238	
2022	-	-	-	-	-	-	-	-	-	95	
<b>Total</b>										<b>\$4,497</b>	
<b>All net outstanding liabilities prior to 2013, net of reinsurance</b>										<b>5,243</b>	
<b>Liabilities for unpaid claims and claim adjustment expense</b>										<b>\$9,281</b>	

Average annual percentage payout of incurred claims (*Supplemental and unaudited*)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
15.1%	19.1%	11.2%	7.6%	4.8%	3.3%	1.4%	0.7%	0.0%	0.1%

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The aggregate amount of discount related to the time value of money deducted to derive the liabilities as of December 31, 2022 and 2021, were \$434 and \$458, respectively. Prior to 2018, the US Business Lines and National Insurance businesses now reported in GRM and GRS, respectively, were managed under the former Commercial Insurance SBU. Discount related to time value of money was not explicitly analyzed separately between the two books of business, but rather in total from a Commercial Insurance perspective. Calendar year 2017 and prior discount related to time value of money is reported in GRS NI – Workers Compensation.

The amounts of discount accretion recognized for the years ended December 31, 2022, 2021 and 2020, were \$41, \$45 and \$48, respectively. These amounts are included in the financial statement line item benefits, claims and claim adjustment expenses.

**GRM BL - General Liability**

*(Claim counts in whole numbers)*

Incurred claims and allocated claim adjustment expenses, net of reinsurance

<b>As of December 31, 2022</b>											<b>Total of incurred but not reported liabilities plus expected development on reported claims</b>	<b>Cumulative number of reported claims<sup>(2)</sup></b>
<b>AY</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022<sup>(1)</sup></b>		
	<i>-----Supplemental and unaudited-----</i>											
<b>2013</b>	164	163	159	159	152	166	170	170	151	144	1	3,707
<b>2014</b>	-	168	172	144	149	157	175	159	173	168	3	3,043
<b>2015</b>	-	-	140	122	123	138	159	165	177	178	1	3,092
<b>2016</b>	-	-	-	140	129	125	145	151	164	175	2	2,953
<b>2017</b>	-	-	-	-	153	159	168	168	170	186	3	2,950
<b>2018</b>	-	-	-	-	-	206	127	129	143	168	3	3,312
<b>2019</b>	-	-	-	-	-	-	310	291	291	281	72	3,337
<b>2020</b>	-	-	-	-	-	-	-	307	307	294	176	2,980
<b>2021</b>	-	-	-	-	-	-	-	-	317	315	214	2,693
<b>2022</b>	-	-	-	-	-	-	-	-	-	296	257	1,921
										<b>Total</b>	<b>2,205</b>	

(1) Gross of retroactive reinsurance recoverable of \$4,832 for all lines of business. (See Note 5 for further discussion)

(2) Note that 100% of claim count information is disclosed on a per occurrence basis.

LIBERTY MUTUAL HOLDING COMPANY INC.

Notes to Consolidated Financial Statements

(dollars in millions)

Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance

As of December 31, 2022										
-----Supplemental and unaudited-----										
AY	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2013	7	18	44	86	104	119	129	136	136	138
2014	-	5	39	59	91	131	143	148	155	164
2015	-	-	8	36	77	117	147	157	164	169
2016	-	-	-	7	30	86	108	131	143	155
2017	-	-	-	-	7	43	105	131	143	163
2018	-	-	-	-	-	14	53	81	103	132
2019	-	-	-	-	-	-	11	46	97	166
2020	-	-	-	-	-	-	-	12	40	69
2021	-	-	-	-	-	-	-	-	17	50
2022	-	-	-	-	-	-	-	-	-	12
<b>Total</b>										\$1,218
<b>All net outstanding liabilities prior to 2013, net of reinsurance</b>										206
<b>Liabilities for unpaid claims and claim adjustment expense</b>										\$1,193

Average annual percentage payout of incurred claims (*Supplemental and unaudited*)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
4.6%	14.7%	20.2%	19.4%	15.0%	8.1%	5.2%	4.1%	2.8%	1.1%

GRS NI - General Liability

(Claim counts in whole numbers)

Incurred claims and allocated claim adjustment expenses, net of reinsurance

As of December 31, 2022											Total of incurred but not reported liabilities plus expected development on reported claims	Cumulative number of reported claims <sup>(2)</sup>
-----Supplemental and unaudited-----												
AY	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 <sup>(1)</sup>		
2013	582	563	556	549	552	544	557	576	585	615	75	67,582
2014	-	596	576	593	591	630	644	661	667	672	76	67,206
2015	-	-	634	643	678	717	749	784	776	816	84	57,454
2016	-	-	-	565	575	594	674	718	730	805	88	59,384
2017	-	-	-	-	714	720	807	863	905	898	240	56,304
2018	-	-	-	-	-	667	389	209	239	241	246	46,067
2019	-	-	-	-	-	-	741	737	768	763	291	36,398
2020	-	-	-	-	-	-	-	651	676	680	438	23,910
2021	-	-	-	-	-	-	-	-	639	666	368	21,839
2022	-	-	-	-	-	-	-	-	-	658	572	16,006
<b>Total</b>										\$6,814		

(1) Gross of retroactive reinsurance recoverable of \$4,832 for all lines of business. (See Note 5 for further discussion)

(2) Note that 100% of claim count information is disclosed on a per claimant basis.

**LIBERTY MUTUAL HOLDING COMPANY INC.**

Notes to Consolidated Financial Statements

(dollars in millions)

Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance

<b>As of December 31, 2022</b>										
-----Supplemental and unaudited-----										
<b>AY</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>2013</b>	15	67	130	227	321	388	434	460	474	483
<b>2014</b>	-	20	73	167	297	382	442	481	507	540
<b>2015</b>	-	-	18	77	224	404	489	553	610	634
<b>2016</b>	-	-	-	20	84	244	364	447	536	616
<b>2017</b>	-	-	-	-	20	95	176	343	457	549
<b>2018</b>	-	-	-	-	-	23	(324)	(370)	(253)	(127)
<b>2019</b>	-	-	-	-	-	-	14	57	188	342
<b>2020</b>	-	-	-	-	-	-	-	12	44	117
<b>2021</b>	-	-	-	-	-	-	-	-	8	68
<b>2022</b>	-	-	-	-	-	-	-	-	-	12
									<b>Total</b>	<b>\$3,234</b>
										<b>743</b>
										<b>\$4,323</b>

Average annual percentage payout of incurred claims (*Supplemental and unaudited*)

<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Year 9</b>	<b>Year 10</b>
2.8%	-9.4%	10.0%	22.8%	18.9%	9.8%	7.5%	3.7%	3.6%	1.4%

**GRS Global Specialty - Reinsurance**

(Claim counts in whole numbers)

Incurred claims and allocated claim adjustment expenses, net of reinsurance

<b>As of December 31, 2022</b>											
-----Supplemental and unaudited-----											
<b>AY</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>Total of incurred but not reported liabilities plus expected development on reported claims</b>
<b>2013</b>	369	497	466	437	441	443	432	429	431	415	10
<b>2014</b>	-	331	420	430	427	443	427	404	401	413	15
<b>2015</b>	-	-	333	438	442	434	410	411	403	423	(1)
<b>2016</b>	-	-	-	350	460	445	425	409	409	378	19
<b>2017</b>	-	-	-	-	709	758	688	709	708	693	(29)
<b>2018</b>	-	-	-	-	-	394	451	449	458	427	44
<b>2019</b>	-	-	-	-	-	-	801	833	817	847	164
<b>2020</b>	-	-	-	-	-	-	-	546	565	568	161
<b>2021</b>	-	-	-	-	-	-	-	-	905	900	179
<b>2022</b>	-	-	-	-	-	-	-	-	-	1,049	700
										<b>Total</b>	<b>\$6,113</b>

Claims count is unavailable for the line of business since underlying claim count information is not maintained by cedants and not included in cession statements.

**LIBERTY MUTUAL HOLDING COMPANY INC.**

Notes to Consolidated Financial Statements

(dollars in millions)

Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance

<b>As of December 31, 2022</b>										
<i>Supplemental and unaudited</i>										
<b>AY</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>2013</b>	43	159	245	286	304	319	321	326	328	348
<b>2014</b>	-	44	157	240	278	291	289	293	299	305
<b>2015</b>	-	-	45	140	223	262	264	275	286	283
<b>2016</b>	-	-	-	46	159	213	221	238	238	259
<b>2017</b>	-	-	-	-	118	281	218	203	191	223
<b>2018</b>	-	-	-	-	-	72	95	117	129	146
<b>2019</b>	-	-	-	-	-	-	369	461	645	675
<b>2020</b>	-	-	-	-	-	-	-	273	343	412
<b>2021</b>	-	-	-	-	-	-	-	-	258	305
<b>2022</b>	-	-	-	-	-	-	-	-	-	424
									<b>Total</b>	<b>\$3,380</b>
										<u>275</u>
										<u><u>\$3,008</u></u>

Average annual percentage payout of incurred claims (*Supplemental and unaudited*)

<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Year 9</b>	<b>Year 10</b>
23.9%	18.3%	13.1%	5.0%	2.5%	2.1%	2.4%	0.6%	1.0%	5.0%

LIBERTY MUTUAL HOLDING COMPANY INC.

Notes to Consolidated Financial Statements

(dollars in millions)

**GRM BL - Commercial Automobile Liability**

(Claim counts in whole numbers)

Incurred claims and allocated claim adjustment expenses, net of reinsurance

As of December 31, 2022

AY	Supplemental and unaudited										Total of incurred but not reported liabilities plus expected development on reported claims	Cumulative number of reported claims <sup>(2)</sup>
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 <sup>(1)</sup>		
2013	450	428	424	445	504	509	509	510	515	501	12	35,829
2014	-	422	426	438	500	524	535	539	547	549	10	34,788
2015	-	-	414	443	491	513	539	542	552	555	12	33,415
2016	-	-	-	469	512	526	597	607	621	625	11	33,536
2017	-	-	-	-	569	601	659	675	675	679	9	33,882
2018	-	-	-	-	-	628	435	377	333	342	9	31,031
2019	-	-	-	-	-	-	696	725	698	698	179	27,268
2020	-	-	-	-	-	-	-	538	565	534	185	16,071
2021	-	-	-	-	-	-	-	-	496	547	257	13,229
2022	-	-	-	-	-	-	-	-	-	530	382	9,902
<b>Total</b>										\$5,560		

(1) Gross of retroactive reinsurance recoverable of \$4,832 for all lines of business (See Note 5 for further discussion).

(2) Note that 100% of claim count information is disclosed on a per occurrence basis.

Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance

As of December 31, 2022

AY	Supplemental and unaudited									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2013	96	194	285	368	445	471	480	485	487	487
2014	-	92	193	292	412	485	517	525	531	536
2015	-	-	92	193	315	453	507	525	533	537
2016	-	-	-	105	247	407	519	569	588	604
2017	-	-	-	-	124	285	431	517	581	640
2018	-	-	-	-	-	120	(4)	86	171	267
2019	-	-	-	-	-	-	71	194	296	408
2020	-	-	-	-	-	-	-	76	150	246
2021	-	-	-	-	-	-	-	-	62	164
2022	-	-	-	-	-	-	-	-	-	69
<b>Total</b>										\$3,958
<b>All net outstanding liabilities prior to 2013, net of reinsurance</b>										84
<b>Liabilities for unpaid claims and claim adjustment expense</b>										\$1,686

Average annual percentage payout of incurred claims (Supplemental and unaudited)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
17.1%	13.0%	20.5%	19.2%	14.0%	5.2%	1.8%	1.0%	0.5%	0.1%

LIBERTY MUTUAL HOLDING COMPANY INC.

Notes to Consolidated Financial Statements

(dollars in millions)

GRS NI - Commercial Automobile Liability

(Claim counts in whole numbers)

Incurred claims and allocated claim adjustment expenses, net of reinsurance

As of December 31, 2022											Total of incurred but not reported liabilities plus expected development on reported claims	Cumulative number of reported claims <sup>(2)</sup>
AY	Supplemental and unaudited											
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 <sup>(1)</sup>		
2013	315	290	305	323	357	356	370	373	375	374	8	60,669
2014	-	281	285	312	344	415	394	396	383	382	10	56,694
2015	-	-	279	269	313	344	353	356	360	361	6	55,536
2016	-	-	-	278	315	345	377	385	382	393	17	55,749
2017	-	-	-	-	411	396	407	416	413	410	19	60,863
2018	-	-	-	-	-	421	689	766	761	759	22	63,064
2019	-	-	-	-	-	-	527	502	558	564	101	66,575
2020	-	-	-	-	-	-	-	420	402	423	161	64,642
2021	-	-	-	-	-	-	-	-	437	413	238	74,997
2022	-	-	-	-	-	-	-	-	-	514	372	78,631
<b>Total</b>										<b>\$4,593</b>		

(1) Gross of retroactive reinsurance recoverable of \$4,832 for all lines of business (See Note 5 for further discussion).

(2) Note that 100% of claim count information is disclosed on a per claimant basis.

Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance

As of December 31, 2022										
AY	Supplemental and unaudited									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2013	46	117	189	257	318	337	352	359	362	365
2014	-	47	113	192	271	337	354	366	369	371
2015	-	-	43	103	185	270	316	332	339	347
2016	-	-	-	41	112	198	282	326	352	369
2017	-	-	-	-	45	125	212	285	338	364
2018	-	-	-	-	-	52	403	542	628	693
2019	-	-	-	-	-	-	83	169	252	354
2020	-	-	-	-	-	-	-	26	79	159
2021	-	-	-	-	-	-	-	-	32	96
2022	-	-	-	-	-	-	-	-	-	52
<b>Total</b>										<b>\$3,170</b>
<b>All net outstanding liabilities prior to 2013, net of reinsurance</b>										<b>29</b>
<b>Liabilities for unpaid claims and claim adjustment expense</b>										<b>\$1,452</b>

Average annual percentage payout of incurred claims (Supplemental and unaudited)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
10.4%	20.1%	19.7%	18.7%	13.1%	5.5%	3.3%	1.7%	0.6%	0.7%



**LIBERTY MUTUAL HOLDING COMPANY INC.**

Notes to Consolidated Financial Statements

(dollars in millions)

**Reconciliation of the Disclosure of Incurred and Paid Claims Development to the Liability for Unpaid Claims and Claim Adjustment Expenses (“CAE”)**

<b>Net outstanding liabilities for unpaid claims and CAE<sup>(1)</sup></b>	<b>December 31, 2022</b>
Private Passenger Auto	\$10,663
GRM BI – Commercial Multiple-Peril	2,512
GRS NI – Commercial Multiple-Peril	155
GRM BI – Workers Compensation	2,712
GRS NI – Workers Compensation	9,281
GRM BI – General Liability	1,193
GRS NI – General Liability	4,323
Global Specialty – Reinsurance	3,008
GRM BI – Commercial Automobile Liability	1,686
GRS NI – Commercial Automobile Liability	1,452
GRS Global Specialty – General Liability	10,908
Other Insurance Lines	15,407
<b>Liabilities for unpaid claims and allocated CAE, net of reinsurance</b>	<b>\$ 63,300</b>
<b>Reinsurance recoverable on unpaid claims</b>	
Private Passenger Auto	950
GRM BI – Commercial Multiple-Peril	4
GRS NI – Commercial Multiple-Peril	36
GRM BI – Workers Compensation	226
GRS NI – Workers Compensation	2,956
GRM BI – General Liability	6
GRS NI – General Liability	722
GRS Global Specialty – Reinsurance	540
GRM BI – Commercial Automobile Liability	59
GRS NI – Commercial Automobile Liability	372
GRS Global Specialty – General Liability	2,726
Other Insurance Lines	5,076
<b>Total reinsurance recoverable on unpaid claims</b>	<b>\$ 13,673</b>
Unallocated claims adjustment expenses	2,193
Impact of discounting	(568)
<b>Total gross liability for unpaid claims and CAE</b>	<b>\$ 78,598</b>

(1) Gross of retroactive reinsurance recoverable of \$4,832 for all lines of business (See Note 5 for further discussion).

**Asbestos and Environmental Reserves**

The Company has exposure to asbestos and environmental claims that emanate principally from general liability policies written prior to the mid-1980s. In establishing the Company's asbestos and environmental reserves, the Company estimates case reserves for anticipated losses and bulk reserves for claim adjustment expenses and IBNR. The Company maintained casualty excess of loss reinsurance during the relevant periods. The reserves, including cessions reported by ceding reinsurers on assumed reinsurance contracts, are reported in unpaid claims and claim adjustment expenses, and ceded reserves are included in reinsurance recoverables on the accompanying consolidated balance sheets.

Upon their de-affiliation from the Nationwide Group and affiliation with the Company, Employers Insurance Company of Wausau (“EICOW”), Wausau Business Insurance Company (“WBIC”), Wausau General Insurance Company (“WGIC”), and Wausau Underwriters Insurance Company (“WUIC”) entered into ceded reinsurance contracts whereby Nationwide Indemnity Company assumed full responsibility for obligations on certain policies with effective dates prior to January 1, 1986, including all asbestos and environmental exposures.

## LIBERTY MUTUAL HOLDING COMPANY INC.

### Notes to Consolidated Financial Statements

(dollars in millions)

The process of establishing reserves for asbestos and environmental claims is subject to greater uncertainty than the establishment of reserves for liabilities relating to other types of insurance claims. A number of factors contribute to this greater uncertainty surrounding the establishment of asbestos and environmental reserves, including, without limitation: (i) the lack of available and reliable historical claims data as an indicator of future loss development, (ii) the long waiting periods between exposure and manifestation of any bodily injury or property damage, (iii) the difficulty in identifying the source of asbestos or environmental contamination, (iv) the difficulty in properly allocating liability for asbestos or environmental damage, (v) the uncertainty as to the number and identity of insureds with potential exposure, (vi) the cost to resolve claims, and (vii) the collectability of reinsurance.

The uncertainties associated with establishing reserves for asbestos and environmental claims and claim adjustment expenses are compounded by the differing, and at times inconsistent, court rulings on environmental and asbestos coverage issues involving: (i) the differing interpretations of various insurance policy provisions and whether asbestos and environmental losses are or were ever intended to be covered, (ii) when the loss occurred and what policies provide coverage, (iii) whether there is an insured obligation to defend, (iv) whether a compensable loss or injury has occurred, (v) how policy limits are determined, (vi) how policy exclusions are applied and interpreted, (vii) the impact of entities seeking bankruptcy protection as a result of asbestos-related liabilities, (viii) whether clean-up costs are covered as insured property damage, and (ix) applicable coverage defenses or determinations, if any, including the determination as to whether or not an asbestos claim is a products/completed operation claim subject to an aggregate limit and the available coverage, if any, for that claim. The uncertainties cannot be reasonably estimated, but could have a material impact on the Company's future operating results and financial condition.

In 2022, the Company completed asbestos ground-up and aggregate environmental reserve studies. These studies were completed by a multi-disciplinary team of claims, legal, reinsurance and actuarial personnel, and included all major business segments of the Company's direct, assumed, and ceded asbestos and environmental unpaid claim liabilities. As part of the review, policyholders with the largest direct asbestos unpaid claim liabilities were individually evaluated using the Company's proprietary stochastic ground-up model, which is consistent with published actuarial methods of asbestos reserving. Among the factors reviewed in depth by the team of specialists were the type of business, level of exposure, coverage limits, geographic distribution of products, injury type, jurisdiction and legal defenses. Reinsurance recoveries for these policyholders were then separately evaluated by the Company's reinsurance and actuarial personnel. Asbestos and environmental unpaid claim liabilities for all other policyholders were evaluated using aggregate methods that utilized information and experience specific to these policyholders. The studies resulted in an increase to reserves of \$96 including: \$22 of asbestos reserves and \$74 of pollution reserves.

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.

As of December 31, 2022 and 2021, the Company's unpaid claims and claim adjustment expense reserves, net of associated reinsurance recoverables, includes \$1,199 and \$1,232, respectively, for asbestos and environmental-related claims before consideration of the NICO Reinsurance Transaction.

Net asbestos losses paid in 2022, 2021, and 2020 were \$110, \$78, and \$113, respectively. The Company incurred \$21, \$67, and \$110 of asbestos reserves before consideration of the NICO Reinsurance Transaction, net of change in allowance for doubtful accounts during the years ended December 31, 2022, 2021, and 2020, respectively.

Net environmental losses paid in 2022, 2021, and 2020 were \$53, \$71, and \$46, respectively. The Company incurred \$75, \$81, and \$122, of environmental reserves before consideration of the NICO Reinsurance Transaction, net of change in allowance for doubtful accounts during the years ended December 31, 2022, 2021, and 2020, respectively.

**LIBERTY MUTUAL HOLDING COMPANY INC.**

Notes to Consolidated Financial Statements

(dollars in millions)

**(7) DEBT OUTSTANDING**

Debt outstanding as of December 31, 2022 and December 31, 2021 includes the following:

***Short-term debt:***

	<b>2022</b>	<b>2021</b>
4.95% Notes, due 2022 <sup>(1)</sup>	\$-	\$473
4.25% Notes, due 2023 <sup>(1)</sup>	547	-
Total short-term debt	\$547	\$473

***Long-term debt:***

	<b>2022</b>	<b>2021</b>
4.25% Notes, due 2023 <sup>(1)</sup>	\$-	\$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 <sup>(2)</sup>	500	500
5.50% Notes, due 2052	1,000	-
3.625% €500 million Junior Subordinated Notes, due 2059 <sup>(3)</sup>	533	568
3.95% Notes, due 2060	746	746
4.30% Junior Subordinated Notes, due 2061 <sup>(4)</sup>	800	800
7.80% Junior Subordinated Notes, due 2087 <sup>(5)</sup>	437	437
10.75% Junior Subordinated Notes, due 2088 <sup>(6)</sup>	35	35
7.697% Surplus Notes, due 2097	260	260
	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.

**Debt Transactions and In-Force Credit Facilities**

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

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

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

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

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

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

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

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

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

On August 16, 2021, LMGI issued \$500 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 of LMGI 5.00% Notes were paid at maturity.

On February 1, 2021, LMGI issued \$800 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.

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

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

#### Interest

The Company paid \$488, \$436, \$417 of interest in 2022, 2021 and 2020, respectively.

#### (8) INCOME TAXES

The components of U.S. Federal, state and foreign income tax expense from continuing operations are:

Years ended December 31,	2022	2021	2020
Current tax expense (benefit):			
U.S. Federal	\$280	\$356	\$144
U.S. Federal net operating losses	(19)	(29)	(32)
State	14	25	6
Foreign	197	145	163
Total current tax expense (benefit)	472	497	281
Deferred tax expense (benefit):			
U.S. Federal	(232)	225	(53)
Foreign	(159)	18	9
Total deferred tax expense (benefit)	(391)	243	(44)
Total U.S. Federal, state and foreign income tax expense	\$81	\$740	\$237

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A reconciliation of the income tax expense attributable to continuing operations computed at the U.S. Federal statutory tax rate to the income tax expense as included in the consolidated statements of income is as follows:

<b>Years ended December 31,</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>
Expected U.S. Federal income tax expense	\$105	\$800	\$213
Tax effect of:			
Nontaxable investment income	(26)	(26)	(27)
Change in valuation allowance	24	149 <sup>(1)</sup>	31
Revision to estimates	12	(27)	(3)
General business credits	(25)	(22)	(11)
Disposition of subsidiary	-	(133)	-
State income tax	12	20	6
Foreign rate differential	13	(26)	23
U.S. impact from foreign operations	73	38	9
Foreign other	(107)	(34)	-
Other	-	1	(4)
<b>Total income tax expense</b>	<b>\$81</b>	<b>\$740</b>	<b>\$237</b>

(1) Includes \$131 related to an Australian subsidiary that was disposed of in 2021.

The significant components of the deferred income tax assets and liabilities at December 31, are summarized as follows:

	<b>2022</b>	<b>2021</b>
Deferred tax assets:		
Unpaid claims discount	\$639	\$577
Unearned premium reserves	932	852
Net operating losses	359	182
Net unrealized losses	515	-
Employee benefits	648	595
Credits	52	29
Other accrued expenses	147	134
Other	296	349
	<u>3,588</u>	<u>2,718</u>
Less: valuation allowance	(137)	(34)
<b>Total deferred tax assets</b>	<b>3,451</b>	<b>2,684</b>
Deferred tax liabilities:		
Deferred acquisition costs	729	702
Net unrealized gains	-	1,261
Intangibles	202	173
Equalization reserves	21	125
Depreciation/amortization	181	292
Other	388	332
<b>Total deferred tax liabilities</b>	<b>1,521</b>	<b>2,885</b>
<b>Net deferred tax assets/(liabilities)</b>	<b>\$1,930</b>	<b>\$(201)</b>

For the year ended December 31, 2022, the Company established a partial valuation allowance of \$62 on certain deferred tax assets related to unrealized losses in the available-for-sale securities portfolio. As part of evaluating whether it was more likely than not that the Company could realize the tax benefit from these losses, the Company considered all available positive and negative evidence. The establishment of this valuation allowance was allocated to other comprehensive income. On March 1, 2022, the Company completed its merger with State Auto Group. As a result, the Company expects certain acquired State Auto net operating loss and foreign tax credit carryforwards to expire unutilized; as such, a partial valuation allowance of \$18 has been recorded through purchase accounting as of December 31, 2022. Additionally, the Company increased the existing valuation allowance on foreign tax credits that are expected to expire unutilized. Management believes it is more likely than not the remaining net deferred tax assets will be realized.

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The Company's subsidiaries have foreign tax credit carryforwards of \$52 and gross net operating loss carryforwards of \$1,576 as of December 31, 2022. With respect to the foreign tax credit carryforwards, \$3 will begin to expire in 2023 if not utilized; the remainder will begin to expire in 2029 if not utilized. The gross net operating loss carryforwards in the U.S. and various non-U.S. tax jurisdictions will begin to expire, if not utilized, as follows:

<u>Year</u>	<u>Total</u>
2024	\$1
2025	13
2026	16
Thereafter or indefinite	1,546
<b>Total</b>	<b><u><u>\$1,576</u></u></b>

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

Balance at December 31, 2020	\$69
Additions based on tax positions related to current year	3
Additions for tax positions of prior years	10
Reductions for tax positions of prior years	(5)
Lapse of the statute of limitations	(3)
Translation	(2)
Balance at December 31, 2021	<u>\$72</u>
Additions based on tax positions related to current year	11
Additions for tax positions of prior years	21
Reductions for tax positions of prior years	(4)
Settlements	(2)
Lapse of the statute of limitations	(3)
Translation	2
Balance at December 31, 2022	<u><u>\$97</u></u>

Included in the tabular rollforward of unrecognized tax benefits are interest and penalties in the amount of \$38 and \$31 as of December 31, 2022 and 2021, respectively.

Included in the balance at December 31, 2022, is \$80 related to tax positions that would impact the effective tax rate.

The Company recognizes interest and penalties related to unrecognized tax benefits in U.S. Federal, state, and foreign income tax expense. For the years ended December 31, 2022, 2021 and 2020, the Company recognized \$4, \$3 and \$0 of interest and penalties, respectively. The Company had approximately \$38 and \$29 of interest and penalties accrued as of December 31, 2022 and 2021, respectively.

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

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

### **(9) BENEFIT PLANS**

The Company sponsors non-contributory defined benefit pension plans ("the Plans") covering substantially all U.S. employees. The benefits and eligibility are based on age, years of service, and the employee's final average compensation, as more fully described in the Plans. Some foreign subsidiaries also sponsor defined benefit pension plans. In 2014, the Company added a new cash balance benefit formula for all eligible U.S. employees and froze credited service under the plan's final average pay formula. In 2016, the Company announced changes to the U.S. pension plan which included freezing the final average pay formula effective December 31, 2020, and increasing pay credits under the cash balance formula from 4.5% to 5.0% of eligible pay effective January 1, 2018.

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

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The Company also provides certain postretirement healthcare and life insurance benefits (“Postretirement”) covering substantially all U.S. employees. In 2014, the Company’s U.S. postretirement medical and dental cost sharing arrangement changed to a defined contribution model with an annual dollar contribution amount based on age and years of eligible credited service. Life insurance benefits are based on a participant’s final compensation subject to the plan maximum. The postretirement plan is unfunded. In 2016, the Company announced employees hired on or after January 1, 2018, will not be eligible for coverage under the U.S. postretirement health and life insurance plans. In 2017, the Company announced changes to the U.S. postretirement health plan which included the transition of Medicare-eligible retirees to the Medicare market place exchange effective January 1, 2018.

In 2020, the Company offered a voluntary early retirement option (“ERO”) to U.S. employees meeting certain age and service requirements. Employees opting into the program received an enhanced pension benefit were required to terminate employment with the Company between December 31, 2020 and December 30, 2021. The Company recorded settlement charges in restructuring costs in the consolidated statement of income of \$178 for the year ended December 31, 2021. The company reported \$18 of settlement charges due to Supplemental payments in excess of the settlement accounting threshold and \$577 of ERO benefit costs in the consolidated statement of income for the year end December 31, 2020.

Assets of the U.S. tax-qualified, defined benefit pension plans consist primarily of investments held in a master trust with The Bank of New York Mellon. Assets of the plan are invested primarily in fixed income securities and in diversified public equities. As of December 31, 2022 and 2021, no assets of the plans were held in separate accounts of the Company.

The Company sponsors defined contribution plans for substantially all U.S. (401(k) plan) employees who meet eligibility requirements. During 2022, 2021, and 2020, employees could contribute a percentage of their annual compensation on a before and after-tax basis, subject to Federal limitations. Company contributions are based on the employee’s contribution amount. In 2022, 2021, and 2020, the Company incurred matching contributions of \$140, \$131, and \$124 respectively, including the supplemental defined contribution plans.

Compensation expense related to the Company’s long-term and short-term incentive compensation plans was \$899, \$1,000, and \$723 for the years ended December 31, 2022, 2021, and 2020, respectively.

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The following table sets forth the assets, obligations, and assumptions associated with the U.S. pension and postretirement benefits.

	Pension		Supplemental Pension		Postretirement	
	2022	2021	2022	2021	2022	2021
<b>Change in benefit obligations:</b>						
Benefit obligation at beginning of year	\$8,622	\$9,812	\$471	\$474	\$1,089	\$1,119
Service costs	163	159	8	7	14	16
Interest costs	213	199	11	10	26	24
Amendments	(12)	-	-	-	2	-
Curtailment	-	-	-	-	-	-
Settlement	-	-	-	-	-	-
Actuarial (gains) losses	(1,853)	(41)	(122)	2	(287)	(30)
Acquisition	460	-	11	-	6	-
Benefits paid	(635)	(1,507)	(23)	(22)	(65)	(40)
Other	-	-	-	-	(7)	-
<b>Benefit obligations at end of year</b>	<b>\$6,958</b>	<b>\$8,622</b>	<b>\$356</b>	<b>\$471</b>	<b>\$778</b>	<b>\$1,089</b>
<b>Accumulated benefit obligations</b>	<b>\$6,958</b>	<b>\$8,622</b>	<b>\$356</b>	<b>\$471</b>	<b>\$778</b>	<b>\$1,089</b>

<b>Change in plan assets:</b>						
Fair value of plan assets at beginning of year	\$9,115	\$9,708	\$-	\$-	\$-	\$-
Actual return on plan assets	(2,208)	913	-	-	-	-
Acquisition	483	-	-	-	-	-
Employer contribution	-	-	-	-	-	-
Benefits paid	(635)	(1,506)	-	-	-	-
<b>Fair value of plan assets at end of year</b>	<b>\$6,755</b>	<b>\$9,115</b>	<b>\$-</b>	<b>\$-</b>	<b>\$-</b>	<b>\$-</b>
<b>Funded status of Plan</b>	<b>\$ (203)</b>	<b>\$493</b>	<b>\$ (356)</b>	<b>\$ (471)</b>	<b>\$ (778)</b>	<b>\$ (1,089)</b>

	Pension		Supplemental Pension		Postretirement	
	2022	2021	2022	2021	2022	2021
<b>Amounts recognized in the Balance Sheets:</b>						
Assets	\$-	\$497	\$-	\$-	\$-	\$-
Liabilities	(203)	(4)	(356)	(471)	(778)	(1,089)
<b>Net asset (liability) at end of year</b>	<b>\$ (203)</b>	<b>\$493</b>	<b>\$ (356)</b>	<b>\$ (471)</b>	<b>\$ (778)</b>	<b>\$ (1,089)</b>

<b>Amounts recognized in Accumulated Other Comprehensive Loss (Income):</b>						
Net loss	\$1,926	\$1,196	\$73	\$215	\$(211)	\$89
Prior service costs	(72)	(86)	(5)	(8)	(48)	(63)
<b>Total</b>	<b>\$1,854</b>	<b>\$1,110</b>	<b>\$68</b>	<b>\$207</b>	<b>\$(259)</b>	<b>\$26</b>

<b>Other changes in Plan assets and projected benefit obligation recognized in Other Comprehensive (Income) Loss:</b>						
Net actuarial (gains) losses	\$860	\$(443)	\$(123)	\$2	\$(287)	\$(30)
Amortization of net actuarial loss	(125)	(330)	(20)	(27)	(13)	(20)
Prior service costs	(12)	-	-	-	2	-
Amortization of prior service cost	21	22	3	4	13	14
<b>Total</b>	<b>\$744</b>	<b>\$(751)</b>	<b>\$(139)</b>	<b>\$(21)</b>	<b>\$(285)</b>	<b>\$(36)</b>

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The net benefit costs for the years ended December 31, 2022, 2021 and 2020, include the following components:

<b>December 31, 2022</b>	<b>Pension</b>	<b>Supplemental Pension</b>	<b>Postretirement</b>
Components of net periodic benefit costs:			
Service costs	\$163	\$8	\$14
Interest costs	213	11	26
Expected return on plan assets	(505)	-	-
Amortization of unrecognized:			
Net loss	125	20	13
Prior service cost	(21)	(3)	(13)
<b>Net periodic benefit costs</b>	<b>\$(25)</b>	<b>\$36</b>	<b>\$40</b>

<b>December 31, 2021</b>	<b>Pension</b>	<b>Supplemental Pension</b>	<b>Postretirement</b>
Components of net periodic benefit costs:			
Service costs	\$159	\$7	\$16
Interest costs	199	10	24
Expected return on plan assets	(511)	-	-
Amortization of unrecognized:			
Net loss	153	27	20
Prior service cost	(22)	(4)	(14)
<b>Net periodic benefit costs<sup>(1)</sup></b>	<b>\$(22)</b>	<b>\$40</b>	<b>\$46</b>
Settlement	177	-	-
ERO Charge	-	-	-
<b>Total Net periodic benefit costs</b>	<b>\$155</b>	<b>\$40</b>	<b>\$46</b>

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

<b>December 31, 2020</b>	<b>Pension</b>	<b>Supplemental Pension</b>	<b>Postretirement</b>
Components of net periodic benefit costs:			
Service costs	\$157	\$7	\$15
Interest costs	258	12	29
Expected return on plan assets	(533)	-	-
Amortization of unrecognized:			
Net loss	223	26	12
Prior service cost	(23)	(4)	(14)
<b>Net periodic benefit costs<sup>(1)</sup></b>	<b>\$82</b>	<b>\$41</b>	<b>\$42</b>
Settlement	-	16	2
ERO Charge	509	4	62
<b>Total Net periodic benefit costs</b>	<b>\$591</b>	<b>\$61</b>	<b>\$106</b>

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

The measurement date used to determine pension and other postretirement is December 31, 2022.

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Weighted-average actuarial assumptions for benefit obligations are set forth in the following table:

<b>December 31,</b>	<b>2022</b>	<b>2021</b>
<b>Pension</b>		
Discount rate	5.22%	3.01%
Rate of compensation increase	4.90%	4.70%
Cash balance interest crediting rate	4.00%	2.00%
<b>Supplemental Pension</b>		
Discount rate	5.22%	2.96%
Rate of compensation increase	5.80%	6.00%
Cash balance interest crediting rate	4.00%	2.00%
<b>Postretirement</b>		
Discount rate	5.24%	3.05%

Weighted-average actuarial assumptions for net periodic benefit costs are set forth in the following table:

<b>December 31,</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>
<b>Pension</b>			
Discount rate	3.04%	3.02%	3.52%
Interest cost effective interest rate	2.46%	2.26%	3.10%
Service cost discount rate	2.88%	2.83%	3.35%
Expected return on plan assets	5.95%	6.00%	6.50%
Rate of compensation increase	4.70%	4.60%	4.20%
Cash balance interest crediting rate	2.00%	1.75%	2.50%
<b>Supplemental Pension</b>			
Discount rate	2.96%	2.81%	3.32%
Interest cost effective interest rate	2.38%	2.10%	2.78%
Service cost discount rate	3.18%	3.05%	3.44%
Rate of compensation increase	6.00%	5.90%	5.50%
Cash balance interest crediting rate	2.00%	1.75%	2.50%
<b>Postretirement</b>			
Discount rate	3.07%	2.91%	3.54%
Interest cost effective interest rate	2.49%	2.18%	3.12%
Service cost discount rate	3.34%	3.26%	3.78%

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 company calculates service cost 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.

Effective January 1, 2020, the Company elected a change to its method of calculating the market-related value of assets ("MRVA") used to determine the expected return on plan assets component of net periodic pension cost. The Company previously calculated market-related value for its pension plan by recognizing changes in the fair value of plan assets over a period of five years on all classes of assets. As a result of the change in accounting method, the Company will no longer recognize changes in fair value for the asset classes, such as investment grade fixed income securities and derivatives in the Immunizing Portfolio over five years. Instead, changes in the fair value of these assets will be recognized immediately for purposes of the market-related value. However, the Company will continue to recognize changes in the fair value of the asset classes in the Growth Portfolio over a five-year period. These assets include public equities, private equity, common collective trust funds, non-investment grade fixed income, and emerging market fixed income. The change is preferable to better align pension assets and liabilities with the investment policy designed for the Immunizing Portfolio to hedge the Plan's liability risks, specifically to offset changes in the Plan's liability value due to market-related risk factors such as change in interest rate and credit spreads.

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The adjustment is comprised of the difference between the net actuarial loss within AOCI before and after the change in methodology. The actual impact on 2020 expense of the MRVA methodology change compared to the current method resulted in an overall decrease of \$90.

Effective December 31, 2022 and 2021, the Company adopted the Scale MP-2021. Effective December 31, 2020, the Company adopted the Private Retirement Plan Mortality table with central year 2012 for employees, retirees, and contingent survivors with White Collar adjustment, projected generationally using Scale MP-2020.

The weighted-average healthcare cost trend rates are expected to be 6.60% in 2022 graded down to 5.00% in 2028.

#### Plan Assets

The Company's overall investment strategy for the U.S. pension plan's assets is to achieve a diversified mix of asset types, fund strategies, and fund managers. The U.S. pension plan's primary investment goal is to maximize return within reasonable and prudent levels of risk while also taking into account the liability obligations of the Plan and the risks associated with such liabilities.

The U.S. pension plan's assets are administered by the Liberty Mutual Retirement Committee, which has the fiduciary responsibility for management of the U.S. pension plan's assets in accordance with the Liberty Mutual Retirement Benefit Plan Investment Policy Statement. Effective October 18, 2022, the Liberty Mutual Retirement Committee amended the Investment Policy Statement.

The U.S. pension plan's assets are held in a trust and managed by LMIC, a wholly owned subsidiary of the Company and by its subadvisor, Liberty Mutual Group Asset Management, Inc., which is also a wholly owned subsidiary of the Company.

The investment plan assets consist of two portfolios, an immunizing portfolio and a growth portfolio. The Immunizing Portfolio is designed to hedge the Plan's liability risks, specifically to offset changes in the Plan's liability value due to market-related risk factors such as changes in interest rates and credit spreads. The Growth Portfolio is invested in a diversified group of assets that seeks to generate a return in excess of the Plan's liabilities, within an acceptable level of risk. The target allocation for the plan's assets is: 55% Immunizing portfolio, 44% Growth portfolio, and 1% cash and short-term investments.

The investment strategy of the Immunizing Portfolio is to mitigate the plan's liabilities through the use of core fixed income instruments, such as corporate and sovereign bonds, swaps, and futures contracts.

The investment strategy of the Growth Portfolio is to maximize return over the long term through the use of public equities, private equity, real estate, private debt, infrastructure, non-investment grade fixed income, and emerging market fixed income.

The following tables sets forth by level, within the fair value hierarchy, the Plans' assets at fair value as of December 31, 2022 and 2021.

#### Fair Value Measurements as of December 31, 2022

Asset Category	Total	Quoted Prices in Active Markets for Identical Assets Level 1 <sup>(1)</sup>	Significant Observable Inputs Level 2 <sup>(1)</sup>	Significant Unobservable Inputs Level 3 <sup>(1)</sup>
Cash, cash equivalents and short-term investments <sup>(2)</sup>	\$704	\$468	\$236	\$-
Fixed maturities:				
U.S. government and agency securities	211	211	-	-
U.S. state and municipal	172	-	172	-
Corporate and other	2,855	-	2,855	-
Equity investments:				
Common collective trust	975	-	975	-
Equity investments	224	156	68	-
Limited Partnerships	1,609	-	-	1,609
Other assets	5	-	5	-
<b>Total</b>	<b>\$6,755</b>	<b>\$835</b>	<b>\$4,311</b>	<b>\$1,609</b>

<sup>(1)</sup> See Note 10 for description of the Fair Value Measurement inputs. Pension Limited Partnerships are valued at the latest fair value reported by the General Partner adjusted by cash flows. Also, the common collective trust assets are valued based on Net Asset Value ("NAV") from BlackRock.

<sup>(2)</sup> Cash equivalents in Level 2 are net of investment payables of \$(168).

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**Fair Value Measurements as of December 31, 2021**

<b>Asset Category</b>	<b>Total</b>	<b>Quoted Prices in Active Markets for Identical Assets Level 1<sup>(1)</sup></b>	<b>Significant Observable Inputs Level 2<sup>(1)</sup></b>	<b>Significant Unobservable Inputs Level 3<sup>(1)</sup></b>
Cash, cash equivalents and short-term investments <sup>(2)</sup>	\$704	\$625	\$79	\$-
Fixed maturities:				
U.S. government and agency securities	542	542	-	-
U.S. state and municipal	213	-	213	-
Corporate and other	3,979	-	3,979	-
Equity investments:				
Common collective trust	1,926	-	1,926	-
Equity investments	13	13	-	-
Limited Partnerships	1,454	-	-	1,454
Other assets	284	-	7	277
<b>Total</b>	<b>\$9,115</b>	<b>\$1,180</b>	<b>\$6,204</b>	<b>\$1,731</b>

(1) See Note 10 for description of the Fair Value Measurement inputs. Pension Limited Partnerships are valued at the latest fair value reported by the General Partner adjusted by cash flows. Also, the common collective trust assets are valued based on Net Asset Value ("NAV") from BlackRock.

(2) Cash equivalents in Level 2 are net of investment payables of \$(79).

**Fair Value Measurements Using Significant  
Unobservable Inputs (Level 3)**

	<b>As of December 31, 2022</b>			<b>As of December 31, 2021</b>		
	<b>Purchases</b>	<b>Transfer in to Level 3</b>	<b>Transfer out of Level 3</b>	<b>Purchases</b>	<b>Transfer in to Level 3</b>	<b>Transfer out of Level 3</b>
Limited partnerships	\$124	\$-	\$-	\$189	\$-	\$-
Other assets	20	-	-	35	-	-
Equity investments	-	-	-	-	-	-
<b>Total</b>	<b>\$144</b>	<b>\$-</b>	<b>\$-</b>	<b>\$224</b>	<b>\$-</b>	<b>\$-</b>

The Plans' investments in limited partnerships are recorded at the carrying value as reported by the external fund managers, which is believed to approximate the fair value of the investments.

**Cash Flows**

*Contributions* - The Company contributed \$0 to the qualified plans, and directly funded \$23 to retirees in the supplemental pension plans in 2022. In addition, the Company directly funded \$65 to retirees in the postretirement benefit plans in 2022.

The Company expects to contribute approximately \$0 to the qualified plans, to directly fund \$26 to retirees in the supplemental pension plans, and to directly fund \$64 to the postretirement benefit plans in 2023.

# LIBERTY MUTUAL HOLDING COMPANY INC.

## Notes to Consolidated Financial Statements

(dollars in millions)

*Expected Future Benefit Payments* - The following benefit payments, which reflect expected future service as appropriate, are expected to be paid:

	<b>Pension</b>	<b>Supplemental Pension</b>	<b>Postretirement Plans</b>
2023	418	26	64
2024	447	42	49
2025	466	23	48
2026	487	24	47
2027	507	24	47
2028-2032	2,750	130	240

### (10) FAIR VALUE OF FINANCIAL INSTRUMENTS

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

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

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

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

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

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

#### **Fixed Maturities**

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

## LIBERTY MUTUAL HOLDING COMPANY INC.

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(dollars in millions)

#### **U.S. Government and Agency Securities**

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

#### **Mortgage-Backed Securities**

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

#### **Asset-Backed Securities**

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

#### **Municipal Securities**

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

#### **Corporate Debt and Other Securities**

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

#### **Foreign Government Securities**

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

#### **Equity Securities**

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

#### **Short-Term Investments**

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

#### **Other Investments**

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

**LIBERTY MUTUAL HOLDING COMPANY INC.**

Notes to Consolidated Financial Statements

(dollars in millions)

**Other Assets and Other Liabilities**

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

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

**Life Insurance Obligations**

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

**Assets and Liabilities Measured at Fair Value on a Recurring Basis**

The following tables summarize the Company's assets and liabilities that are measured at fair value on a recurring basis as of December 31, 2022 and 2021:

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

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Assets, at Fair Value	As of December 31, 2021			
	Level 1	Level 2	Level 3	Total
U.S. government and agency securities	\$11,393	\$63	\$-	11,456
Residential MBS	-	5,368	-	5,368
Commercial MBS	-	4,100	116	4,216
Other MBS and ABS	-	5,469	82	5,551
U.S. state and municipal	-	8,435	345	8,780
Corporate and other	-	31,574	1,062	32,636
Foreign government securities	-	5,093	6	5,099
Total fixed maturities, available for sale	11,393	60,102	1,611	73,106
Common stock	2,918	29	76	3,023
Preferred stock	1	2	8	11
Total equity securities	2,919	31	84	3,034
Short-term investments	6	186	26	218
Other investments	32	146	1,108	1,286
Other assets	-	-	19	19
Total assets	\$14,350	\$60,465	\$2,848	\$77,663

  

Liabilities, at Fair Value	Level 1	Level 2	Level 3	Total
Life insurance obligations	\$-	\$-	\$(91)	\$(91)
Other liabilities	-	(2)	-	(2)
Total liabilities	\$-	\$(2)	\$(91)	\$(93)

Changes in Level 3 Recurring Fair Value Measurements

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

Assets, at Fair Value	As of December 31, 2022			As of December 31, 2021		
	Purchases	Transfer in to Level 3	Transfer out of Level 3	Purchases	Transfer in to Level 3	Transfer out of Level 3
U.S. government and agency securities	\$-	\$-	\$-	\$-	\$-	\$-
Residential MBS	-	-	-	32	-	(98)
Commercial MBS	31	-	(44)	-	28	-
Other MBS and ABS	31	32	(10)	83	-	(12)
U.S. state and municipal	15	181	-	-	257	-
Corporate and other	976	1	(108)	1,024	11	(44)
Foreign government securities	24	8	-	-	6	-
Reedeemable Preferred Stock	55	24	-	-	-	-
Total fixed maturities	1,132	246	(162)	1,139	302	(154)
Common stock	2,516	66	(33)	54	-	(37)
Preferred stock	1	-	-	1	-	-
Total equity securities	2,517	66	(33)	55	-	(37)
Short-term investments	60	-	(1)	39	-	-
Other investments	699	-	(472)	412	449	-
Other assets	-	-	-	-	-	-
Total assets	\$4,408	\$312	\$(668)	\$1,645	\$751	\$(191)

  

Liabilities, at Fair Value	Level 1	Level 2	Level 3	Total
Life insurance obligations	\$8	\$-	\$-	\$8
Total liabilities	\$8	\$-	\$-	\$8

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

**LIBERTY MUTUAL HOLDING COMPANY INC.**

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**Quantitative Information about Level 3 Fair Value Measurements**

The following table provides information about the significant unobservable inputs used for recurring fair value measurements for certain material Level 3 assets and liabilities and includes only those instruments for which information about the inputs is reasonably available to the Company. As the input information with respect to certain Level 3 instruments may not be reasonably available to the Company, balances shown below may not equal total amounts reported for such Level 3 assets and liabilities.

Assets, at Fair Value	Fair Value at December 31, 2022	Valuation Technique(s)	Unobservable Input	Range (Weighted Average)
Corporate and other	\$48	Spread Model	Credit Spread (a)	165-262 (244 bps)
Other Assets	\$8	Discounted Cash Flow	Lapse rates (b) Annuitization take-up rate (c)	1.0%-5.8% 0.0%-12.2%
<b>Liabilities, at Fair Value</b>				
Life insurance obligations	\$47	Discounted Cash Flow	Lapse rates (b) Annuitization take-up rate (c)	1.0%-12.3% 0.0%-27.3%
Assets, at Fair Value	Fair Value at December 31, 2021	Valuation Technique(s)	Unobservable Input <sup>(a)</sup>	Range (Weighted Average)
Other MBS and ABS	\$1	Spread Model	Credit Spread (a)	894-894 (894 bps)
Corporate and other	\$63	Spread Model	Credit Spread (a)	57-214 (187 bps)
Other Assets	\$18	Discounted Cash Flow	Lapse rates (b) Annuitization take-up rate (c)	1.3%-6.0% 0.0%-12.2%
<b>Liabilities, at Fair Value</b>				
Life insurance obligations	\$91	Discounted Cash Flow	Lapse rates (b) Annuitization take-up rate (c)	1.3%-13.0% 0%-24.2%

(a) An increase in the credit spread will lead to a decrease in fair value and vice versa.

(b) An increase in the lapse rates will lead to a decrease in fair value and vice versa.

(c) An increase in the take-up rate will lead to an increase in fair value and vice versa.

The Company had no material assets or liabilities that were measured at fair value on a nonrecurring basis during the years ended December 31, 2022 and 2021.

**Fair Value Option**

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

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

**(11) COMMITMENTS AND CONTINGENT LIABILITIES**

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

The Company is contingently liable for structured settlement obligations for which it has accepted assignments. The loss contingency would arise if the issuer of the guarantee contract related to the structured settlement liabilities were unable to fulfil their obligations. At December 31, 2022 and 2021, the contingent liability was \$1,273 and \$1,363, respectively.

As of December 31, 2022, the Company had unfunded commitments in traditional private equity partnerships, real estate, private credit, natural resources, and other of \$2,377, \$3,029, \$1,867, \$1,254 (\$1,197 of which is related to energy transition and infrastructure), and \$80, respectively.

As of December 31, 2022, the Company had commitments to purchase various residential MBS at a cost and fair value of \$262 and \$265, respectively.

As of December 31, 2022, the Company had \$482 of undrawn letter of credit outstanding secured by assets of \$526.

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#### (12) LEASES

The Company's leases consist principally of real estate operating leases that are recognized on a straight-line basis over the term of the lease. A right-of-use asset and lease liability is recognized as part of other assets and other liabilities, respectively, in the consolidated balance sheet.

December 31, 2022

Lease cost	
Operating leases	\$144
Short-term leases <sup>(1)</sup>	1
Lease expense	145
Less: sublease income <sup>(2)</sup>	53
Net lease cost	\$92
<b>Other information on operating leases</b>	
Cash payments to settle a lease liability reported in cash flows	\$98
Right-of-use assets obtained in exchange for new lease liabilities	
Weighted average discount rate	1.0%
Weighted average remaining lease term in years	5.8 years

<sup>(1)</sup> Leases with an initial term of twelve months or less are not recorded on the balance sheet.

<sup>(2)</sup> Sublease income consists of rent from third parties of office space and is recognized as part of fee and other revenues in the consolidated statement of income.

Net operating lease expense was \$126 and \$147 for the years ended December 31, 2021 and 2020.

The following table presents the contractual maturities of the Company's operating lease liabilities:

2023	\$87
2024	72
2025	60
2026	45
2027	40
Thereafter	83
Total undiscounted lease payments	387
Less: present value adjustment	24
Operating lease liability	\$363

The capital lease obligation as of December 31, 2022 was \$59 and is included in other liabilities in the accompanying consolidated balance sheet. Amortization of the lease obligation was \$47 for the year ended December 31, 2022. In 2021, the Company entered into an arrangement to sell and leaseback certain furniture and equipment. The interest rate on this lease is 1.23%. The transaction is accounted for as a capital lease. As of December 31, 2022, the Company's amortization of the lease obligation under the sale-leaseback agreement through maturity is approximately \$47 for 2023 and \$12 for 2024.

#### (13) POLICYHOLDERS' EQUITY

The statutory surplus of the Company's domestic insurance companies was \$26,739 and \$26,481 as of December 31, 2022 and 2021, respectively. The statutory net income of the Company's domestic insurance companies was \$646, \$1,197, and \$782 for the years ended December 31, 2022, 2021, and 2020, respectively. The Company's domestic insurance subsidiaries prepare statutory basis financial statements in accordance with the National Association of Insurance Commissioners' Accounting Practices and Procedures Manual ("NAIC APP"), subject to any deviations prescribed or permitted by the insurance commissioners of the various insurance companies' states of domicile. The Company does not have any material permitted practices that deviate from the NAIC APP.

#### Dividends

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 meet its financial needs and does not exceed the insurer's unassigned surplus. However, no insurer may pay an extraordinary dividend without the approval or nondisapproval 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

## LIBERTY MUTUAL HOLDING COMPANY INC.

### Notes to Consolidated Financial Statements

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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 (a) 10% of the insurer's surplus as regards policyholders as of the preceding December 31, or (b) 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 the notes held at LMGI, as could a redomestication or merger of LMIC, LMPICO, LMFIC, EICOW, or SAM to a different domiciliary state. The maximum dividend payout in 2023 that may be made prior to regulatory approval is \$2,313.

#### **(14) SUBSEQUENT EVENTS**

Management has assessed material subsequent events through February 23, 2023, the date the financial statements were available to be issued.