UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2022

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____to_____

Commission file number 001-10898

The Travelers Companies, Inc.

(Exact name of registrant as specified in its charter)

Minnesota	**41-0518860**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

485 Lexington Avenue
New York, NY 10017
(Address of principal executive offices) (Zip code)
(917) 778-6000
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, without par value	TRV	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer (as defined in Rule 405 of the Securities Act). Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Act:

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

As of June 30, 2022, the aggregate market value of the registrant's voting and non-voting common equity held by non-affiliates was $40,004,782,316.

As of February 13, 2023, 232,094,271 shares of the registrant's common stock (without par value) were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Proxy Statement relating to the 2023 Annual Meeting of Shareholders are incorporated by reference into Part III of this report.

The Travelers Companies, Inc.

Annual Report on Form 10-K

For Fiscal Year Ended December 31, 2022

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PART I
Item 1. BUSINESS

The Travelers Companies, Inc. (together with its consolidated subsidiaries, the Company) is a holding company principally engaged, through its subsidiaries, in providing a wide range of commercial and personal property and casualty insurance products and services to businesses, government units, associations and individuals. The Company is incorporated as a general business corporation under the laws of the State of Minnesota and is one of the oldest insurance organizations in the United States, dating back to 1853. The principal executive offices of the Company are located at 485 Lexington Avenue, New York, New York 10017, and its telephone number is (917) 778-6000. The Company also maintains executive offices in Hartford, Connecticut, and St. Paul, Minnesota. The term "TRV" in this document refers to The Travelers Companies, Inc., the parent holding company excluding subsidiaries.

PROPERTY AND CASUALTY INSURANCE OPERATIONS

The property and casualty insurance industry is highly competitive in the areas of price, service, product offerings, agent and broker relationships and other methods of distribution. Distribution methods include the use of local and national independent agents and brokers, agency aggregators and carrier-based agencies, as well as direct to consumer, affinity and other partner platforms. According to A.M. Best, there are approximately 1,100 property and casualty groups in the United States, comprising approximately 2,600 property and casualty companies. Of those groups, the top 150 accounted for approximately 94% of the consolidated industry's total net written premiums in 2021. The Company competes with both foreign and domestic insurers. In addition, some property and casualty insurers writing commercial lines of business, including the Company, offer products for alternative forms of risk protection in addition to traditional insurance products. These products include large deductible programs and various forms of self-insurance, some of which utilize captive insurance companies and risk retention groups. The Company's competitive position in the marketplace is based on many factors, including the following:

- ability to profitably price business, retain existing customers and obtain new business;
- premiums charged, contract terms and conditions, products and services offered (including the ability to design customized programs);
- agent, broker and policyholder relationships;
- ability to keep pace relative to competitors with changes in technology and information systems;
- ability to use data and analytics to make decisions;
- speed of claims payment;
- ability to provide a positive customer experience;
- ability to provide products and services in a cost effective manner;
- ability to provide new products and services to meet changing customer needs;
- ability to adapt to changes in business models, technology, customer preferences or regulation impacting the markets in which the Company operates;
- perceived overall financial strength and corresponding ratings assigned by independent rating agencies;
- ability to recruit and retain qualified employees;
- geographic scope of business; and
- local presence.

In addition, the marketplace is affected by the available capacity of the insurance industry, as measured by statutory capital and surplus, and the availability of reinsurance from both traditional sources, such as reinsurance companies and capital markets (through catastrophe bonds), and non-traditional sources, such as hedge funds and pension plans. Industry capacity as measured by statutory capital and surplus expands and contracts primarily in conjunction with profit levels generated by the industry, less amounts returned to shareholders through dividends and share repurchases. Capital raised by debt and equity offerings may also increase statutory capital and surplus.

Pricing and Underwriting

Pricing of the Company's property and casualty insurance products is generally developed based upon an estimation of expected losses, the expenses associated with producing, issuing and servicing business and managing claims, the time value of money related to the expected loss and expense cash flows, and a reasonable profit margin that considers the capital needed to support the Company's business. The Company has a disciplined approach to underwriting and risk management that emphasizes product returns and profitable growth over time rather than premium volume or market share. The Company's insurance subsidiaries are subject to state laws and regulations regarding rate and policy form approvals. The applicable state laws and regulations establish standards in certain lines of business to ensure that rates are not excessive, inadequate, unfairly

discriminatory, or used to engage in unfair price competition. The Company's ability to increase rates and the relative timing of the process are dependent upon each respective state's requirements, as well as the competitive market environment.

Geographic Distribution

The following table shows the geographic distribution of the Company's consolidated direct written premiums for the year ended December 31, 2022:

Location	% of Total
Domestic:	
California	10.4 %
Texas [1]	8.6
New York	8.5
Florida	4.2
Pennsylvania	4.1
Illinois	3.8
Georgia	3.8
New Jersey	3.8
Massachusetts	3.0
All other domestic [2]	43.9
Total Domestic	94.1
International:	
Canada	3.3
All other international	2.6
Total International	5.9
Consolidated total	100.0 %

(1) The percentage for Texas includes business written by the Company through a fronting agreement with another insurer.

(2) No other single state accounted for 3.0% or more of the Company's consolidated direct written premiums written in 2022.

Catastrophe Exposure

The Company's property and casualty insurance operations expose it to claims arising out of catastrophes. The Company uses various analyses and methods, including proprietary and third-party modeling processes, to monitor and analyze underwriting risks of business in natural catastrophe-prone areas and target risk areas for conventional terrorist attacks (defined as attacks other than nuclear, biological, chemical or radiological events). The Company relies, in part, upon these analyses to make underwriting decisions designed to manage its exposure on catastrophe-exposed business. For example, as a result of these analyses, the Company has at various times limited the writing of new property and homeowners business in some markets and has selectively taken underwriting actions on new and existing business. These underwriting actions on new and existing business include tightening underwriting standards, selective price increases and changes to policy terms specific to hurricane-, tornado-, wind-, wildfire- and hail-prone areas. See "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Catastrophe Modeling" and "—Changing Climate Conditions." The Company also utilizes reinsurance to manage its aggregate exposures to catastrophes. See "—Reinsurance."

BUSINESS INSURANCE

Business Insurance offers a broad array of property and casualty insurance products and services to its customers, primarily in the United States, as well as in Canada, the United Kingdom, the Republic of Ireland and throughout other parts of the world, including as a corporate member of Lloyd's. Business Insurance is organized as follows:

Domestic

- *Select Accounts* provides small businesses with property and casualty insurance products and services, including commercial multi-peril, workers' compensation, commercial automobile, general liability and commercial property.

- *Middle Market* provides mid-sized businesses with property and casualty insurance products and services, including workers' compensation, general liability, commercial multi-peril, commercial automobile and commercial property, as well as risk management, claims handling and other services. Middle Market generally provides these products to mid-sized businesses through *Commercial Accounts,* as well as to targeted industries through *Construction*, *Technology*, *Public Sector Services* and *Oil & Gas*, and additionally, provides mono-line umbrella and excess coverage insurance through *Excess Casualty.* Middle Market also provides insurance for goods in transit and movable objects, as well as builders' risk insurance, through *Inland Marine*; insurance for the marine transportation industry and related services, as well as other businesses involved in international trade, through *Ocean Marine*; and comprehensive breakdown for equipment, including property and business interruption, through *Boiler & Machinery*.

- *National Accounts* provides large companies with casualty insurance products and services, including workers' compensation, commercial automobile and general liability, generally utilizing loss-sensitive products, on both a bundled and unbundled basis, as well as risk management, claims administration and other insurance-related services. National Accounts also includes the Company's commercial residual market business, which primarily offers workers' compensation claims, policy management and other administrative services related to the involuntary market. National Accounts also offers insurance-related services, such as claims administration, risk management, loss control and risk management information services through Constitution State Services LLC, a wholly-owned subsidiary of the Company.

- *National Property and Other* provides traditional and customized commercial property insurance programs to large and mid-sized customers through *National Property.* National Property and Other also provides insurance coverage for the commercial trucking industry through *Northland Transportation* and serves small- to medium-sized agricultural businesses, including farms, ranches and other agricultural-related operations through *Agribusiness.* National Property and Other also includes commercial property and general liability policies for small, difficult-to-place specialty classes of commercial business, primarily on an excess and surplus lines basis through *Northfield*, and also offers tailored property and casualty insurance programs on an admitted basis for customers with common risk characteristics or coverage requirements through *National Programs*.

International

- *International*, through its operations in Canada, the United Kingdom and the Republic of Ireland, provides property and casualty insurance and risk management services to several customer groups, including, among others, those in the technology, manufacturing and public services industry sectors. International also provides insurance for both the foreign exposures of United States organizations and the United States exposures of foreign organizations through *Global Services*. At its Lloyd's syndicate (Syndicate 5000), for which the Company provides 100% of the capital, International underwrites five principal businesses — marine, energy, property, aviation and special risks.

Business Insurance also includes Simply Business, a leading provider of small business insurance policies primarily in the United Kingdom, and Business Insurance Other, which primarily comprises the Company's asbestos and environmental liabilities, and the assumed reinsurance and certain other runoff operations.

Selected Market and Product Information

The following table sets forth Business Insurance's net written premiums by market and product line for the periods indicated. For a description of the markets and product lines referred to in the table, see "—Principal Markets and Methods of Distribution" and "—Product Lines," respectively.

(for the year ended December 31, in millions)	2022	2021	2020	% of Total 2022
By market:				
Domestic:				
Select Accounts	**$ 3,099**	$ 2,833	$ 2,821	**17.6 %**
Middle Market	**9,923**	8,933	8,511	**56.3**
National Accounts	**1,085**	987	996	**6.1**
National Property and Other	**2,467**	2,265	2,086	**14.0**
Total Domestic	**16,574**	15,018	14,414	**94.0**
International	**1,061**	1,074	1,017	**6.0**
Total Business Insurance by market	**$ 17,635**	$ 16,092	$ 15,431	**100.0 %**
By product line:				
Domestic:				
Workers' compensation	**$ 3,397**	$ 3,175	$ 3,349	**19.3 %**
Commercial automobile	**3,061**	2,898	2,790	**17.4**
Commercial property	**2,771**	2,408	2,163	**15.7**
General liability	**2,962**	2,699	2,447	**16.8**
Commercial multi-peril	**4,304**	3,768	3,608	**24.4**
Other	**79**	70	57	**0.4**
Total Domestic	**16,574**	15,018	14,414	**94.0**
International	**1,061**	1,074	1,017	**6.0**
Total Business Insurance by product line	**$ 17,635**	$ 16,092	$ 15,431	**100.0 %**

Principal Markets and Methods of Distribution

Business Insurance markets and distributes products through thousands of independent agencies and brokers. Agencies and brokers are serviced by 86 field offices and supported by customer service centers where the Company performs services for agents for a fee and centralized business centers where the Company processes new and renewal business that meet certain underwriting criteria.

Business Insurance builds relationships with well-established, independent insurance agencies and brokers. In selecting new independent agencies and brokers to distribute its products, Business Insurance considers, among other factors, each agency's or broker's financial strength, staff experience and strategic fit with the Company's operating and marketing plans. Once an agency or broker is appointed, Business Insurance regularly monitors its performance. The majority of products offered in the United States are distributed through independent agents and brokers, many of whom also sell the Company's Personal Insurance and Bond & Specialty Insurance products. Business Insurance continues to make significant investments to enable real-time interface capabilities with its independent agencies and brokers.

Domestic

- **Select Accounts** markets and distributes products and services to small businesses, generally with fewer than 50 employees, through a large network of independent agents and brokers. Products offered by Select Accounts are guaranteed-cost policies, including packaged products covering property and liability exposures. Each small business risk is independently evaluated via an automated underwriting platform which in turn enables agents to quote, bind and issue a substantial amount of new small business risks in an efficient manner. Risks with more complex characteristics are underwritten with the assistance of Company personnel.

- **Middle Market** markets and distributes products and services primarily to mid-sized businesses with 50 to 1,000 employees through a large network of independent agents and brokers. The Company offers a full line of products to its Middle Market customers with an emphasis on guaranteed-cost programs. Each account is underwritten based on the unique risk characteristics, loss history and coverage needs of the account. The ability to underwrite at this detailed level allows Middle Market to have a broad risk appetite and a diversified customer base. Within Middle Market, products and services are tailored to certain targeted industry segments of significant size and complexity that require unique underwriting, claims handling services, risk management or other insurance-related products and services.

- **National Accounts** markets and distributes products and services to large companies through a large network of national and regional brokers. Products offered by National Accounts are primarily casualty programs that utilize loss-sensitive products, such as large deductible, and to a lesser extent, retrospectively rated insurance and self-insured retention plans. National Accounts also offers insurance-related services, such as claims administration, risk management, loss control and risk management information services through Constitution State Services LLC, a wholly-owned subsidiary of the Company. The commercial residual market business of National Accounts services approximately 38% of the total workers' compensation assigned risk market, making the Company one of the largest servicing carriers in the industry.

- **National Property and Other** markets and distributes products and services to a wide customer base, providing traditional and customized insurance programs to a broad range of customer sizes through a large network of agents and brokers. National Property and Other also provides insurance coverage to the excess and surplus lines market, which is characterized by the absence of regulation related to rate and form, and allows for more pricing and coverage flexibility to write certain classes of business. In working with agents or program managers on a brokerage basis, National Property and Other underwrites the business internally and sets the premium level. In working with agents or program managers with delegated underwriting authority, the agents produce and underwrite business subject to pricing and underwriting guidelines that have been specifically designed for each facility or program.

International markets and distributes products and services principally through brokers in each of the countries in which it operates. International also writes business at Lloyd's, where its products are distributed through Lloyd's wholesale and retail brokers. By virtue of Lloyd's worldwide licenses, Business Insurance has access to international markets across the world.

Effective January 1, 2023, the Company entered into a quota share reinsurance agreement with subsidiaries of Fidelis Insurance Holdings Limited (Fidelis) pursuant to which the Company will assume 20% of the business written by Fidelis during 2023, subject to a loss ratio cap. The Company's portion of net written premiums from Fidelis is expected to be approximately $550 million to $600 million for the full year and will be reported as part of the International results of Business Insurance. The Company also has a minority investment in Fidelis.

Pricing and Underwriting

Business Insurance utilizes underwriting, claims, engineering, actuarial and product development disciplines for particular industries, together with extensive amounts of proprietary data gathered and analyzed over many years, as well as third-party data, to facilitate its risk selection process and develop pricing parameters. Business Insurance utilizes both proprietary forms and standard industry forms for the insurance policies it issues.

A portion of business in this segment, particularly in National Accounts and Construction, is written with large deductible insurance policies. Under workers' compensation insurance contracts with large deductible features, the Company is obligated to pay the claimant the full amount of the claim. The Company is subsequently reimbursed by the contractholder for the deductible amount and, as a result, is subject to credit risk until such reimbursement is made. At December 31, 2022, contractholder payables on unpaid losses within the deductible layer of large deductible policies were approximately $3.60 billion, and the associated receivables (net of allowance for expected credit losses) were approximately $3.58 billion. Business Insurance also utilizes retrospectively rated policies for a portion of its business, primarily for workers' compensation coverage. Although the retrospectively rated feature of the policy substantially reduces insurance risk for the Company, it introduces additional credit risk to the Company. Premiums receivable from holders of retrospectively rated policies totaled approximately $70 million at December 31, 2022. Significant collateral, primarily letters of credit and, to a lesser extent, cash collateral, trusts or surety bonds, is generally obtained for large deductible plans and/or retrospectively rated policies that provide for deferred collection of deductible recoveries and/or ultimate premiums. The amount of collateral requested is based upon the creditworthiness of the customer and the nature of the insured risks. Business Insurance regularly monitors the credit exposure on individual accounts and the adequacy of collateral. For additional information concerning credit risk in certain of the Company's businesses, see "Item 1A—Risk Factors—We are exposed to credit risk in certain of our insurance operations and with respect to certain guarantee or indemnification arrangements that we have with third parties."

Product Lines

Business Insurance provides the following types of coverages:

Domestic

- **Workers' Compensation.** Provides coverage for employers for specified benefits payable under state or federal law for workplace injuries to employees. There are typically four types of benefits payable under workers' compensation policies:

medical benefits, disability benefits, death benefits and vocational rehabilitation benefits. The Company emphasizes managed care cost containment strategies, which involve employers, employees and care providers in a collaborative effort that focuses on the injured employee's early return to work and cost-effective quality care.

- **Commercial Automobile.** Provides coverage for businesses against losses incurred from personal bodily injury, bodily injury to third parties, property damage to an insured's vehicle and property damage to other vehicles and other property resulting from the ownership, maintenance or use of automobiles and trucks in a business.

- **Commercial Property.** Provides coverage for loss of or damage to buildings, inventory and equipment resulting from a variety of events, including, among others, hurricanes and other windstorms, tornadoes, earthquakes, hail, wildfires, severe winter weather, floods, volcanic eruptions, tsunamis, theft, vandalism, fires, explosions, terrorism and financial loss due to business interruption resulting from covered property damage. Commercial property also includes specialized equipment insurance, which provides coverage for loss or damage resulting from the mechanical breakdown of boilers and machinery, and ocean and inland marine insurance, which provides coverage for goods in transit and unique, one-of-a-kind exposures.

- **General Liability.** Provides coverages for businesses against third-party claims arising from accidents occurring on their premises or arising out of their operations, including as a result of injuries sustained from products sold. Coverages may also include directors' and officers' liability arising in their official capacities, employment practices liability insurance, fiduciary liability for trustees and sponsors of pension, health and welfare, and other employee benefit plans, errors and omissions insurance for employees, agents, professionals and others arising from acts or failures to act under specified circumstances, cyber liability, as well as umbrella and excess insurance.

- **Commercial Multi-Peril.** Provides a combination of the property and liability coverages described in the foregoing product line descriptions.

The Company offers the above coverages through the following types of products and services:

- guaranteed-cost insurance products, where the premiums charged are not adjusted for actual loss experience during the covered period;

- loss-sensitive insurance products, including large deductible and retrospectively rated policies, where fees or premiums are adjusted based on actual loss experience of the insured during the policy period; and

- service programs, which are generally sold to the Company's National Accounts customers, where the Company receives fees rather than premiums for providing insurance-related services, such as claims administration, risk management, loss control and risk management information services.

The Company also participates in state assigned risk pools as a servicing carrier and pool participant.

International

- Provides coverage for employers' liability (similar to workers' compensation coverage in the United States), public and product liability (the equivalent of general liability), professional indemnity (similar to professional liability coverage), commercial property, commercial automobile, marine, aviation, onshore and offshore energy, construction, terrorism, personal accident and kidnap & ransom. Marine provides coverage for ship hulls, cargoes carried, private yachts, marine-related liability, ports and terminals, and fine art. Aviation provides coverage for worldwide aviation risks, including physical damage and liabilities for airline, aerospace, general aviation, aviation war and space risks. Personal accident provides financial protection in the event of death or disablement due to accidental bodily injury, while kidnap & ransom provides financial protection against kidnap, hijack, illegal detention and extortion. While the covered hazards may be similar to those in the U.S. market, the different legal environments can make the product risks and coverage terms very different from those the Company faces in the United States.

Net Retention Policy Per Risk

The following discussion reflects the Company's retention policy with respect to Business Insurance as of January 1, 2023. For third-party liability, Business Insurance generally limits its net retention, through the use of reinsurance, to a maximum of $14.0 million per insured, per occurrence, subject further to a significant aggregate annual deductible. For property exposures, Business Insurance generally limits its net retention, through the use of reinsurance, to a maximum amount per risk of $21.0

million per occurrence. Business Insurance generally retains its workers' compensation exposures. Reinsurance treaties often have aggregate limits or caps which may result in larger net per-risk retentions if the aggregate limits or caps are reached. Business Insurance utilizes facultative reinsurance to provide additional limits capacity or to reduce retentions on an individual risk basis. Business Insurance may also retain amounts greater than those described herein based upon the individual characteristics of the risk.

Geographic Distribution

The following table shows the geographic distribution of Business Insurance's direct written premiums for the year ended December 31, 2022:

Location	% of Total
Domestic:	
California	12.9 %
New York	8.8
Texas	7.2
Illinois	4.5
Florida	4.1
New Jersey	3.9
Pennsylvania	3.8
All other domestic [1]	49.7
Total Domestic	94.9
International:	
Canada	2.2
All other international	2.9
Total International	5.1
Total Business Insurance	100.0 %

(1) No other single state accounted for 3.0% or more of Business Insurance's direct written premiums in 2022.

Competition

The insurance industry is represented in the commercial marketplace by many insurance companies of varying size as well as other entities offering risk alternatives, such as self-insured retentions or captive programs. Market competition operates within the insurance regulatory framework to set the price charged for insurance products and the levels of coverage and service provided. A company's success in the competitive commercial insurance landscape is largely measured by its ability to profitably provide insurance and services, including claims handling and risk management, at prices and terms that retain existing customers and attract new customers, as well as its financial strength. See "Item 1A—Risk Factors—The intense competition that we face, including with respect to attracting and retaining employees, and the impact of innovation, technological change and changing customer preferences on the insurance industry and the markets in which we operate, could harm our ability to maintain or increase our business volumes and our profitability."

Domestic

Competitors typically write Select Accounts business through independent agents and brokers and, to a lesser extent, as direct writers, including through affinity and other partner platforms. Both national (including international companies doing business in the U.S.) and regional property and casualty insurance companies compete in the Select Accounts market which generally comprises lower-hazard, "Main Street" business customers. Risks are underwritten and priced using standard industry practices and a combination of proprietary and standard industry product offerings. Competition in this market is focused on ease and speed of doing business and price.

Competitors typically write Middle Market business through independent agents and brokers. Several of Middle Market's operations require unique combinations of industry knowledge, customized coverage, specialized risk control and loss handling services, along with partnerships with agents and brokers that also focus on these markets. Competitors in this market are

primarily national property and casualty insurance companies (including international companies doing business in the U.S.) that write most classes of business using traditional products and pricing, and regional insurance companies. Companies compete based on product offerings, service levels, price, claim and loss prevention services and ease and speed of doing business. Efficiency through automation and response time to agent, broker and customer needs is one key to success in this market.

In the National Accounts market, competition is based on price, product offerings, claim and loss prevention services, managed care cost containment, risk management information systems and collateral requirements. National Accounts primarily competes with national property and casualty insurance companies (including international companies doing business in the U.S.), as well as with other underwriters of property and casualty insurance in the alternative risk transfer market, such as self-insurance plans, captives managed by others, third-party administrators and a variety of other risk-financing vehicles and mechanisms. The residual market division competes for state contracts to provide claims and policy management services.

National Property and Other competes in focused target markets. Each of these markets is different and requires unique combinations of industry knowledge, customized coverage, specialized risk management and claims handling services, along with partnerships with agents and brokers that also focus on these markets. Some of these businesses compete with national carriers (including international companies doing business in the U.S.) with similarly dedicated underwriting and marketing groups, whereas others compete with smaller regional companies. Specialized agents and brokers, including wholesale agents and program managers, supplement this focused target market approach. National Property and Other's competitive strategy typically is based on the application of focused industry knowledge to insurance and risk needs.

International

International competes with numerous international and domestic insurers in Canada, the United Kingdom and the Republic of Ireland. Companies compete on the basis of price, product offerings, distribution partnerships, the level of claim and risk management services provided and the ease and speed of doing business. The Company has developed expertise in various markets in these countries similar to those served in the United States and provides both property and casualty coverage for these markets.

At Lloyd's, International competes with other syndicates operating in the Lloyd's market as well as international and domestic insurers in the various markets where the Lloyd's operation writes business worldwide, with an emphasis on short-tail insurance lines. Competition is based on price, product and service.

BOND & SPECIALTY INSURANCE

Bond & Specialty Insurance offers surety, fidelity, management liability, professional liability, and other property and casualty coverages and related risk management services to its customers, primarily in the United States, and certain surety and specialty insurance products in Canada, the United Kingdom, the Republic of Ireland and Brazil (through a joint venture as described below), in each case utilizing various degrees of financially-based underwriting approaches. The range of coverages includes performance, payment and commercial surety bonds for construction and general commercial enterprises; management liability coverages including directors' and officers' liability, employment practices liability, fidelity liability, fiduciary liability and cyber risk for public corporations, private companies, not-for-profit organizations and financial institutions; professional liability coverage for a variety of professionals including, among others, lawyers and design professionals; in the United States only, property, workers' compensation, auto and general liability for financial institutions; and transactional liability coverages to public and private companies.

Bond & Specialty Insurance's surety business in Brazil and Colombia is conducted through Junto Holding Brasil S.A. (Junto) and Junto Holding Latam S.A. in Brazil. The Company owns 49.5% of both Junto, a market leader in surety coverages in Brazil, and Junto Holding Latam S.A., which owns a majority interest in JMalucelli Travelers Seguros S.A., a Colombian surety provider. These joint venture investments are accounted for using the equity method and are included in "other investments" on the consolidated balance sheet.

Selected Product Information

The following table sets forth Bond & Specialty Insurance's net written premiums by product line for the periods indicated. For a description of the product lines referred to in the table, see "—Product Lines." In addition, see "—Principal Markets and Methods of Distribution" for a discussion of distribution channels for Bond & Specialty Insurance's product lines.

(for the year ended December 31, in millions)	2022	2021	2020	% of Total 2022
Domestic:				
Fidelity and surety	**$ 1,329**	$ 1,123	$ 1,072	**35.6 %**
General liability	**1,639**	1,530	1,311	**43.9**
Other	**225**	218	231	**6.0**
Total Domestic	**3,193**	2,871	2,614	**85.5**
International	**539**	505	337	**14.5**
Total Bond & Specialty Insurance	**$ 3,732**	$ 3,376	$ 2,951	**100.0 %**

Principal Markets and Methods of Distribution

Bond & Specialty Insurance markets and distributes the vast majority of its products in the United States through many of the same independent agencies and brokers that distribute Business Insurance's products in the United States. Bond & Specialty Insurance builds relationships with well-established, independent insurance agencies and brokers. In selecting new independent agencies and brokers to distribute its products, Bond & Specialty Insurance considers, among other factors, each agency's or broker's profitability, financial stability, staff experience and strategic fit with its operating and marketing plans. Once an agency or broker is appointed, its ongoing performance is regularly monitored. Bond & Specialty Insurance continues to make investments to enable real-time interface capabilities with its independent agencies and brokers.

Pricing and Underwriting

Bond & Specialty Insurance utilizes underwriting, claims, engineering, actuarial and product development disciplines for specific accounts and industries, together with extensive amounts of proprietary data gathered and analyzed over many years, as well as third-party data, to facilitate its risk selection process and develop pricing parameters. Bond & Specialty Insurance utilizes both proprietary forms and standard industry forms for the insurance policies and bonds it issues.

Product Lines

Bond & Specialty Insurance writes the following types of coverages:

Domestic

- **Fidelity and Surety.** Provides fidelity insurance coverage, which protects an insured for loss due to embezzlement or misappropriation of funds by an employee, and surety, which is a three-party agreement whereby the surety company agrees to pay a third party or to complete an obligation in response to the default, acts or omissions of a bonded party. Surety bonds are generally provided for construction performance; legal matters, such as appeals; trustees in bankruptcy and probate; and other performance obligations.

- **General Liability.** Provides coverage for specialized liability exposures as described above in more detail in the "Business Insurance" section of this report, as well as transactional liability coverages.

- **Other.** Coverages include Commercial Property, Workers' Compensation, Commercial Automobile and Commercial Multi-Peril, which are described above in more detail in the "Business Insurance" section of this report.

International

- Fidelity and Surety and certain General Liability products are provided internationally to various customer groups.

Net Retention Policy Per Risk

The following discussion reflects the Company's retention policy with respect to Bond & Specialty Insurance as of January 1, 2023. For management liability coverages, including but not limited to directors' and officers' liability, professional liability, employment practices liability, fidelity liability, fiduciary liability and cyber risk liability, Bond & Specialty Insurance generally limits net retentions to $25.0 million per policy. For surety, where limits are often significant, Bond & Specialty Insurance generally retains up to $132.5 million probable maximum loss (PML) per principal, after reinsurance, but may retain higher amounts based on the type of obligation, credit quality and other credit risk factors. Reinsurance treaties often have

aggregate limits or caps which may result in larger net per risk retentions if the aggregate limits or caps are reached. Bond & Specialty Insurance utilizes facultative reinsurance to provide additional limits capacity or to reduce retentions on an individual risk basis. Bond & Specialty Insurance may also retain amounts greater than those described herein based upon the individual characteristics of the risk.

Geographic Distribution

The following table shows the geographic distribution of Bond & Specialty Insurance's direct written premiums for the year ended December 31, 2022:

Location	% of Total
Domestic:	
California	10.2 %
Texas	6.4
New York	6.3
Florida	4.9
Illinois	3.6
Pennsylvania	3.5
All other domestic [1]	50.5
Total Domestic	85.4
International:	
United Kingdom	7.8
Canada	4.4
All other international	2.4
Total International	14.6
Total Bond & Specialty Insurance	100.0 %

(1) No other single state accounted for 3.0% or more of Bond & Specialty Insurance's direct written premiums in 2022.

Competition

The competitive landscape in which Bond & Specialty Insurance operates is affected by many of the same factors described above for Business Insurance. Competitors in this market are primarily national property and casualty insurance companies (including international companies doing business in the U.S.) that write most classes of business and, to a lesser extent, regional insurance companies and companies that have developed niche programs for specific industry segments.

Domestic

Bond & Specialty Insurance underwrites and markets its products to all sizes of businesses and other organizations, as well as individuals. The Company believes that its reputation for timely and consistent decision making and financial stability, a nationwide network of local underwriting, claims and industry experts and strong producer and customer relationships, as well as its ability to offer its customers a full range of products and services, provides Bond & Specialty Insurance an advantage over many of its competitors and enables it to compete effectively in a complex, dynamic marketplace. The Company believes that the ability of Bond & Specialty Insurance to cross-sell its products to customers of Business Insurance and Personal Insurance also provides the Company with a competitive advantage. See "Item 1A—Risk Factors—The intense competition that we face, including with respect to attracting and retaining employees, and the impact of innovation, technological change and changing customer preferences on the insurance industry and the markets in which we operate, could harm our ability to maintain or increase our business volumes and our profitability."

International

International competes with numerous international and domestic insurers in Canada, the United Kingdom, the Republic of Ireland, and in Brazil and Colombia through joint ventures. Companies compete on the basis of price, product offerings, the

level of claim and risk management services provided, the ease and speed of doing business and stability of the insurer. The Company has developed expertise in various markets in these countries similar to those served in the United States and provides certain specialty coverages for these markets.

PERSONAL INSURANCE

Personal Insurance offers a broad range of property and casualty insurance products and services covering individuals' personal risks, primarily in the United States, as well as in Canada. Personal Insurance's primary products of automobile and homeowners insurance are complemented by a broad suite of related coverages.

Selected Product and Distribution Channel Information

The following table sets forth net written premiums for Personal Insurance's business by product line for the periods indicated. For a description of the product lines referred to in the following table, see "—Product Lines." In addition, see "—Principal Markets and Methods of Distribution" for a discussion of distribution channels for Personal Insurance's product lines.

(for the year ended December 31, in millions)	2022	2021	2020	% of Total 2022
Domestic:				
Automobile	**$ 6,482**	$ 5,827	$ 5,369	**46.2 %**
Homeowners and Other	**6,916**	5,980	5,329	**49.2**
Total Domestic	**13,398**	11,807	10,698	**95.4**
International	**649**	684	652	**4.6**
Total Personal Insurance	**$ 14,047**	$ 12,491	$ 11,350	**100.0 %**

Principal Markets and Methods of Distribution

Domestic

Personal Insurance products are marketed and distributed primarily through thousands of independent agents and brokers located throughout the United States, supported by personnel in eight sales regions. In addition, sales and service are provided to customers through five contact centers. Principal markets for Personal Insurance products are spread throughout the contiguous United States.

In selecting new independent agencies to distribute its products, Personal Insurance considers many factors, including financial stability, staff experience, customer facing online and digital capabilities and operating and marketing plans. Once an agency is appointed, Personal Insurance regularly monitors its performance.

Agents can access the Company's agency service portal for a number of resources, including customer service, marketing and claims management. In addition, agencies can choose to shift the ongoing service responsibility for Personal Insurance's customers to the Company's Customer Care Program, where the Company provides, on behalf of an agency, a comprehensive array of customer service needs, including billing inquiries, coverage discussions and account changes. Approximately two thousand agents take advantage of this service alternative, for which they generally pay a fee.

Personal Insurance also markets and distributes its products directly to consumers, largely through digital marketing, and additional channels, including corporations that make the Company's product offerings available to their employees primarily through payroll deductions, consumer associations and affinity groups. Personal Insurance handles the sales and service for these programs either through a sponsoring independent agent or through the Company's contact center locations. Personal Insurance also markets and distributes its products on other distribution platforms, including carrier partnerships. Since 1995, the Company has had a distribution agreement with the agency affiliate of GEICO to underwrite a portion of their homeowners business.

International

In Canada, the Company markets and distributes its personal insurance products principally through hundreds of brokers located throughout the country.

Pricing and Underwriting

Personal Insurance has developed a product management methodology that integrates the disciplines of underwriting, claims, actuarial and product development. This approach is designed to maintain high-quality underwriting discipline and pricing segmentation. Proprietary and third-party data accumulated over many years is analyzed, and Personal Insurance uses a variety of risk differentiation models to facilitate its pricing segmentation and underwriting. The Company's product management area establishes underwriting guidelines integrated with its filed pricing and rating plans, which enable Personal Insurance to effectively execute its risk selection and pricing processes.

Domestic

Pricing for personal automobile insurance is driven in large part by changes in the frequency of claims and changes in severity, including inflation in the cost of automobile replacements and repairs (including parts and labor), medical care and resolution of liability claims. Pricing in the homeowners business is driven in large part by changes in the frequency of claims and changes in severity, including inflation in the cost of materials, labor and household possessions. In addition to the normal risks associated with any multiple peril coverage, the profitability and pricing of both homeowners and automobile insurance are affected by the incidence of catastrophes and other weather-related events, as well as other unusual circumstances, such as the impact of supply chain disruptions, labor shortages and inflation. Insurers writing personal lines property and casualty policies may be unable to change prices until some time after the costs associated with coverage have changed, primarily because of state insurance rate regulation. The pace at which an insurer can change rates in response to changing costs depends, in part, on whether the applicable state law requires prior approval of rate changes or notification to the regulator either before or after a rate change is imposed. In states with prior approval laws, rates must be approved by the regulator before being used by the insurer. In states having "file-and-use" laws, the insurer must file rate changes with the regulator, but does not need to wait for approval before using the new rates. A "use-and-file" law requires an insurer to file rates within a period of time after the insurer begins using the new rate. Approximately one-half of the states require prior approval of most rate changes. In addition, changes to methods of marketing and underwriting in some jurisdictions are subject to state-imposed restrictions, which can make it more difficult for an insurer to significantly manage catastrophe exposures.

The Company's ability or willingness to change prices, modify underwriting terms or reduce exposure to certain geographies may be limited due to a number of factors, including public policy, the competitive environment, the evolving political and legislative environment and/or changes in the general economic climate. The Company also may choose to write business it might not otherwise write in some states for strategic purposes, such as improving access to other commercial or personal underwriting opportunities. In choosing to write business in some states, the Company also considers the costs and benefits of those states' residual markets and guaranty funds, as well as other property and casualty business the Company writes in those states.

International

Pricing and underwriting for personal automobile and homeowners insurance in Canada is driven in large part by the same factors as in the United States. For personal automobile insurance, all provinces in Canada require prior approval before rates are implemented.

Product Lines

Domestic

The primary coverages in Personal Insurance are personal automobile and homeowners and other insurance sold to individuals. Personal Insurance had approximately 9.2 million active policies (i.e., policies-in-force) in the United States at December 31, 2022.

Personal Insurance writes the following types of coverages:

- **Automobile** provides coverage for liability to others for both bodily injury and property damage, uninsured motorist protection, and for physical damage to an insured's own vehicle from collision, fire, flood, hail and theft. In addition, many states require policies to provide first-party personal injury protection, frequently referred to as no-fault coverage.

- **Homeowners and Other** provides protection against losses to dwellings and contents from a variety of perils (excluding flooding) as well as coverage for personal liability. The Company writes homeowners insurance for dwellings,

condominiums and tenants, and rental properties. The Company also writes coverage for boats and yachts, valuable personal items such as jewelry, umbrella liability, and weddings and special events.

International

- **International** provides automobile and homeowners and other coverages in Canada (similar to coverages in the United States). Personal Insurance had approximately 449,000 active policies in Canada at December 31, 2022.

Net Retention Policy Per Risk

The following discussion reflects the Company's retention policy with respect to Personal Insurance as of January 1, 2023. Personal Insurance generally retains its primary personal auto exposures in their entirety. For personal property insurance, there is an $8.0 million maximum retention per risk, net of reinsurance. Personal Insurance uses facultative reinsurance to provide additional limits capacity or to reduce retentions on an individual risk basis. Personal Insurance issues umbrella policies up to a maximum limit of $10.0 million per risk. Personal Insurance may also retain amounts greater than those described herein based upon the individual characteristics of the risk.

Geographic Distribution

The following table shows the geographic distribution of Personal Insurance's direct written premiums for the year ended December 31, 2022:

Location	% of Total
Domestic:	
Texas [1]	11.1 %
New York	8.8
California	7.1
Georgia	5.4
Pennsylvania	4.7
New Jersey	4.2
Florida	4.1
Virginia	3.6
Maryland	3.3
Colorado	3.3
Massachusetts	3.1
South Carolina	3.1
Illinois	3.0
All other domestic [2]	30.7
Total Domestic	95.5
International:	
Canada	4.5
Total International	4.5
Total Personal Insurance	100.0 %

(1) The percentage for Texas includes business written by the Company through a fronting agreement with another insurer.

(2) No other single state accounted for 3.0% or more of Personal Insurance's direct written premiums in 2022.

Competition

Domestic

Although national companies (including international companies doing business in the U.S.) write the majority of this business, Personal Insurance also faces competition from many regional and local companies. Competitors write business in both traditional and alternative distribution platforms through independent agents and as direct writers, either through the use of exclusive agents, salaried employees or direct marketing strategies. Personal Insurance primarily competes based on breadth of product offerings, price, service (including claims handling), partner and customer experience, stability of the insurer and name recognition. In the independent agent channel, Personal Insurance competes for business within each independent agency since these agencies also offer policies from competing companies. Most independent personal insurance agents utilize price comparison rating technology, sometimes referred to as "comparative raters," as a cost-efficient means of obtaining quotes from multiple companies. Because the use of this technology facilitates the process of generating multiple quotes, the technology has increased price comparison on new and renewal business.

International

Personal Insurance competes with numerous international and domestic insurers in Canada. Companies compete based on similar factors to those described above for domestic operations. The Company has developed expertise in various markets in Canada similar to those served in the United States and provides both automobile and homeowners and other coverages for this market.

See "Item 1A—Risk Factors—The intense competition that we face, including with respect to attracting and retaining employees, and the impact of innovation, technological change and changing customer preferences on the insurance industry and the markets in which we operate, could harm our ability to maintain or increase our business volumes and our profitability."

CLAIMS MANAGEMENT

The Company's claim functions are managed through its Claims Services organization, with locations in the United States and in the other countries where it does business. With approximately 13,000 employees, Claims Services employs a group of professionals with diverse skills, including claim adjusters, appraisers, attorneys, investigators, engineers, accountants, nurses, data and analytics professionals, system specialists and training, management and support personnel. Approved external service providers, such as investigators, attorneys and, when necessary, independent adjusters and appraisers, are available for use as appropriate.

United States field claim management teams located in 16 claim centers and 55 satellite and specialty-only offices in 42 states are organized to maintain focus on the specific claim characteristics unique to the businesses within the Company's business segments. Claim teams with specialized skills, required licenses, resources and workflows are matched to the unique exposures of those businesses, with local claims management dedicated to achieving optimal results within each segment, including acting as a third party administrator for large customers who self-insure and retain the Company to handle their claims process on a fee-for-service basis. The Company's home office operations provide additional support in the form of workflow design, quality management, information technology, advanced management information and data analysis, training, financial reporting and control, and human resources strategy. This structure permits the Company to maintain the economies of scale of a large, established company while retaining the agility to respond promptly to the needs of customers, brokers, agents and underwriters. Claims management for International, while generally provided locally by staff in the respective international locations due to local knowledge of applicable laws and regulations, is also managed by the Company's Claims Services organization in the United States to leverage that knowledge base and to share best practices.

An integral part of the Company's strategy to benefit customers and shareholders is its continuing industry leadership in the fight against insurance fraud through its Investigative Services unit. The Company has a nationwide staff of experts who investigate a wide array of insurance fraud schemes using in-house forensic resources and other technological tools. This staff also has specialized expertise in fire scene examinations, medical provider fraud schemes, law firm fraud schemes and data mining. The Company also dedicates investigative resources to ensure that violations of law are reported to and prosecuted by law enforcement agencies.

Claims Services uses technology, management information and data analysis to assist the Company in reviewing its claim practices and results in order to evaluate and improve its claims management performance. The Company's claims-management strategy is focused on segmentation of claims and appropriate technical specialization to drive effective claim resolution. The Company regularly monitors its investment in claim resources to maintain an effective focus on claim outcomes and a

disciplined approach to continual improvement. The Company operates a state-of-the-art claims-training facility which offers hands-on experiential learning to help ensure that its claim professionals are properly trained. In recent years, the Company has invested significant additional resources in many of its claims handling operations, including digital, analytics, artificial intelligence and automation capabilities, and regularly monitors the effect of those investments to ensure a consistent optimization among outcomes, cost and service.

Claims Services' catastrophe response strategy is to respond to a significant catastrophic event using its own personnel, enabling it to minimize reliance on independent adjusters and appraisers. The Company has developed a large dedicated catastrophe response team and trained a large Enterprise Response Team of existing employees who can be deployed on short notice in the event of a catastrophe that generates claim volume exceeding the capacity of the dedicated catastrophe response team. In recent years, these internal resources were successfully deployed to respond to a significant level of catastrophe claims.

REINSURANCE

The Company reinsures a portion of the risks it underwrites in order to manage its exposure to losses and to protect its capital. The Company cedes to reinsurers a portion of these risks and pays premiums based upon the risk and exposure of the policies subject to such reinsurance. The Company utilizes a variety of reinsurance agreements to manage its exposure to large property and casualty losses, including facultative as well as catastrophe and individual risk treaties. Ceded reinsurance involves credit risk, except with regard to mandatory pools and associations, and is predominantly subject to aggregate loss limits. Although the reinsurer is liable to the Company to the extent of the reinsurance ceded, the Company remains liable as the direct insurer on all risks reinsured. Reinsurance recoverables are reported after reductions for known insolvencies and after allowances for uncollectible amounts. The Company also holds collateral, including trust agreements, escrow funds and letters of credit, under certain reinsurance agreements. The Company monitors the financial condition of reinsurers on a regular basis and reviews its reinsurance arrangements periodically. Reinsurers are selected based on their financial condition, business practices, the price of their product offerings and the value of collateral provided. After reinsurance is purchased, the Company has limited ability to manage the credit risk of a reinsurer. In addition, in a number of jurisdictions, particularly the European Union and the United Kingdom and a small number of U.S. states, a reinsurer is permitted to transfer a reinsurance arrangement to another reinsurer, which may be less creditworthy, without a counterparty's consent, provided that the transfer has been approved by the applicable regulatory and/or court authority.

For additional information regarding reinsurance, see note 6 of the notes to the consolidated financial statements and "Item 1A—Risk Factors—We may not be able to collect all amounts due to us from reinsurers, reinsurance coverage may not be available to us in the future at commercially reasonable rates or at all and we are exposed to credit risk related to our structured settlements." For a description of reinsurance-related litigation, see note 17 of the notes to the consolidated financial statements.

Catastrophe Reinsurance

Catastrophes include hurricanes, tornadoes and other windstorms, earthquakes, hail, wildfires, severe winter weather, floods, tsunamis, volcanic eruptions, solar flares and other naturally-occurring events. Catastrophes can also result from terrorist attacks and other intentionally destructive acts including those involving cyber events, nuclear, biological, chemical and radiological events, civil unrest, explosions and destruction of infrastructure. The incidence and severity of catastrophes are inherently unpredictable. The extent of losses from a catastrophe is a function of both the total amount of insured exposure affected by the event and the severity of the event. Most catastrophes are restricted to small geographic areas; however, hurricanes, earthquakes, wildfires, cyber attacks and other events may produce significant damage or loss in larger areas, especially those areas that are heavily populated. For additional information regarding catastrophes, see "Item 1A—Risk Factors—High levels of catastrophe losses, including as a result of factors such as increased concentrations of insured exposures in catastrophe-prone areas and changing climate conditions, could materially and adversely affect our results of operations, our financial position and/or liquidity, and could adversely impact our ratings, our ability to raise capital and the availability and cost of reinsurance." The Company generally seeks to manage its exposure to catastrophes through individual risk selection and the purchase of catastrophe reinsurance. In addition to the Company's catastrophe reinsurance coverages, the Company is also party to other reinsurance treaties that can provide additional coverage for losses arising from catastrophes, as described in the "Net Retention Policy Per Risk" sections of the respective segment discussions above. The Company conducts reviews of its risk and catastrophe coverages on a regular basis and makes changes as it deems appropriate. On January 1, 2023, the Company did not renew the 2022 Underlying Property Aggregate Catastrophe Excess-of-Loss Reinsurance Treaty, the terms of which were disclosed in the "Reinsurance - Catastrophe Reinsurance" section in Part I, Item 1 of the Company's Annual Report on Form 10-K for the year ended December 31, 2021. The following discussion summarizes the Company's catastrophe reinsurance coverage at January 1, 2023.

Corporate Catastrophe Excess-of-Loss Reinsurance Treaty. This treaty covers the accumulation of certain property losses arising from one or multiple occurrences for the period January 1, 2023 through and including December 31, 2023. The treaty provides for recovery of 100% of the dollar amount of each qualifying loss in excess of a $3.5 billion retention, up to a maximum amount of qualifying losses of $5.5 billion. Therefore, the maximum recovery under the treaty would be $2.0 billion. Qualifying losses for each occurrence are after a $100 million deductible. The treaty covers all of the Company's exposures in North America and all waters contiguous thereto. The treaty only provides coverage for terrorism events in limited circumstances and excludes entirely losses arising from nuclear, biological, chemical or radiological attacks. The treaty only provides coverage for cyber events in limited circumstances and excludes losses arising from communicable disease. The Company's underlying insurance coverages generally exclude coverage for communicable disease.

Catastrophe Bonds. The Company has catastrophe protection through an indemnity reinsurance agreement with Long Point Re IV Ltd. (Long Point Re IV), an independent Bermuda company registered as a special purpose insurer under the Bermuda Insurance Act of 1978 and related regulations. The reinsurance agreement meets the requirements to be accounted for as reinsurance in accordance with the guidance for reinsurance contracts. In connection with the reinsurance agreement, Long Point Re IV issued notes (generally referred to as "catastrophe bonds") to investors in amounts equal to the full coverage provided under the reinsurance agreement as described below. The proceeds of the issuance were deposited in a reinsurance trust account. The businesses covered by this reinsurance agreement are subsets of the Company's overall insurance portfolio, comprising specified property coverages spread across the following geographic locations: Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Virginia and Vermont.

The reinsurance agreement was entered into in May 2022 and provides coverage of up to $575 million to the Company through May 24, 2026 for certain losses from tropical cyclones, earthquakes, severe thunderstorms or winter storms in the locations listed above. The attachment point and maximum limit under this agreement are reset annually to adjust the expected loss of the layer within a predetermined range. For events up to and including May 24, 2023, this treaty provides up to $575 million part of $700 million coverage, subject to a $2.20 billion retention (i.e., for every dollar of loss between $2.20 billion and $2.90 billion, this treaty provides 82 cents of coverage). The coverage under the reinsurance agreement is limited to specified property coverage written in Personal Insurance; Select Accounts, Middle Market (excluding Excess Casualty and Boiler & Machinery) and National Property and Other in Business Insurance; and Other in Bond & Specialty Insurance.

Under the terms of the reinsurance agreement, the Company is obligated to pay annual reinsurance premiums to Long Point Re IV for the reinsurance coverage. Amounts payable to the Company under the reinsurance agreement with respect to any covered event cannot exceed the Company's actual losses from such event. The principal amount of the catastrophe bonds will be reduced by any amounts paid to the Company under the reinsurance agreement.

As with any reinsurance agreement, there is credit risk associated with collecting amounts due from reinsurers. With regard to Long Point Re IV, the credit risk is mitigated by a reinsurance trust account that has been funded by Long Point Re IV with money market funds that invest solely in direct government obligations and obligations backed by the U.S. government with maturities of no more than 13 months. The money market funds must have a principal stability rating of at least AAAm by Standard & Poor's or AAAmmf by Fitch Ratings on the issuance date of the bonds and thereafter must be rated by Standard & Poor's or Fitch Ratings, as applicable. Other permissible investments include money market funds which invest in repurchase and reverse repurchase agreements collateralized by direct government obligations and obligations of any agency backed by the U.S. government with terms of no more than 397 calendar days, and cash.

At the time the agreement was entered into with Long Point Re IV, the Company evaluated the applicability of the accounting guidance that addresses variable interest entities or VIEs. Under this guidance, an entity that is formed for business purposes is considered a VIE if: (a) the equity investors lack the direct or indirect ability through voting rights or similar rights to make decisions about an entity's activities that have a significant effect on the entity's operations or (b) the equity investors do not provide sufficient financial resources for the entity to support its activities. Additionally, a company that absorbs a majority of the expected losses from a VIE's activities or is entitled to receive a majority of the entity's expected residual returns, or both, is considered to be the primary beneficiary of the VIE and is required to consolidate the VIE in the company's financial statements.

As a result of the evaluation of the reinsurance agreement with Long Point Re IV, the Company concluded that it was a VIE because the conditions described in items (a) and (b) above were present. However, while Long Point Re IV was determined to be a VIE, the Company concluded that it did not have a variable interest in the entity, as the variability in its results, caused by the reinsurance agreement, is expected to be absorbed entirely by the investors in the catastrophe bonds issued by Long Point Re IV and residual amounts earned by it, if any, are expected to be absorbed by the equity investors (the Company has neither an equity nor a residual interest in Long Point Re IV).

Accordingly, the Company is not the primary beneficiary of Long Point Re IV and does not consolidate that entity in the Company's consolidated financial statements. Additionally, because the Company has no intention to pursue any transaction that would result in it acquiring interest in and becoming the primary beneficiary of Long Point Re IV, the consolidation of that entity in the Company's consolidated financial statements in future periods is unlikely.

The Company has not incurred any losses that have resulted or are expected to result in a recovery under the Long Point Re IV agreement since its inception.

Northeast Property Catastrophe Excess-of-Loss Reinsurance Treaty. This treaty provides up to $750 million part of $850 million of coverage, subject to a $2.25 billion retention (i.e., for every dollar of loss between $2.25 billion and $3.10 billion, this treaty provides 88 cents of coverage), for losses arising from a single occurrence and allows for one reinstatement. Coverage is provided on an all perils basis, including but not limited to hurricanes, tornadoes, hail storms, earthquakes, winter storms and/or freeze losses (coverage is included for terrorism events in limited circumstances). Coverage for cyber events applies only in limited circumstances, and coverage for communicable disease and nuclear, biological and radiological terrorism attacks is excluded from this treaty. The treaty covers territory from Virginia to Maine for the period from July 1, 2022 through and including June 30, 2023. Losses from a covered event anywhere in North America and waters contiguous thereto may be used to satisfy the retention. Recoveries under the catastrophe bonds (if any) would be first applied to reduce losses subject to this treaty.

Middle Market Earthquake Catastrophe Excess-of-Loss Reinsurance Treaty. This treaty provides for up to $248 million part of $275 million of coverage, subject to a $110 million retention (i.e., for every dollar of loss between $110 million and $385 million, this treaty provides 90 cents of coverage), for losses arising from an earthquake, including other ensuing causes of loss such as fire following and sprinkler leakage, incurred under policies written by Technology, Public Sector Services and Commercial Accounts in Business Insurance for the period from July 1, 2022 through and including June 30, 2023. The treaty covers the United States and Canada, their territories, possessions and waters contiguous thereto.

Personal Insurance Earthquake Catastrophe Excess-of-Loss Reinsurance Treaty. This treaty provides for up to $160 million part of $200 million of coverage, subject to a $170 million retention, for losses occurring from an earthquake, including fire following and sprinkler leakage, incurred by Personal Insurance from January 1, 2023 through and including December 31, 2023. The treaty covers the United States, its territories, possessions and waters contiguous thereto.

Canadian Property Catastrophe Excess-of-Loss Reinsurance Treaty. This treaty provides coverage for 50% of losses in excess of C$100 million (US$74 million at December 31, 2022) up to C$200 million (US$148 million at December 31, 2022) and for 100% of losses in excess of C$200 million (US$148 million at December 31, 2022) up to C$500 million (US$369 million at December 31, 2022), in each case with respect to the accumulation of net property losses arising out of one occurrence on business written by the Company's Canadian businesses for the period from July 1, 2022 through and including June 30, 2023. The treaty covers all property written by the Company's Canadian businesses, including, but not limited to, habitational property, commercial property, inland marine, ocean marine and auto physical damages exposures. Coverage for cyber events applies only in limited circumstances, and coverage for communicable disease and nuclear, biological and radiological terrorism attacks is excluded from this treaty.

Other International Reinsurance Treaties. For other business underwritten in Canada, as well as for business written in the United Kingdom and the Republic of Ireland and in the Company's operations at Lloyd's, separate reinsurance protections are purchased locally that have lower net retentions more commensurate with the size of the respective local balance sheet.

Terrorism Risk Insurance Program. The Terrorism Risk Insurance Program is a Federal program administered by the Department of the Treasury authorized through December 31, 2027 that provides for a system of shared public and private compensation for certain insured losses resulting from certified acts of terrorism. For a further description of the program, including the Company's estimated deductible under the program in 2023, see note 6 of the notes to the consolidated financial statements and "Item 1A—Risk Factors—High levels of catastrophe losses, including as a result of factors such as increased concentrations of insured exposures in catastrophe-prone areas and changing climate conditions, could materially and adversely affect our results of operations, our financial position and/or liquidity, and could adversely impact our ratings, our ability to raise capital and the availability and cost of reinsurance."

CLAIMS AND CLAIM ADJUSTMENT EXPENSE RESERVES

Claims and claim adjustment expense reserves represent management's estimate of the ultimate liability for unpaid losses and loss adjustment expenses for claims that have been reported and claims that have been incurred but not yet reported as of the balance sheet date.

The Company refines its reserve estimates as part of its regular ongoing process that includes reviews of key assumptions, underlying variables and historical loss experience. The Company reflects adjustments to reserves in the results of operations in the periods in which the estimates are changed. In establishing reserves, the Company takes into account estimated recoveries for reinsurance, salvage and subrogation. The reserves are reviewed regularly by qualified actuaries employed by the Company. For additional information on the process of estimating reserves and a discussion of underlying variables and risk factors, see "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Estimates."

The process of estimating loss reserves involves a high degree of judgment and is subject to a number of variables. These variables (discussed by product line in the "Critical Accounting Estimates" section of "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations") are affected by both internal and external events, such as changes in claims handling procedures, inflation, judicial trends, the tort environment and the legislative landscape, among others. The impact of many of these items on ultimate costs for claims and claim adjustment expenses is difficult to estimate. Reserve estimation difficulties also differ significantly by product line due to differences in the underlying insurance contract (e.g., claims-made versus occurrence), claim complexity, the volume of claims, the potential severity of individual claims, the determination of the occurrence date for a claim, and reporting lags (the time between the occurrence of the insured event and when it is actually reported to the insurer). Informed judgment is applied throughout the process.

The Company derives estimates for unreported claims and development with respect to reported claims principally from actuarial analyses of historical patterns of loss development by accident year for each business unit, product line and type of exposure. Similarly, the Company derives estimates of unpaid loss adjustment expenses principally from actuarial analyses of historical development patterns and the relationship of loss adjustment expenses to losses for each product line and type of exposure. For a description of the Company's reserving methods for asbestos and environmental claims, see "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Asbestos Claims and Litigation," and "—Environmental Claims and Litigation."

Certain of the Company's claims and claim adjustment expense reserves are discounted to present value. See note 8 of the notes to the consolidated financial statements for further discussion.

Reserves on Statutory Accounting Basis

At December 31, 2022, 2021 and 2020, claims and claim adjustment expense reserves (net of reinsurance) prepared in accordance with U.S. generally accepted accounting principles (GAAP reserves) were $91 million higher, $99 million higher and $110 million higher, respectively, than those reported in the Company's respective annual financial reports filed with insurance regulators, which are prepared in accordance with statutory accounting practices (statutory reserves).

The differences between the amount of reserves reported for GAAP and statutory reporting are primarily due to the differences in accounting for: (i) fee reimbursements associated with large deductible business, (ii) the impact of updated accounting guidance for credit losses adopted January 1, 2020 applicable to structured settlements and (iii) the accounting for reinsurance.

For large deductible business, the Company pays the deductible portion of a casualty insurance claim and then seeks reimbursement from the insured, plus a fee. The associated reserves for claim adjustment expenses are reported gross of the expected fee income (i.e., the reserves are not net of the expected fees) for GAAP reporting. For statutory reporting, the associated reserves are reported net of the expected fee income.

For GAAP reporting, amounts payable under structured settlements for which the Company did not receive a release of its obligation from the claimant are reported in loss reserves and reinsurance recoverables, net of an allowance for estimated uncollectible amounts. The allowance was impacted by the updated accounting guidance for credit losses adopted January 1, 2020 that requires the allowance to be based on expected credit losses. For statutory reporting, structured settlements for which the Company has not obtained a release are disclosed as a contingent liability and not recorded as part of loss reserves.

Reserves for claims and claim adjustment expenses are reported gross of reinsurance recoverables (i.e., without reduction for amounts recoverable for reinsurance) for GAAP reporting. For statutory reporting, the reserves are reported net of reinsurance

recoverables. Additionally, reinsurance balances resulting from reinsurance placed to cover losses on insured events occurring prior to the inception of a reinsurance contract (retroactive reinsurance) are included in reinsurance recoverables for GAAP reporting. Statutory accounting practices require retroactive reinsurance balances to be recorded in other liabilities as contra-liabilities rather than in loss reserves.

Asbestos and Environmental Claims

Asbestos and environmental claims are segregated from other claims and are handled separately within the Company's Strategic Resolution Group, a separate unit staffed by dedicated legal, claim, finance and engineering professionals which also has responsibility for enterprise-wide major case activity. For additional information on asbestos and environmental claims, see "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Asbestos Claims and Litigation" and "—Environmental Claims and Litigation."

INTERCOMPANY REINSURANCE POOLING ARRANGEMENTS

Most of the Company's domestic insurance subsidiaries are members of an intercompany property and casualty reinsurance pooling arrangement. Pooling arrangements permit the participating companies to rely on the capacity of the entire pool's statutory capital and surplus rather than just on its own statutory capital and surplus. Under such arrangements, the members share substantially all insurance business that is written and allocate the combined premiums, losses and expenses.

RATINGS

Ratings are an important factor in assessing the Company's competitive position in the insurance industry. The Company receives ratings from the following major rating agencies: A.M. Best Company (A.M. Best), Fitch Ratings (Fitch), Moody's Investors Service (Moody's) and S&P Global Ratings (S&P). Rating agencies typically issue two types of ratings for insurance companies: claims-paying (or financial strength) ratings, which reflect the rating agency's assessment of an insurer's ability to meet its financial obligations to policyholders, and debt ratings, which reflect the rating agency's assessment of a company's prospects for repaying its debts and are considered by lenders in connection with the setting of interest rates and terms for a company's short- and long-term borrowings. Agency ratings are not a recommendation to buy, sell or hold any security, and they may be revised or withdrawn at any time by the rating agency. Each agency's rating should be evaluated independently of any other agency's rating. The system and the number of rating categories can vary widely from rating agency to rating agency. Customers usually focus on claims-paying ratings, while creditors focus on debt ratings. Investors use both to evaluate a company's overall financial strength. The ratings issued on the Company or its subsidiaries by any of these agencies are announced publicly and are available on the Company's website and from the agencies.

A downgrade in one or more of the Company's claims-paying ratings could negatively impact the Company's business volumes and competitive position because demand for certain of its products may be reduced, particularly because some customers require that the Company maintain minimum ratings to enter into, maintain or renew business with it.

Additionally, a downgrade in one or more of the Company's debt ratings could adversely impact the Company's ability to access the capital markets and other sources of funds, including in the syndicated bank loan market, and/or result in higher financing costs. For example, downgrades in the Company's debt ratings could result in higher interest expense under the Company's revolving credit agreement (under which the cost of borrowing could range from the Secured Overnight Financing Rate (SOFR) plus 85 basis points (including a credit spread adjustment) to SOFR plus 147.5 basis points (including a credit spread adjustment), depending on the Company's debt ratings), the Company's commercial paper program, or in the event that the Company were to access the capital markets by issuing debt or similar types of securities. See note 9 of the notes to the consolidated financial statements for a discussion of the Company's revolving credit agreement and commercial paper program. The Company considers the level of increased cash funding requirements in the event of a ratings downgrade as part of the evaluation of the Company's liquidity requirements. The Company currently believes that a one- to two-notch downgrade in its debt ratings would not result in a material increase in interest expense under its existing credit agreement and commercial paper programs. In addition, the Company considers the impact of a ratings downgrade as part of the evaluation of its common share repurchases.

S&P has announced that it intends to change its capital adequacy model. While the proposed model has not been finalized, it could increase the level of capital S&P requires for a particular financial strength rating. As part of its capital management strategy, the Company will continue to make its own assessment of the appropriate level of capital to support the Company's business operations. For a discussion of the risks to the Company's claims-paying and financial strength ratings, see the risk factor entitled "A downgrade in our claims-paying and financial strength ratings could adversely impact our business volumes,

adversely impact our ability to access the capital markets and increase our borrowing costs" included in "Part I—Item 1A—Risk Factors."

Claims — Paying Ratings

The following table summarizes the current claims-paying (or financial strength) ratings for each of the Company's rated entities as of February 16, 2023, including the position of each rating in the applicable agency's rating scale.

	A.M. Best	Moody's	S&P	Fitch
Travelers Reinsurance Pool (a)(b)	A++ (1st of 16)	Aa2 (3rd of 21)	AA (3rd of 21)	AA (3rd of 21)
Travelers C&S Co. of America	A++ (1st of 16)	Aa2 (3rd of 21)	AA (3rd of 21)	AA (3rd of 21)
First Floridian Auto and Home Ins. Co.	A- (4th of 16)	—	—	AA (3rd of 21)
Travelers Insurance Company of Canada	A++ (1st of 16)	—	AA- (4th of 21)	—
The Dominion of Canada General Insurance Company	A (3rd of 16)	—	—	—
Travelers Insurance Company Limited	A++ (1st of 16)	—	AA (3rd of 21)	—
Travelers Insurance Designated Activity Company	A++ (1st of 16)	—	AA- (4th of 21)	—

(a) The Travelers Reinsurance Pool consists of: The Travelers Indemnity Company, The Charter Oak Fire Insurance Company, The Phoenix Insurance Company, The Travelers Indemnity Company of Connecticut, The Travelers Indemnity Company of America, Travelers Property Casualty Company of America, Travelers Commercial Casualty Company, TravCo Insurance Company, The Travelers Home and Marine Insurance Company, Travelers Casualty and Surety Company, Northland Insurance Company, Northland Casualty Company, The Standard Fire Insurance Company, The Automobile Insurance Company of Hartford, Connecticut, Travelers Casualty Insurance Company of America, Farmington Casualty Company, Travelers Commercial Insurance Company, Travelers Casualty Company of Connecticut, Travelers Property Casualty Insurance Company, Travelers Personal Security Insurance Company, Travelers Personal Insurance Company, St. Paul Fire and Marine Insurance Company, The Travelers Casualty Company, St. Paul Protective Insurance Company, Travelers Constitution State Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., Discover Property & Casualty Insurance Company and United States Fidelity and Guaranty Company. In addition, the following entities are also members of the Travelers Reinsurance Pool but have a 0% share of the pool: Northfield Insurance Company, American Equity Specialty Insurance Company, Travelers Excess and Surplus Lines Company, St. Paul Surplus Lines Insurance Company and Travelers Specialty Insurance Company.

(b) The following affiliated companies are 100% reinsured by one of the pool participants noted in (a) above: Fidelity and Guaranty Insurance Company, Gulf Underwriters Insurance Company, American Equity Insurance Company, Select Insurance Company, The Travelers Lloyds Insurance Company and Travelers Lloyds of Texas Insurance Company.

Debt Ratings

The following table summarizes the current debt, trust preferred securities and commercial paper ratings of the Company and its subsidiaries as of February 16, 2023. The table also presents the position of each rating in the applicable agency's rating scale.

	A.M. Best	Moody's	S&P	Fitch
Senior debt	a+ (5th of 22)	A2 (6th of 21)	A (6th of 22)	A (6th of 22)
Junior subordinated debentures	a- (7th of 22)	A3 (7th of 21)	BBB+ (8th of 22)	BBB+ (8th of 22)
Commercial paper	AMB-1+ (1st of 5)	P-1 (1st of 4)	A-1 (2nd of 10)	F1 (2nd of 8)

Rating Agency Actions

The following rating agency actions were taken with respect to the Company from February 17, 2022, the date on which the Company filed its Annual Report on Form 10-K for the year ended December 31, 2021, through February 16, 2023:

- On April 29, 2022, Fitch affirmed all ratings of the Company. The outlook for all ratings is stable.

- On April 29, 2022, Moody's affirmed all ratings of the Company. The outlook for all ratings is stable.

- On July 29, 2022, A.M. Best affirmed all ratings of the Company. The outlook for all ratings is stable.

INVESTMENT OPERATIONS

The majority of funds available for investment are deployed in a widely diversified portfolio of high quality, liquid, taxable U.S. government, tax-exempt and taxable U.S. municipal and taxable corporate and U.S. agency mortgage-backed bonds. The Company regularly monitors the effective duration of its fixed maturity investments, and the Company's investment purchases and sales are executed with the objective of having adequate funds available to satisfy its insurance and debt obligations. Generally, the expected principal and interest payments produced by the Company's fixed maturity portfolio adequately fund the estimated runoff of the Company's insurance reserves. The Company manages the investment duration relative to its liability duration. In 2022, the estimated effective duration of the Company's portfolio of fixed maturity and short-term security investments increased and the estimated effective duration of the Company's net insurance liabilities decreased, both changes primarily reflecting the impact of higher interest rates. As a result, at December 31, 2022, the estimated effective duration of the Company's portfolio of fixed maturity and short-term security investments was greater than the estimated effective duration of the Company's net insurance liabilities. The substantial amount by which the fair value of the fixed maturity portfolio exceeds the value of the net insurance liabilities, as well as the positive cash flow from newly sold policies and the large amount of high-quality liquid bonds, contributes to the Company's ability to fund claim payments without having to sell illiquid assets or access its credit facilities.

The Company also invests much smaller amounts in equity securities, real estate, private equity limited partnerships, hedge funds, and real estate partnerships and joint ventures. These investment classes have the potential for higher returns but also involve varying degrees of risk, including less stable rates of return and less liquidity.

See note 3 of the notes to the consolidated financial statements for additional information regarding the Company's investment portfolio.

REGULATION

U.S. State and Federal Regulation

The Company's domestic insurance subsidiaries are collectively licensed to transact insurance business in all U.S. states, the District of Columbia, Guam, Puerto Rico, the U.S. Virgin Islands and the Northern Mariana Islands and are subject to regulation in the various states and jurisdictions in which the subsidiaries transact business. The extent of regulation varies, but generally derives from statutes that delegate regulatory, supervisory, and administrative authority to a department of insurance or finance in each state and jurisdiction. The regulation, supervision, and administration relate, among other things, to standards of solvency that must be met and maintained, the nature of and limitations on investments, premium rates, restrictions on the type and size of risks that may be insured under a single policy, reserves and provisions for unearned premiums, losses and other obligations, deposits of securities for the benefit of policyholders, the licensing of insurers and their agents, approval of policy forms and the regulation of market conduct, including the use of credit and other information in underwriting as well as other underwriting and claims practices. State insurance departments also conduct periodic examinations of the financial condition and market conduct of insurance companies and require the filing of financial and other reports on a quarterly and annual basis.

State insurance regulation continues to evolve in response to the changing economic and business environment as well as efforts by regulators internationally to develop a consistent approach to regulation. While the U.S. federal government has not historically regulated the insurance business, the Federal Insurance Office (or FIO) was established within the U.S. Treasury Department with limited authority as part of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. FIO has been active in the efforts to develop international regulatory standards for the insurance industry. In response to these international efforts, the state insurance regulators, through the National Association of Insurance Commissioners (NAIC), along with the Federal Reserve and the FIO, are working to consider and develop changes to the U.S. regulatory framework, including the development of regulatory tools to evaluate risks and the availability of capital on a groupwide basis in addition to the current requirements imposed on a legal-entity basis.

These changes are evidenced by the incorporation of supervisory colleges into the U.S. regulatory framework. A supervisory college is a forum of the regulators having jurisdictional authority over a holding company's various insurance subsidiaries, including foreign insurance subsidiaries, convened to meet with the insurer's executive management, to evaluate the insurer's business strategies, approach to enterprise risk management and corporate governance from both a groupwide and legal-entity perspective.

While insurance in the United States is regulated on a legal-entity basis, the NAIC has adopted changes to its Model Holding Company Act that some states, including the State of Connecticut, have enacted to allow the insurance commissioner to be designated as the groupwide supervisor (i.e., lead regulator) for the insurance holding company system based upon certain criteria, including the jurisdiction of domicile of the insurance subsidiaries holding the majority of the insurance group's premiums, assets, or liabilities. Based upon these criteria, the State of Connecticut Insurance Department is designated as the Company's lead regulator and coordinates supervisory colleges for the Company. Additionally, the NAIC has recently adopted changes to its Model Holding Company Act to require certain insurance groups to file a Group Capital Calculation to allow the groupwide supervisor (lead state) to evaluate the risks and available capital on a groupwide basis in addition to the risk-based capital requirements currently imposed on a legal-entity basis. The State of Connecticut amended its holding company act to incorporate the recent changes to the NAIC Model Holding Company Act and will require insurers, including the Company, to file a Group Capital Calculation beginning in 2023. These changes could result in an increase in the amount of capital the Company's insurance subsidiaries are required to have and could subject the Company to increased regulation.

Insurance Regulation Concerning Dividends from Insurance Subsidiaries. The Company's principal domestic insurance subsidiaries are domiciled in the State of Connecticut. The Connecticut insurance holding company laws require notice to, and approval by, the state insurance commissioner for the declaration or payment of any dividend from an insurance subsidiary that, together with other distributions made within the preceding twelve months, exceeds the greater of 10% of the insurance subsidiary's statutory capital and surplus as of the preceding December 31, or the insurance subsidiary's net income for the twelve-month period ending the preceding December 31, in each case determined in accordance with statutory accounting practices and by state regulation. This declaration or payment is further limited by the amount of adjusted unassigned surplus held by the insurance subsidiaries, as determined in accordance with statutory accounting practices.

The insurance holding company laws of states in which the Company's other domestic insurance subsidiaries are domiciled generally contain similar, although in some instances somewhat more restrictive, limitations on the payment of dividends. These insurance subsidiaries, as well as the insurance subsidiaries domiciled in Connecticut, may also be subject to similar dividends limitations imposed by states in which those subsidiaries are considered commercially domiciled as a result of the amount of business written in those states.

Rate and Rule Approvals. TRV's domestic insurance subsidiaries are subject to each state's laws and regulations regarding rate and rule approvals. The applicable laws and regulations generally establish standards to ensure that rates are not excessive, inadequate, unfairly discriminatory or used to engage in unfair price competition. An insurer's ability to adjust rates and the relative timing of the process are dependent upon each state's requirements. Many states have enacted variations of competitive ratemaking laws, which allow insurers to set certain premium rates for certain classes of insurance without having to obtain the prior approval of the state insurance department.

Requirements for Exiting Geographic Markets and/or Canceling or Nonrenewing Policies. Many states have laws and regulations which may impact the timing and/or the ability of an insurer to either discontinue or substantially reduce its writings in that state. These laws and regulations typically require prior notice and in some instances insurance department approval prior to discontinuing a line of business or withdrawing from that state. In addition, all states impose limitations on cancellations or non-renewals of certain policies, including in particular, limitations on the reasons for cancellations and on the timing of non-renewals.

Regulatory and Legislative Responses to Catastrophes. States have from time to time passed legislation, and regulators have taken action, that have the effect of limiting the ability of insurers to manage catastrophe risk, such as legislation restricting insurers from reducing exposures or withdrawing from catastrophe-prone areas or mandating that insurers participate in residual markets involving catastrophe-prone areas. Participation in residual market mechanisms has resulted in, and may in the future result in, significant losses or assessments to insurers, including the Company, and, in certain states, those losses or assessments may not be commensurate with the Company's direct catastrophe exposure in those states. If the Company's competitors leave states that have residual market mechanisms, the remaining insurers, including the Company, may be subject to significant increases in losses or assessments following a catastrophe. In addition, following catastrophes, there have been, and may in the future be, legislative and administrative initiatives and court decisions that seek to expand insurance coverage for catastrophe claims beyond the original intent of the policies, seek to prevent the application of deductibles included in the policies or seek to limit the exercise of certain rights available to insurers under the policies. Also, the Company's ability to adjust policy language or terms, including deductible levels, or to increase pricing to the extent necessary to offset rising claim costs related to catastrophes requires approval of insurance regulatory authorities in certain states. The Company's ability or its willingness to manage its catastrophe exposure by raising prices, modifying policy terms or reducing exposure to certain geographies may be limited due to considerations of public policy, an evolving political environment and/or changes in general economic

conditions. Furthermore, reduction or elimination of the National Flood Insurance Program could result in an increase in the Company's exposure to flood risk if insurers become required to cover flood risk under certain types of policies.

Assessments for Guaranty Funds and Second-Injury Funds and Other Mandatory Assigned Risk and Reinsurance Arrangements. As a condition of their authority to transact insurance in virtually all states, property and casualty insurers, including the Company's domestic insurance subsidiaries, are required to be a member of each state's guaranty association and to bear a portion of the losses covered by the guaranty association (subject to a statutory maximum covered loss amount which varies by state) suffered by claimants of insurers that become insolvent. Additionally, many states also have laws that establish second-injury funds to provide compensation to injured employees for the aggravation of a prior injury or disability.

The Company's domestic insurance subsidiaries are also required to participate in various involuntary assigned risk pools, principally involving workers' compensation, automobile insurance, property damage due to wind (windpools) in states prone to property damage from hurricanes and Fair Access to Insurance Requirements (FAIR) plans, as well as automobile assigned risk plans the results of which are not pooled with other carriers, which provide various insurance coverages to individuals or other entities that otherwise are unable to purchase that coverage in the voluntary market.

Other assessments include charges mandated by statute or regulatory authority that are related directly or indirectly to underwriting activities. Examples of such mechanisms include, but are not limited to, the Florida Hurricane Catastrophe Fund, Florida Citizens Property Insurance Corporation, National Workers' Compensation Reinsurance Pool, various workers' compensation related funds (e.g., the Florida Special Disability Trust), North Carolina Beach Plan, Louisiana Citizens Property Insurance Corporation, and the Texas Windstorm Insurance Association. Amounts payable or paid as a result of arrangements that are in substance reinsurance, including certain involuntary pools where insurers are required to assume premiums and losses from those pools, are accounted for as reinsurance (e.g., National Workers' Compensation Reinsurance Pool, North Carolina Beach Plan). Amounts related to assessments from arrangements that are not reinsurance are reported as part of "General and Administrative Expenses," such as the Florida Special Disability Trust. For additional information concerning assessments for guaranty funds and second-injury funds and other mandatory assigned risk and reinsurance agreements including state-funding mechanisms, see "Item 1A—Risk Factors."

Insurance Regulatory Information System (IRIS). The NAIC developed the IRIS to help state regulators identify companies that may require regulatory attention. Financial examiners review annual financial statements and the results of key financial ratios based on year-end data with the goal of identifying insurers that appear to require immediate regulatory attention. Each ratio has an established "usual range" of results. A ratio result falling outside the usual range, however, is not necessarily considered adverse; rather, unusual values are used as part of the regulatory early monitoring system. Furthermore, in some years, it may not be unusual for financially sound companies to have several ratios with results outside the usual ranges. Generally, an insurance company may become subject to regulatory scrutiny or, depending on the company's financial condition, regulatory action if certain of its key IRIS ratios fall outside the usual ranges and the insurer's financial condition is trending downward.

Based on preliminary 2022 IRIS ratios calculated by the Company for its lead domestic insurance subsidiaries, The Travelers Indemnity Company had results outside the normal range for one IRIS ratio due to the size of its investments in certain non-fixed maturity securities, while Travelers Casualty and Surety Company had results outside the normal range for one IRIS ratio due to the amount of dividends received from its subsidiaries. In 2021, The Travelers Indemnity Company and Travelers Casualty and Surety Company had results outside the normal range for these same ratios.

Management does not anticipate regulatory action as a result of the 2022 IRIS ratio results for the lead insurance subsidiaries or their insurance subsidiaries. In all instances in prior years, regulators have been satisfied upon follow-up that no regulatory action was required.

Risk-Based Capital (RBC) Requirements. The NAIC has an RBC requirement which sets forth minimum capital standards for most U.S.-based property and casualty insurance companies that is intended to raise the level of protection for policyholder obligations. The Company's U.S. insurance subsidiaries are subject to these NAIC RBC requirements based on laws that have been adopted by individual states. These requirements subject insurers having policyholders' surplus less than that required by the RBC calculation to varying degrees of regulatory action, depending on the level of capital inadequacy. Each of the Company's U.S. insurance subsidiaries had policyholders' surplus at December 31, 2022 and 2021 significantly above the level at which any RBC regulatory action would occur.

While there is currently no group regulatory capital requirement in place for insurers in the United States, a comparison of an insurer's policyholders' surplus on a combined basis to the legal entity NAIC RBC requirements on a combined basis can provide useful information regarding an insurance group's overall capital adequacy in the U.S. The amount of policyholders' surplus held by the Company's U.S. insurance subsidiaries at December 31, 2022, determined on a combined basis,

significantly exceeded the level at which the subsidiaries would be subject to RBC regulatory action (company action level) on a combined basis at that date.

The RBC formulas have not been designed to differentiate among adequately capitalized companies that operate with levels of capital above the RBC requirement. Therefore, it is inappropriate and ineffective to use the formulas to rate or to rank these companies.

Investment Regulation. Insurance company investments must comply with applicable laws and regulations which prescribe the kind, quality and concentration of investments. In general, these laws and regulations permit investments in federal, state and municipal obligations, corporate bonds, preferred and common equity securities, mortgage loans, real estate and certain other investments, subject to specified limits and certain other qualifications, depending on the type of investment. At December 31, 2022 and 2021, the Company was in compliance with these laws and regulations.

Federal Regulation. As mentioned above, the Dodd-Frank Act established a Federal Insurance Office (FIO) within the U.S. Department of the Treasury. The FIO has limited regulatory authority and is empowered to gather data and information regarding the insurance industry and insurers, but it has in the past recommended an expanded federal role in some circumstances. The Dodd-Frank Act also gives the Federal Reserve supervisory authority over a number of non-bank financial services holding companies, including holding companies with insurance company subsidiaries, if they are designated by a two-thirds vote of a Financial Stability Oversight Council (the FSOC) as "systemically important financial institutions" (SIFI) or own a bank or thrift. The Company, based upon the FSOC's rules and interpretive guidance, has not been designated as a SIFI and is not subject to regulation by the Federal Reserve. Nonetheless, it is possible that FSOC may change its rules or interpretations in the future and conclude that the Company is a SIFI. If the Company were designated as a SIFI, the Federal Reserve's supervisory authority could include the ability to impose heightened financial regulation and could impact requirements regarding the Company's capital, liquidity and leverage as well as its business and investment conduct. The Dodd-Frank Act also authorizes assessments to pay for the resolution of SIFIs that have become insolvent. The Company (as a financial company with more than $50 billion in assets) could be assessed, and although any such assessment is required to be risk weighted (i.e., riskier firms pay more), such costs could be material and are not currently estimable. As a result of the foregoing, the Dodd-Frank Act, including any changes thereto, or other additional federal regulation that is adopted in the future, could impose additional burdens on the Company, including impacting the ways in which the Company conducts its business, increasing compliance costs and duplicating state regulation, and could result in a competitive disadvantage, particularly relative to other competitors that may not be subject to the same level of regulation.

International Regulation

The Company's insurance subsidiaries based in Canada, and the Canadian branch of one of the Company's U.S. insurance subsidiaries, are regulated for solvency purposes by the Office of the Superintendent of Financial Institutions (OSFI) under the provisions of the Insurance Companies Act (Canada). These Canadian subsidiaries and the Canadian branch are also subject to Canadian provincial and territorial insurance legislation and regulation, governing market conduct, including pricing, underwriting, coverage and claim conduct, in varying degrees by province/territory and by product line.

The Company's insurance subsidiaries based in the United Kingdom (U.K.) are regulated by two regulatory bodies, The Prudential Regulation Authority (PRA) and The Financial Conduct Authority (FCA). The PRA's primary objective is to promote the safety and soundness of insurers for the protection of policyholders, while the FCA has three operational objectives: (i) to secure an appropriate degree of protection for consumers, (ii) to protect and enhance the integrity of the U.K. financial system, and (iii) to promote effective competition in the interests of consumers. One of the Company's U.K. insurance subsidiaries is also authorized in the U.S. as a surplus lines insurer subject to U.S. state regulation applicable to such insurers.

The Company's managing agency (Travelers Syndicate Management Limited) (TSML) of its Lloyd's syndicate (Syndicate 5000 at Lloyd's) is also regulated by the PRA and the FCA, which have delegated certain regulatory responsibilities to the Council of Lloyd's. Travelers Syndicate 5000 is able to write business in over 200 countries and territories throughout the world by virtue of Lloyd's international licenses. In each such jurisdiction, the policies written by TSML, as part of Lloyd's, are subject to the laws and insurance regulations of that jurisdiction. Travelers Underwriting Agency Limited, which as an insurance intermediary is regulated by the FCA, produces insurance business for Travelers Syndicate 5000. Xbridge Limited, operating under the trade name Simply Business, is an insurance broker that provides products for small commercial customers in the U.K. via a panel of insurance companies and is also regulated by the FCA.

Travelers is conducting its insurance operations in the Republic of Ireland and across the EU through an insurance subsidiary that is incorporated in the Republic of Ireland and authorized and regulated by the Central Bank of Ireland. Certain operations are conducted in the U.K. through a U.K. branch of the Irish subsidiary, which is supervised by the PRA and FCA as well as the

Central Bank of Ireland. Since January 1, 2019, the Company has used a Lloyd's insurance subsidiary in Brussels, Belgium (Lloyd's Brussels) to cover its Lloyd's customers' risks in the EU. Lloyd's Brussels is regulated by the National Bank of Belgium.

During 2022, the Company's operations in the Republic of Ireland were also subject to regulation by the European Union (EU). Generally, EU requirements are adopted by the EU and then implemented by enabling legislation in the member countries. Significant areas of oversight and influence from the EU include capital and solvency requirements (Solvency II), competition law and antitrust regulation, intermediary and distribution regulation, gender discrimination and data security and privacy. Under Solvency II, it is possible that the U.S. parent of a European Union subsidiary could be subject to certain Solvency II requirements if the regulator determines that the subsidiary's capital position is dependent on the parent company and the U.S. Parent is not already subject to regulations deemed "equivalent" to Solvency II. Currently, as a result of the Covered Agreements described below, the state regulatory system governing U.S. insurers is deemed "equivalent" for purposes of Solvency II.

Beginning December 31, 2020, the Company's operations in the U.K. were no longer subject to EU regulations. The applicability of the EU requirements to the Company's businesses in the U.K. may change in ways yet to be determined as a result of the U.K.'s exit from the EU. It is expected that the U.K. will continue to apply the requirements of Solvency II to insurers operating in the U.K.

Each of the Company's foreign insurance subsidiaries had capital significantly above their respective regulatory requirements at December 31, 2022.

Regulators in countries where the Company has operations are working with the International Association of Insurance Supervisors (IAIS) (and with the NAIC, the Federal Reserve and FIO in the U.S.) to consider changes to insurance company supervision, including group supervision and group capital requirements.

The IAIS has developed a methodology for identifying "global systemically important insurers" (G-SIIs) and high-level policy measures that will apply to the G-SIIs. The methodology and measures were endorsed by the Financial Stability Board (FSB) which was created by the Group of Twenty (or G-20); however, identification of G-SIIs was suspended at the beginning of 2020. In December 2022, the FSB, in consultation with the IAIS, decided to discontinue the annual identification of G-SIIs. Going forward the FSB will utilize a newly developed framework to inform its considerations of systemic risk in the insurance sector. The Company has not previously been designated as a G-SII by the FSB; however, it is possible that the designation of G-SIIs could be reinstituted, the methodologies or framework could be amended or interpreted differently in the future and the Company could be named as a G-SII.

The IAIS completed its Common Framework for the Supervision of Internationally Active Insurance Groups (known as ComFrame). ComFrame is intended to apply heightened regulatory requirements similar to those being developed for G-SIIs to internationally active insurance groups (or "IAIGs"), including group supervision, group capital requirements, and resolution planning, i.e., a written plan developed by a financial group detailing how it would be wound down in the event of an insolvency. While the Company would not be considered an IAIG under the current criteria in ComFrame, it is possible that the criteria could be changed. If the Company is designated as an IAIG or the NAIC and individual states adopt ComFrame or similar provisions for large insurers, the Company could be subject to increased supervision and higher capital standards.

Covered Agreements

The U.S. Department of the Treasury and the Office of the U.S. Trade Representative have signed covered agreements (the Covered Agreements) regarding prudential (solvency) insurance and reinsurance measures with both the EU and the U.K. The Covered Agreements include three areas of prudential insurance supervision: reinsurance contracts, group supervision, and the exchange of information between U.S. and U.K. regulators and between U.S. and EU regulators on insurers and reinsurers that operate in the U.S., U.K. and EU markets. The Covered Agreement with the EU went into effect in April 2018, while the Covered Agreement with the U.K. took full effect upon the U.K.'s exit from the EU on January 31, 2020. The Covered Agreements are intended to promote cooperation between U.S. insurance regulators and EU and U.K. insurance regulators and to limit the ability of the EU and the U.K. to apply solvency and group capital requirements to the worldwide operations of any U.S. insurer operating in the EU or the U.K. It is possible that individual members of the EU could differ in how they adopt or implement the Covered Agreement, resulting in greater regulation and higher capital standards as well as inconsistent regulatory requirements among the jurisdictions in which the Company does business. While it is not yet known how or if these actions will impact the Company, such regulation could result in increased costs of compliance, increased disclosure and less flexibility in capital management, and could adversely impact the Company's results of operations and limit its growth.

The Covered Agreements eliminate the collateral and local presence requirements for EU and U.K. reinsurers operating in the U.S., and for U.S. reinsurers operating in the EU and U.K., as a condition for credit for reinsurance in regulatory reporting and capital requirements. The prospective elimination of the collateral requirements is conditioned on the reinsurer meeting capital and solvency standards and maintaining a record of prompt payments to ceding insurers. While the collateral requirement is removed for reinsurers meeting these standards, insurers and reinsurers are not prohibited from negotiating and putting into place collateral as part of reinsurance agreements. The Covered Agreements include a five-year transition period to full compliance in the impacted jurisdictions.

Insurance Holding Company Statutes

As a holding company, TRV is not regulated as an insurance company. However, since TRV owns capital stock in insurance subsidiaries, it is subject to state insurance holding company statutes, as well as certain other laws, of each of its insurance subsidiaries' states of domicile. All holding company statutes, as well as other laws, require disclosure and, in some instances, prior approval of certain transactions between an insurance company and an affiliate. The holding company statutes and other laws also require, among other things, prior approval for acquiring control of a domestic insurer and the payment of extraordinary dividends or distributions.

Insurance Regulations Concerning Change of Control. Many state insurance regulatory laws contain provisions that require advance approval by state agencies of any change in control of an insurance company that is domiciled, or, in some cases, having substantial business in a state such that the insurance company is deemed to be commercially domiciled in that state.

The laws of many states also contain provisions requiring pre-notification to state agencies prior to any change in control of a non-domestic insurance company admitted to transact business in that state. While these pre-notification statutes do not authorize the state agency to disapprove the change of control, they do authorize issuance of cease-and-desist orders with respect to the non-domestic insurer if it is determined that some conditions, such as undue market concentration, would result from the acquisition.

Any transactions that would constitute a change in control of any of TRV's insurance subsidiaries would generally require prior approval by the insurance departments of the states in which the insurance subsidiaries are domiciled or commercially domiciled. Pre-acquisition notification may also be required in those states that have adopted pre-acquisition notification provisions and in which such insurance subsidiaries are admitted to transact business.

One of TRV's insurance subsidiaries and its operations at Lloyd's are domiciled in the United Kingdom and one of its insurance subsidiaries is domiciled in the Republic of Ireland. Insurers in the United Kingdom and the Republic of Ireland are subject to change of control restrictions, including approval of the PRA and FCA and of the Central Bank of Ireland, respectively. TRV's insurance subsidiaries domiciled in, or authorized to conduct insurance business in, Canada are also subject to regulatory change of control restrictions, including approval of OSFI. TRV's Brazilian joint venture is subject to regulatory change of control and other share transfer restrictions, including approval of the Superintendência de Seguros Privados (SUSEP).

These requirements may deter, delay or prevent transactions affecting the control of or the ownership of common stock, including transactions that could be advantageous to TRV's shareholders.

Regulatory Developments

The state insurance regulatory framework has been under continuing scrutiny, and some state legislatures have considered or enacted laws that may alter or increase state authority to regulate insurance companies and insurance holding companies. Further, the NAIC and state insurance regulators continually re-examine existing laws and regulations, specifically focusing on modifications to holding company statutes, regulations, interpretations of existing laws and the development of new laws and regulations.

As part of these changes, insurance holding company regulations were amended to require insurers who are part of a holding company system to file an enterprise risk report to provide the lead insurance regulator with a summary of the company's Enterprise Risk Management (ERM) framework, including the material risks within the insurance holding company system that could pose risk to the insurance entities within the holding company system. Insurers having premium volume above certain thresholds, including the Company, are also required to perform at least annually a self-assessment of their current and future risks, including their likely future solvency position (known as an own risk and solvency assessment or ORSA) and file a confidential report with the insurer's lead insurance regulator. The requirement for an insurer to conduct an ORSA is intended to foster an effective level of ERM for all insurers within a holding company system, and to provide a group-wide perspective

on risks and capital as a supplement to the legal entity view. ORSA is now included in the International Association of Insurance Supervisors (IAIS) standards and is in various stages of implementation in the United States, the U.K., Europe, Canada, and other jurisdictions. It is possible that, as a result of ORSA and the manner in which it may be used by insurance regulators, the Company's states of domicile or other regulatory bodies may require changes in its ERM process (e.g., prescribe the use of specific models or the application of certain assumptions or scenarios in the Company's models) that have the effect of limiting the Company's ability to write certain risks, limit its risk appetite or reduce its capital management flexibility. See "Item 1—Business—Enterprise Risk Management" for further discussion of the Company's ERM.

ENTERPRISE RISK MANAGEMENT

The Company's Enterprise Risk Management (ERM) activities involve both the identification and assessment of a broad range of risks and the execution of coordinated strategies to effectively manage these risks. Since certain risks can be correlated with other risks, an event or a series of events can impact multiple areas of the Company simultaneously and have a material effect on the Company's results of operations, financial position and/or liquidity. This requires an entity-wide view of risk and an understanding of the potential impact on all aspects of the Company's operations. It also requires the Company to manage its risk-taking to be within its risk appetite in a prudent and balanced effort to create and preserve value for all of the Company's stakeholders. ERM also includes an evaluation of the Company's risk capital needs, which takes into account regulatory requirements and credit rating considerations, in addition to economic and other factors. ERM at the Company is an integral part of its business operations. All risk owners across all functions, all corporate leaders and the Board of Directors are engaged in ERM. ERM involves risk-based analytics, as well as reporting and feedback throughout the enterprise in support of the Company's long-term financial strategies and objectives.

The Company uses various analyses and methods, including proprietary and third-party modeling processes, to make underwriting and reinsurance decisions designed to manage its exposure to catastrophic events. In addition to catastrophe modeling and analysis, the Company also models and analyzes its exposure to other extreme events. The Company also utilizes proprietary and third-party modeling processes to evaluate capital adequacy. These analytical techniques are an integral component of the Company's ERM process and further support the Company's long-term financial strategies and objectives.

In addition to the day-to-day ERM activities within the Company's operations, key internal risk management functions include, among others, the Management and Operating Committees (comprised of the Company's Chief Executive Officer and the other most senior members of management); the Enterprise, Segment and Function (including Catastrophe, Cyber, etc.) Risk Committees of management; the Executive Crisis Management Team; the Committee on Climate, Energy and the Environment; and the Credit Committee. A senior executive team comprised of the Chief Risk Officer and the Enterprise Chief Underwriting Officer oversees the ERM process. The mission of this team is to facilitate risk assessment and to collaborate in implementing effective risk management strategies throughout the Company. Another strategic ERM objective of this team includes working across the Company to enhance effective and realistic risk modeling capabilities as part of the Company's overall effort to understand and manage its portfolio of risks to be within its risk appetite. Board oversight of ERM is provided by the Risk Committee of the Board of Directors, which reviews the strategies, processes and controls pertaining to the Company's insurance operations and oversees the implementation, execution and performance of the Company's ERM program. The Risk Committee of the Board of Directors meets with senior management at least four times a year to discuss ERM activities and provides a report to the full Board of Directors after each such meeting.

The Company's ERM efforts build upon the foundation of an effective internal control environment. ERM expands the internal control objectives of effective and efficient operations, reliable financial reporting and compliance with applicable laws and regulations, to foster, lead and support an integrated, risk-based culture within the Company that focuses on value creation and preservation. However, the Company can provide only reasonable, not absolute, assurance that these objectives will be met. Further, the design of any risk management or control system must reflect the fact that there are resource constraints, and the benefits must be considered relative to their costs. As a result, the possibility of material financial loss remains in spite of the Company's significant and comprehensive ERM efforts. An investor should carefully consider the risks and all of the other information set forth in this annual report, including the discussions included in "Item 1A—Risk Factors," "Item 7A—Quantitative and Qualitative Disclosures About Market Risk," and "Item 8—Financial Statements and Supplementary Data."

OTHER INFORMATION

Seasonality

A discussion of the extent to which the Company's business may be seasonal can be found under "Outlook" within "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations" and is incorporated by reference into this Item 1.

Human Capital Management

At December 31, 2022, the Company had approximately 32,500 employees, 98% of whom are full-time employees. Over 90% of the Company's employees are located in the United States. The following table shows the geographic distribution of the Company's employees as of December 31, 2022:

Location	% of Total
Domestic:	
Connecticut	21.9 %
New York	6.9
Minnesota	6.7
Texas	6.7
California	5.3
Florida	4.1
Massachusetts	4.1
Georgia	3.6
All other domestic [(1)]	31.1
Total Domestic	90.4
International:	
Canada	5.1
United Kingdom	4.3
All other international	0.2
Total International	9.6
Consolidated total	100.0 %

(1) No other single state accounted for 3.0% or more of the Company's employees as of December 31, 2022.

The average employee tenure at the Company is 11 years, and over 20 years for the Company's approximately 700 most senior leaders. The Company's average global voluntary turnover rate over the past three years was approximately 9%. The Company believes that these employee tenure and voluntary turnover rates are due, in part, to the resources and support the Company provides to employees throughout their careers, as discussed below.

Maintaining an Ethical Culture

The Company's culture of honesty, integrity and accountability is critical to its long-term success. To support this culture, the Company promotes ethics and compliance awareness across its operations. On an annual basis, all employees of the Company's wholly owned subsidiaries are required to complete the Company's ethics training and certify that they have reviewed, understand and agree to comply with the Company's Code of Business Conduct and Ethics and other applicable Company policies.

The Company provides employees with multiple channels to raise concerns, including the Human Resources, Employee Relations and Compliance functions, as well as the Travelers Ethics Helpline. The Company's independently administered Ethics Helpline is available to employees and others 24 hours a day, seven days a week to report issues or seek guidance confidentially and anonymously. Trained professionals investigate each concern and, where appropriate, escalate it internally. In addition, the Company maintains a formal Whistleblowing and Non-Retaliation Policy that prohibits retaliation against, or discipline of, an employee who raises concerns in good faith.

Employee Engagement

The Company strives to deliver an employee experience that engages its workforce and strengthens the organization. The Company maintains an Employee Experience function that is responsible for, among other things, an employee experience program that is designed to help drive superior business performance. This function helps the Company create and enhance programs designed to improve employee engagement, reduce attrition and support the retention, growth and satisfaction of the Company's employees.

The Company uses various methods to evaluate the employee experience and the success of its employee engagement efforts, as well as to inform the strategies the Company uses to enhance those efforts. In addition, the Company's Chief Human Resources Officer meets regularly with the Chief Executive Officer and other senior leaders to discuss employee engagement strategies and the Company's progress.

Based on the Company's employee tenure and voluntary turnover rates, as discussed above, as well as other means the Company uses to evaluate the employee experience and the success of its engagement efforts, the Company believes that its engagement efforts are effective.

Learning and Development

The Company offers various learning and development opportunities to provide its employees with the skills and capabilities they need to be successful. For example, managers participate in the Company's leadership workshop, Leadership Challenge©, which provides an overview of key leadership practices at the Company. These practices are designed to enable leaders to increase engagement and inclusion, lead change, drive innovation, tie business goals to a greater purpose and coach people to higher levels of performance. The Company also offers three additional foundational workshops centered on leadership: Leadership Principles, Coaching for Performance Excellence, and Leading World Class Teams.

In addition, the Company offers career mentorship and development programs for both entry-level and experienced professionals. For example, the Company's Development Programs provide employees with an opportunity to progress through a steady career path in a specific discipline such as Actuarial, Business Insights & Analytics, Data Science, Finance, Human Resources, Technology, Operations, Underwriting, Investments or Product Management. Participants complete assignments and rotations designed to help them build upon their strategic thinking skills and business acumen, provide the foundational knowledge and technical skills necessary for success and include on-the-job training, classroom instruction, self-study materials and independent work in an assigned business area. These programs have been a part of the Company's talent strategy for many years and remained robust through the pandemic.

The Company also maintains a senior-level position responsible for monitoring the development of talented employees to support them in developing the skills necessary to advance their careers and expanding their relationships to ensure their success.

Diversity and Inclusion

The Company believes that its diversity and inclusion efforts are important to its success. The Vice President of Diversity and Inclusion leads the Company's diversity and inclusion efforts. The Company also has a Diversity Council that is chaired by the Chairman and Chief Executive Officer, comprising the 41 members of the Company's Operating Committee.

The Company provides training, development and cultural events to encourage an inclusive culture among its employees, including the Company's leadership. Among others, the Company offers training with respect to conscious inclusion, unconscious bias, and harassment awareness, as ways to ensure a respectful work environment and adherence to applicable legal requirements.

The Company also has eight Diversity Networks – voluntary groups led by employees, dedicated to fostering a diverse and inclusive work environment. The networks help foster the retention, development and success of the Company's employees through networking, mentorship and community volunteer opportunities. In addition, these groups are a resource for the Company's business leaders, providing them with important insights and perspectives. More than 12,000 employees – nearly 40% of the Company's employee population – are members of one or more of the Company's Diversity Networks.

The Company also continues to improve its diverse talent pipeline. The Company has established deliberate recruiting, retention and development practices that are tailored to deepen diverse talent pools and broaden advancement opportunities. These practices include matching upcoming leaders with mentors within the organization and offering workshops to advance their careers within the Company. The Company also uses various talent acquisition strategies, including sourcing strategies and initiatives and partnerships with college diversity groups and other organizations, to help create a pipeline of diverse candidates.

The Company has made significant progress over the past decade in increasing its diverse talent. In each of the last 10 years, the Company has increased the percentage of people of color (as defined by the U.S. Equal Employment Opportunity Commission's EEO-1 race and ethnicity categories for the U.S.) in its U.S. workforce. As of December 31, 2022, women and people of color represented approximately 54% and 27% of its U.S. workforce, respectively. The Company continues to make

progress in promoting women and people of color. In each of the last 10 years, the Company has increased the percentage of women and people of color in U.S. management-level positions.

Performance and Succession

The Company's performance management strategy is designed to develop the Company's talent and equip employees with the skills and resources necessary to ensure the Company's continued success. To that end, managers assist with setting and monitoring goals, planning, development and discussing opportunities for improvement throughout the year.

The Company also conducts a comprehensive annual talent review, which includes succession planning, to identify and prepare talented employees for future leadership positions. Each line of business identifies talented employees and succession candidates for targeted development and advancement opportunities. This talent review process culminates with the Chief Executive Officer and those reporting directly to him meeting to review succession plans for key positions. In addition, the Chief Executive Officer regularly meets with the Nominating and Governance Committee of the Board of Directors and the full Board of Directors to discuss succession-related matters.

Compensation and Benefits

The Company's compensation and benefits programs are designed to attract, motivate and retain high performing employees and to help employees be healthy and productive in all aspects of their lives.

Paying employees equitably is the foundation of the Company's performance-based culture. The Company has comprehensive processes and controls in place and reviews its compensation practices annually with independent, outside experts, in each case to help ensure equitable pay across the Company. Based in part on these measures, the Company believes that it pays its employees equitably, regardless of gender, race or any other protected classification.

The Company's minimum hourly wage in the United States is $18. As calculated and reported in the Company's most recent Proxy Statement filed in April 2022, excluding the Company's Chairman and Chief Executive Officer, (i) the median of the annual total compensation of all the Company's employees was nearly $110,000, and (ii) the median of the annual total compensation of the Company's full-time U.S. employees who worked for the Company for the entire year, who comprised over 90% of its U.S. workforce, was more than $115,000.

The Company takes a holistic approach with respect to the physical, emotional, mental and financial well-being of its employees. The Company offers comprehensive, flexible benefit options for its employees. In the United States, these include, among others:

Health and Wellness

- Medical, dental, vision and prescription drug coverage;
- Health savings and flexible spending accounts;
- The *my*Wellness platform, a virtual application containing tools and resources to help employees achieve their physical, mental and financial wellness goals;
- Round-the-clock access to Life Balance, the Company's employee assistance program, which provides employees access to professional counseling services, life coaching and support resources;
- Included Health, a free service for employees and dependents enrolled in the Company's medical plan that matches members to top-ranked doctors, provides expert second opinions and assists in navigating the health care system; and
- Caregiving Support from Wellthy, a benefit that helps employees navigate the challenges of caring for children, aging family members or loved ones who are chronically ill.

Savings and Retirement

- A 401(k) Savings Plan, through which the Company matches employee contributions dollar-for-dollar up to 5% of eligible pay, with a maximum annual Company match of $7,000 for 2022 and $7,500 for 2023;
- The Paying It Forward Savings Program, through which the Company supports employees with student loans by making an annual contribution in the employee's 401(k) account equal to the annual student loan payments. The combined maximum of the 401(k) match and the Paying It Forward savings contribution is 5% of eligible pay, up to a maximum of $7,000 for 2022 and $7,500 for 2023;
- A Pension Plan that provides annual pay credits from 2% to 6% of eligible pay based on age and years of service, plus quarterly interest credits;
- Financial wellness assessments; and
- Retirement planning services.

Other

- Life insurance;
- Short- and long-term disability coverages;
- Paid time-off, starting at 20 days per year, up to a maximum of 30 days per year based on years of service, plus the ability to purchase up to six additional days per year;
- Eight company holidays plus two floating holidays
- Paid parental and adoption leave;
- Childcare discounts;
- A Legal Services Plan;
- An Educational Assistance Program;
- A corporate discount program; and
- Paid time off for volunteering.

Board Oversight of Human Capital Management

The Company's Board of Directors takes an active role in overseeing the Company's human capital management strategy, including its diversity and inclusion efforts. The Chief Human Resources Officer and other senior executives present to the Board regularly on human capital management matters, including the progress the Company has made over time. Additionally, pursuant to its charter, the Nominating and Governance Committee of the Board meets regularly with senior management, including the Chief Executive Officer and the Chief Human Resources Officer, to review and discuss the Company's strategies to encourage diversity and inclusion within the Company. Pursuant to its charter, the Compensation Committee of the Board, which is advised by an independent compensation consultant, reviews and approves the Company's general compensation philosophy and objectives. In addition, the Compensation Committee meets with senior management on a regular basis to discuss the Company's practices designed to help ensure equitable pay across the organization.

Taxation

For a discussion of tax matters affecting the Company and its operations, see "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations" and note 13 of the notes to the consolidated financial statements.

Intellectual Property

The Company relies on a combination of contractual rights and copyright, trademark, patent and trade secret laws to establish and protect its intellectual property. With respect to trademarks specifically, the Company has registrations in many countries, including the United States, for its material trademarks, including the "Travelers" name and the Company's iconic umbrella logo. The Company has the right to retain its material trademark rights in perpetuity, so long as it satisfies the use and registration requirements of all applicable countries. The Company regards its trademarks as highly valuable assets in marketing its products and services and vigorously seeks to protect its trademarks against infringement. See "Item 1A—Risk Factors—Intellectual property is important to our business, and we may be unable to protect and enforce our own intellectual property or we may be subject to claims for infringing the intellectual property of others."

Company Website, Social Media and Availability of SEC Filings

The Company's internet website is *www.travelers.com*. Information on the Company's website is not incorporated by reference herein and is not a part of this Form 10-K. The Company makes available free of charge on its website or provides a link on its website to the Company's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as soon as reasonably practicable after those reports are electronically filed with, or furnished to, the SEC. To access these filings, go to the Company's website and under the "Investors" heading, click on "Financial Information" then "SEC Filings."

The Company may use its website and/or social media outlets, such as Facebook and Twitter, as distribution channels of material company information. Financial and other important information regarding the Company is routinely posted on and accessible through the Company's website at http://investor.travelers.com, its Facebook page at https://www.facebook.com/travelers and its Twitter account (@Travelers) at https://www.twitter.com/Travelers. In addition, you may automatically receive email alerts and other information about the Company when you enroll your email address by visiting "Email Notifications" under the "Investor Toolkit" section at http://investor.travelers.com.

Glossary of Selected Insurance Terms

Accident year	The annual calendar accounting period in which loss events occurred, regardless of when the losses are actually reported, booked or paid.
Adjusted unassigned surplus	Unassigned surplus as of the most recent statutory annual report reduced by twenty-five percent of that year's unrealized appreciation in value or revaluation of assets or unrealized profits on investments, as defined in that report.
Admitted insurer	A company licensed to transact insurance business within a state.
Agent	A licensed individual who sells and services insurance policies, receiving a commission from the insurer for selling the business and a fee for servicing it. An independent agent represents multiple insurance companies and searches the market for the best product for its client.
Annuity	A contract that pays a periodic benefit over the remaining life of a person (the annuitant), the lives of two or more persons or for a specified period of time.
Assigned risk pools	Reinsurance pools which cover risks for those unable to purchase insurance in the voluntary market. Possible reasons for this inability include the risk being too great or the profit being too small under the required insurance rate structure. The costs of the risks associated with these pools are charged back to insurance carriers in proportion to their direct writings.
Assumed reinsurance	Insurance risks acquired from a ceding company.
Book value per share	Total common shareholders' equity divided by the number of common shares outstanding.
Broker	One who negotiates contracts of insurance or reinsurance on behalf of an insured party, receiving a commission from the insurer or reinsurer for placement and other services rendered.
Capacity	The percentage of statutory capital and surplus, or the dollar amount of exposure, that an insurer or reinsurer is willing or able to place at risk. Capacity may apply to a single risk, a program, a line of business or an entire book of business. Capacity may be constrained by legal restrictions, corporate restrictions or indirect restrictions.
Captive	A closely-held insurance company whose primary purpose is to provide insurance coverage to the company's owners or their affiliates.
Case reserves	Claim department estimates of anticipated future payments to be made on each specific individual reported claim.
Casualty insurance	Insurance which is primarily concerned with the losses caused by injuries to third persons, i.e., not the insured, and the legal liability imposed on the insured resulting therefrom. It includes, but is not limited to, employers' liability, workers' compensation, public liability, automobile liability, personal liability and aviation liability insurance. It excludes certain types of losses that by law or custom are considered as being exclusively within the scope of other types of insurance, such as fire or marine.

Catastrophe	A severe loss designated a catastrophe by internationally recognized organizations that track and report on insured losses resulting from catastrophic events, such as Property Claim Services (PCS) for events in the United States and Canada. Catastrophes include hurricanes, tornadoes and other windstorms, earthquakes, hail, wildfires, severe winter weather, floods, tsunamis, volcanic eruptions, solar flares and other naturally-occurring events. Catastrophes can also be man-made, such as terrorist attacks and other intentionally destructive acts, including those involving nuclear, biological, chemical and radiological events, cyber events, civil unrest, explosions and destruction of infrastructure. Each catastrophe has unique characteristics and catastrophes are not predictable as to timing or amount. Their effects are included in net and core income and claims and claim adjustment expense reserves upon occurrence. A catastrophe may result in the payment of reinsurance reinstatement premiums and assessments from various pools. The Company's threshold for disclosing catastrophes is primarily determined at the reportable segment level. If a threshold for one segment or a combination thereof is exceeded and the other segments have losses from the same event, losses from the event are identified as catastrophe losses in the segment results and for the consolidated results of the Company. Additionally, an aggregate threshold is applied for International business across all reportable segments. For 2022, the threshold ranged from approximately $20 million to $30 million of losses before reinsurance and taxes.
Catastrophe loss	Loss and directly identified loss adjustment expenses from catastrophes, as well as related reinsurance reinstatement premiums and assessments from various pools.
Catastrophe reinsurance	A form of excess-of-loss reinsurance which, subject to a specified limit, indemnifies the ceding company for the amount of loss in excess of a specified retention with respect to an accumulation of losses and related reinsurance reinstatement premiums resulting from a catastrophic event. The actual reinsurance document is called a "catastrophe cover." These reinsurance contracts are typically designed to cover property insurance losses but can be written to cover casualty insurance losses such as from workers' compensation policies.
Cede; ceding company	When an insurer reinsures its liability with another insurer or a "cession," it "cedes" business and is referred to as the "ceding company."
Ceded reinsurance	Insurance risks transferred to another company as reinsurance. See "Reinsurance."
Claim	Request by an insured for indemnification by an insurance company for loss incurred from an insured peril.
Claim adjustment expenses	See "Loss adjustment expenses (LAE)."
Claims and claim adjustment expenses	See "Loss" and "Loss adjustment expenses (LAE)."
Claims and claim adjustment expense reserves	See "Loss reserves."
Cohort	A group of items or individuals that share a particular statistical or demographic characteristic. For example, all claims for a given product in a given market for a given accident year would represent a cohort of claims.

Combined ratio	For Statutory Accounting Practices (SAP), the combined ratio is the sum of the SAP loss and LAE ratio and the SAP underwriting expense ratio as defined in the statutory financial statements required by insurance regulators. The combined ratio as used in this report is the equivalent of, and is calculated in the same manner as, the SAP combined ratio except that the SAP underwriting expense ratio is based on net *written* premium and the underwriting expense ratio as used in this report is based on net *earned* premiums. The combined ratio is an indicator of the Company's underwriting discipline, efficiency in acquiring and servicing its business and overall underwriting profitability. A combined ratio under 100% generally indicates an underwriting profit. A combined ratio over 100% generally indicates an underwriting loss. Other companies' method of computing a similarly titled measure may not be comparable to the Company's method of computing this ratio.
Commercial multi-peril policies	Refers to policies which cover both property and third-party liability exposures.
Commutation agreement	An agreement between a reinsurer and a ceding company whereby the reinsurer pays an agreed-upon amount in exchange for a complete discharge of all obligations, including future obligations, between the parties for reinsurance losses incurred.
Core income (loss)	Consolidated net income (loss) excluding the after-tax impact of net realized investment gains (losses), discontinued operations, the effect of a change in tax laws and tax rates at enactment date, and cumulative effect of changes in accounting principles when applicable. Financial statement users consider core income when analyzing the results and trends of insurance companies.
Debt-to-total capital ratio	The ratio of debt to total capitalization.
Debt-to-total capital ratio excluding net unrealized gain (loss) on investments	The ratio of debt to total capitalization excluding the after-tax impact of net unrealized investment gains and losses included in shareholders' equity.
Deductible	The amount of loss that an insured retains.
Deferred acquisition costs (DAC)	Incremental direct costs of acquired and renewal insurance contracts, consisting of commissions (other than contingent commissions) and premium-related taxes that are deferred and amortized to achieve a matching of revenues and expenses when reported in financial statements prepared in accordance with U.S. Generally Accepted Accounting Principles (GAAP).
Deficiency	With regard to reserves for a given liability, a deficiency exists when it is estimated or determined that the reserves are insufficient to pay the ultimate settlement value of the related liabilities. Where the deficiency is the result of an estimate, the estimated amount of deficiency (or even the finding of whether or not a deficiency exists) may change as new information becomes available.
Demand surge	Significant short-term increases in building material and labor costs due to a sharp increase in demand for those materials and services, commonly as a result of a large catastrophe resulting in significant widespread property damage.
Direct written premiums	The amounts charged by an insurer to insureds in exchange for coverages provided in accordance with the terms of an insurance contract. The amounts exclude the impact of all reinsurance premiums, either assumed or ceded.

Earned premiums or premiums earned	That portion of property casualty premiums written that applies to the expired portion of the policy term. Earned premiums are recognized as revenues under both SAP and GAAP.
Excess and surplus lines insurance	Insurance for risks not covered by standard insurance due to the unique nature of the risk. Risks could be placed in excess and surplus lines markets due to any number of characteristics, such as loss experience, unique or unusual exposures, or insufficient experience in business. Excess and surplus lines are less regulated by the states, allowing greater flexibility to design specific insurance coverage and negotiate pricing based on the risks to be secured.
Excess liability	Additional casualty coverage above a layer of insurance exposures.
Excess-of-loss reinsurance	Reinsurance that indemnifies the reinsured against all or a specified portion of losses over a specified dollar amount or "retention."
Exposure	The measure of risk used in the pricing of an insurance product. The change in exposure is the amount of change in premium on policies that renew attributable to the change in portfolio risk.
Facultative reinsurance	The reinsurance of all or a portion of the insurance provided by a single policy. Each policy reinsured is separately negotiated.
Fair Access to Insurance Requirements (FAIR) Plan	A residual market mechanism which provides property insurance to those unable to obtain such insurance through the regular (voluntary) market. FAIR plans are set up on a state-by-state basis to cover only those risks in that state. For more information, see "residual market (involuntary business)."
Fidelity and surety programs	Fidelity insurance coverage protects an insured for loss due to embezzlement or misappropriation of funds by an employee. Surety is a three-party agreement in which the insurer agrees to pay a third party or make complete an obligation in response to the default, acts or omissions of an insured.
Gross written premiums	The direct and assumed contractually determined amounts charged to the policyholders for the effective period of the contract based on the terms and conditions of the insurance contract.
Ground-up analysis	A method to estimate ultimate claim costs for a given cohort of claims such as an accident year/product line component. It involves analyzing the exposure and claim activity at an individual insured level and then through the use of deterministic or stochastic scenarios and/or simulations, estimating the ultimate losses for those insureds. The total losses for the cohort are then the sum of the losses for each individual insured. In practice, the method is sometimes simplified by performing the individual insured analysis only for the larger insureds, with the costs for the smaller insureds estimated via sampling approaches (extrapolated to the rest of the smaller insured population) or aggregate approaches (using assumptions consistent with the ground-up larger insured analysis).
Guaranteed-cost products	An insurance policy where the premiums charged will not be adjusted for actual loss experience during the covered period.
Guaranty fund	A state-regulated mechanism that is financed by assessing insurers doing business in those states. Should insolvencies occur, these funds are available to meet some or all of the insolvent insurer's obligations to policyholders.

Holding company liquidity	Total cash, short-term invested assets and other readily marketable securities held by the holding company.
Incurred but not reported (IBNR) reserves	Reserves for estimated losses and LAE that have been incurred but not yet reported to the insurer. This includes amounts for unreported claims, development on known cases and re-opened claims.
Inland marine	A broad type of insurance generally covering articles that may be transported from one place to another, as well as bridges, tunnels and other instrumentalities of transportation. It includes goods in transit, generally other than transoceanic, and may include policies for movable objects such as personal effects, personal property, jewelry, furs, fine art and others.
Insurance Regulatory Information System (IRIS) ratios	Financial ratios calculated by the NAIC to assist state insurance departments in monitoring the financial condition of insurance companies.
Large deductible policy	An insurance policy where the customer assumes at least $25,000 or more of each loss. Typically, the insurer is responsible for paying the entire loss under those policies and then seeks reimbursement from the insured for the deductible amount.
Lloyd's	An insurance marketplace based in London, England, where brokers, representing clients with insurable risks, deal with Lloyd's underwriters, who represent investors. The investors are grouped together into syndicates that provide capital to insure the risks.
Loss	An occurrence that is the basis for submission and/or payment of a claim. Losses may be covered, limited or excluded from coverage, depending on the terms of the policy.
Loss adjustment expenses (LAE)	The expenses of settling claims, including legal and other fees and the portion of general expenses allocated to claim settlement costs.
Loss and LAE ratio	For SAP, the loss and LAE ratio is the ratio of incurred losses and loss adjustment expenses less certain administrative services fee income to net earned premiums as defined in the statutory financial statements required by insurance regulators. The loss and LAE ratio as used in this report is calculated in the same manner as the SAP ratio. The loss and LAE ratio is an indicator of the Company's underwriting discipline and underwriting profitability. Other companies' method of computing a similarly titled measure may not be comparable to the Company's method of computing this ratio.
Loss reserves	Liabilities established by insurers and reinsurers to reflect the estimated cost of claims incurred that the insurer or reinsurer will ultimately be required to pay in respect of insurance or reinsurance it has written. Reserves are established for losses and for LAE, and consist of case reserves and IBNR reserves. As the term is used in this document, "loss reserves" is meant to include reserves for both losses and LAE.
Loss reserve development	The increase or decrease in incurred claims and claim adjustment expenses as a result of the re-estimation of claims and claim adjustment expense reserves at successive valuation dates for a given group of claims. Loss reserve development may be related to prior year or current year development.

Losses incurred	The total losses sustained by an insurance company under a policy or policies, whether paid or unpaid. Incurred losses include a provision for IBNR.
National Association of Insurance Commissioners (NAIC)	An organization of the insurance commissioners or directors of all 50 states, the District of Columbia and the five U.S. territories organized to promote consistency of regulatory practice and statutory accounting standards throughout the United States.
Net written premiums	Direct written premiums plus assumed reinsurance premiums less premiums ceded to reinsurers.
New business volume	The amount of written premiums related to new policyholders and additional products sold to existing policyholders.
Pool	An organization of insurers or reinsurers through which particular types of risks are underwritten with premiums, losses and expenses being shared in agreed-upon percentages.
Premiums	The amount charged during the year on policies and contracts issued, renewed or reinsured by an insurance company.
Probable maximum loss (PML)	The maximum amount of loss that the Company would be expected to incur on a policy if a loss were to occur, giving effect to collateral, reinsurance and other factors.
Property insurance	Insurance that provides coverage to a person or business with an insurable interest in tangible property for that person's or business's property loss, damage or loss of use.
Quota share reinsurance	Reinsurance wherein the insurer cedes an agreed-upon fixed percentage of liabilities, premiums and losses for each policy covered on a pro rata basis.
Rates	Amounts charged per unit of insurance.
Redundancy	With regard to reserves for a given liability, a redundancy exists when it is estimated or determined that the reserves are greater than what will be needed to pay the ultimate settlement value of the related liabilities. Where the redundancy is the result of an estimate, the estimated amount of redundancy (or even the finding of whether or not a redundancy exists) may change as new information becomes available.
Reinstatement premiums	Additional premiums payable to reinsurers to restore coverage limits that have been exhausted as a result of reinsured losses under certain excess-of-loss reinsurance treaties.
Reinsurance	The practice whereby one insurer, called the reinsurer, in consideration of a premium paid to that insurer, agrees to indemnify another insurer, called the ceding company, for part or all of the liability of the ceding company under one or more policies or contracts of insurance which it has issued.
Reinsurance agreement	A contract specifying the terms of a reinsurance transaction.
Renewal premium change	The estimated change in average premium on policies that renew, including rate and exposure changes. Such statistics are subject to change based on a number of factors, including changes in estimates.

Renewal rate change	The estimated change in average premium on policies that renew, excluding exposure changes. Such statistics are subject to change based on a number of factors, including changes in estimates.
Residual market (involuntary business)	Insurance market which provides coverage for risks for those unable to purchase insurance in the voluntary market. Possible reasons for this inability include the risks being too great or the profit potential too small under the required insurance rate structure. Residual markets are frequently created by state legislation either because of lack of available coverage such as: property coverage in a windstorm prone area or protection of the accident victim as in the case of workers' compensation. The costs of the residual market are usually charged back to the direct insurance carriers in proportion to the carriers' voluntary market shares for the type of coverage involved.
Retention	The amount of exposure a policyholder company retains on any one risk or group of risks. The term may apply to an insurance policy, where the policyholder is an individual, family or business, or a reinsurance policy, where the policyholder is an insurance company.
Retention rate	The percentage of prior period premiums (excluding renewal premium changes), accounts or policies available for renewal in the current period that were renewed. Such statistics are subject to change based on a number of factors, including changes in estimates.
Retrospective premiums	Premiums related to retrospectively rated policies.
Retrospective rating	A plan or method which permits adjustment of the final premium or commission on the basis of actual loss experience, subject to certain minimum and maximum limits.
Return on equity	The ratio of net income (loss) less preferred dividends to average shareholders' equity.
Risk-based capital (RBC)	A measure adopted by the NAIC and enacted by states for determining the minimum statutory policyholders' surplus requirements of insurers. Insurers having total adjusted capital less than that required by the RBC calculation will be subject to varying degrees of regulatory action depending on the level of capital inadequacy.
Risk retention group	An alternative form of insurance in which members of a similar profession or business band together to self insure their risks.
Runoff business	An operation which has been determined to be nonstrategic; includes non-renewals of in-force policies and a cessation of writing new business, where allowed by law.
Salvage	The amount of money an insurer recovers through the sale of property transferred to the insurer as a result of a loss payment.
Second-injury fund	The employer of an injured, impaired worker is responsible only for the workers' compensation benefit for the most recent injury; the second-injury fund would cover the cost of any additional benefits for aggravation of a prior condition. The cost is shared by the insurance industry and self-insureds, funded through assessments to insurance companies and self-insureds based on either premiums or losses.

Segment income (loss)	Determined in the same manner as core income (loss) on a segment basis. Management uses segment income (loss) to analyze each segment's performance and as a tool in making business decisions. Financial statement users also consider segment income when analyzing the results and trends of insurance companies.
Self-insured retentions	That portion of the risk retained by an insured for its own account.
Servicing carrier	An insurance company that provides, for a fee, various services including policy issuance, claims adjusting and customer service for insureds in a reinsurance pool.
Statutory accounting practices (SAP)	The practices and procedures prescribed or permitted by domiciliary state insurance regulatory authorities in the United States for recording transactions and preparing financial statements. SAP generally reflect a modified going concern basis of accounting.
Statutory capital and surplus	The excess of an insurance company's admitted assets over its liabilities, including loss reserves, as determined in accordance with SAP. Admitted assets are assets of an insurer prescribed or permitted by a state to be recognized on the statutory balance sheet. Statutory capital and surplus is also referred to as "statutory surplus" or "policyholders' surplus."
Statutory net income	As determined under SAP, total revenues less total expenses and income taxes.
Structured settlement	Periodic payments to an injured person or survivor for a determined number of years or for life, typically in settlement of a claim under a liability policy, usually funded through the purchase of an annuity.
Subrogation	A principle of law incorporated in insurance policies, which enables an insurance company, after paying a claim under a policy, to recover the amount of the loss from another person or entity who is legally liable for it.
Tenure impact	As new business volume increases and accounts for a greater percentage of earned premiums, the loss and LAE ratio generally worsens initially, as the loss and LAE ratio for new business is generally higher than the ratio for business that has been retained for longer periods. As poorer performing business leaves and pricing segmentation improves on renewal of the business that is retained, the loss and LAE ratio is expected to improve in future years.
Third-party liability	A liability owed to a claimant (third party) who is not one of the two parties to the insurance contract. Insured liability claims are referred to as third-party claims.
Total capitalization	The sum of total shareholders' equity and debt.
Treaty reinsurance	The reinsurance of a specified type or category of risks defined in a reinsurance agreement (a "treaty") between a primary insurer or other reinsured and a reinsurer. Typically, in treaty reinsurance, the primary insurer or reinsured is obligated to offer and the reinsurer is obligated to accept a specified portion of all that type or category of risks originally written by the primary insurer or reinsured.
Umbrella coverage	A form of insurance protection against losses in excess of amounts covered by other liability insurance policies or amounts not covered by the usual liability policies.

Unassigned surplus	The undistributed and unappropriated amount of statutory capital and surplus.
Underlying combined ratio	The underlying combined ratio is the sum of the underlying loss and LAE ratio and the underlying underwriting expense ratio. The underlying combined ratio is an indicator of the Company's underwriting discipline and underwriting profitability for the current accident year.
Underlying loss and LAE ratio	The underlying loss and LAE ratio is the loss and LAE ratio, adjusted to exclude the impact of catastrophes and prior year reserve development. The underlying loss and LAE ratio is an indicator of the Company's underwriting discipline and underwriting profitability for the current accident year.
Underlying underwriting expense ratio	The underlying underwriting expense ratio is the underwriting expense ratio adjusted to exclude the impact of catastrophes.
Underlying underwriting margin	Net earned premiums and fee income less claims and claim adjustment expenses (excluding catastrophe losses and prior year reserve development) and insurance-related expenses.
Underwriter	An employee of an insurance company who examines, accepts or rejects risks and classifies accepted risks in order to charge an appropriate premium for each accepted risk. The underwriter is expected to select business that will produce an average risk of loss no greater than that anticipated for the class of business.
Underwriting	The insurer's or reinsurer's process of reviewing applications for insurance coverage, and the decision as to whether to accept all or part of the coverage and determination of the applicable premiums; also refers to the acceptance of that coverage.
Underwriting expense ratio	For SAP, the underwriting expense ratio is the ratio of underwriting expenses incurred (including commissions paid), less certain administrative services fee income and billing and policy fees, to net *written* premiums as defined in the statutory financial statements required by insurance regulators. The underwriting expense ratio as used in this report is the ratio of underwriting expenses (including the amortization of deferred acquisition costs), less certain administrative services fee income, billing and policy fees and other, to net *earned* premiums. The underwriting expense ratio is an indicator of the Company's efficiency in acquiring and servicing its business. Other companies' method of computing a similarly titled measure may not be comparable to the Company's method of computing this ratio.
Underwriting gain or loss	Net earned premiums and fee income less claims and claim adjustment expenses and insurance-related expenses.
Unearned premium	The portion of premiums written that is allocable to the unexpired portion of the policy term.
Voluntary market	The market in which a person seeking insurance obtains coverage without the assistance of residual market mechanisms.
Wholesale broker	An independent or exclusive agent that represents both admitted and non-admitted insurers in market areas, which include standard, non-standard, specialty and excess and surplus lines of insurance. The wholesaler does not deal directly with the insurance consumer. The wholesaler deals with the retail agent or broker.

Workers' compensation	A system (established under state and federal laws) under which employers provide insurance for benefit payments to their employees for work-related injuries, deaths and diseases, regardless of fault.

Item 1A. RISK FACTORS

You should carefully consider the following risks and all of the other information set forth in this report, including without limitation our consolidated financial statements and the notes thereto and "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Estimates." The following risk factors have been organized by category for ease of use; however, many of the risks may have impacts in more than one category.

Insurance-Related Risks

High levels of catastrophe losses, including as a result of factors such as increased concentrations of insured exposures in catastrophe-prone areas and changing climate conditions, could materially and adversely affect our results of operations, our financial position and/or liquidity, and could adversely impact our ratings, our ability to raise capital and the availability and cost of reinsurance. Our property and casualty insurance operations expose us to claims arising out of catastrophes in each of the geographies where we write business and to varying peak catastrophe perils in different countries and regions. Catastrophes can be caused by various natural events, including, among others, hurricanes, tornadoes and other windstorms, earthquakes, hail, wildfires, severe winter weather, floods, tsunamis, volcanic eruptions, solar flares and other naturally-occurring events. Catastrophes can also be man-made, such as terrorist attacks and other intentionally destructive acts including those involving cyber events, nuclear, biological, chemical and radiological events, civil unrest, explosions and destruction of infrastructure.

The incidence and severity of catastrophes are inherently unpredictable, and it is possible that both the frequency and severity of natural and man-made catastrophic events could increase. Severe weather events over the last two decades have underscored the unpredictability of climate trends. For example, the frequency and/or severity of hurricane, tornado, hail and wildfire events in the United States have been more volatile during this time period. The insurance industry has experienced increased catastrophe losses due to a number of potential factors, including, in addition to weather/climate variability, aging infrastructure, more people living in, and moving to, high-risk areas, population growth in areas with weaker enforcement of building codes, urban expansion, an increase in the number of amenities included in, and the average size of, a home and higher inflation, including as a result of post-event demand surge. We believe that changing climate conditions have also likely added to the frequency and severity of natural disasters and created additional uncertainty as to future trends and exposures. Climate studies by government agencies, academic institutions, catastrophe modeling organizations and other groups indicate that an increase in the frequency and/or intensity of hurricanes, heavy precipitation events, flash flooding, sea level rise, droughts, heat waves and wildfires has occurred, and can be expected into the future. See "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Catastrophe Modeling" and "—Changing Climate Conditions."

All of the catastrophe modeling tools that we use or rely on to evaluate our catastrophe exposures are based on significant assumptions and judgments and are subject to error and mis-estimation. As a result, our estimated exposures could be materially different than our actual results. See "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Catastrophe Modeling" and "—Changing Climate Conditions."

The extent of losses from a catastrophe is a function of the total amount of insured exposure affected by the event, the severity of the event and the coverage provided. For example, the specific location impacted by tornadoes is inherently random and unpredictable, and the specific location impacted by a tornado may or may not be highly populated and may or may not have a high concentration of our insured exposures. Similarly, the potential for losses from a cyber event can be magnified to the extent that the event impacts geographies, platforms, systems or vulnerabilities shared by a large number of policyholders, such as cloud-based software platforms. In addition, increases in the value and geographic concentration of insured property, the number of policyholders exposed to certain events and the effects of inflation could increase the severity of claims resulting from a catastrophe. For example, in recent periods, the effects of inflation, including as a result of post-event demand surge, have increased catastrophe losses, and this could continue in the future. Disruptions to electrical power supplies have also increased losses arising from natural events, a dynamic which may become more frequent as dependency on electricity increases and/or if the reliability of the electric grid decreases.

States have from time to time passed legislation, and regulators have taken action, that have the effect of limiting the ability of insurers to manage catastrophe risk, such as by restricting insurers from reducing exposures or withdrawing from catastrophe-prone areas or mandating that insurers participate in residual markets. Residual markets have resulted in, and may in the future

result in, significant losses or assessments to insurers, including us. In addition, legislative, regulatory and legal actions have sought to expand insurance coverage for catastrophe claims beyond the original intent of the policies, prevent the application of deductibles or limit other rights of insurers. We may not be able to adjust terms or adequately raise prices to offset the costs of catastrophes. See "Item 1—Business—U.S. State and Federal Regulation – Regulatory and Legislative Responses to Catastrophes."

The estimation of claims and claim adjustment expense reserves related to catastrophe losses can be affected by, among other things, the nature of the information available at the time of estimation, coverage issues, and legal, regulatory and economic uncertainties. The estimates related to catastrophe losses are adjusted in subsequent periods as actual claims emerge and additional information becomes available, and these adjustments could be material.

Exposure to catastrophe losses could adversely affect our financial strength and claims-paying ratings and could impair our ability to raise capital on acceptable terms or at all. Also, as a result of our exposure to catastrophe losses, rating agencies may further increase capital requirements, which may require us to raise capital to maintain our ratings. A ratings downgrade could hurt our ability to compete effectively or attract new business. In addition, catastrophic events could cause us to exhaust our available reinsurance limits and could adversely impact the cost and availability of reinsurance on a going-forward basis. Such events can also impact the credit of our reinsurers. For a discussion of our catastrophe reinsurance coverage, see "Item 1—Business—Reinsurance—Catastrophe Reinsurance." Catastrophic events could also adversely impact the credit of the issuers of securities held in our investment portfolio, such as states or municipalities.

In addition, coverage in our reinsurance program for terrorism is limited. Although the Terrorism Risk Insurance Program provides benefits in the event of certain acts of terrorism, those benefits are subject to a deductible and other limitations, and the program is scheduled to expire on December 31, 2027. Under current provisions of this program, once our losses exceed 20% of our eligible direct commercial earned premiums for the preceding calendar year, the federal government will reimburse us for 80% of our losses attributable to certain acts of terrorism which exceed this deductible up to a total industry program cap of $100 billion. Our estimated deductible under the program is $3.15 billion for 2023. For a further description of the Terrorism Risk Insurance Program, see note 6 of the notes to the consolidated financial statements.

Because of the risks set forth above, catastrophes could materially and adversely affect our results of operations, financial position and/or liquidity. Further, we may not have sufficient resources to respond to claims arising from a high frequency of high-severity natural catastrophes and/or of man-made catastrophic events involving conventional means or claims arising out of one or more man-made catastrophic events involving "unconventional" means, such as nuclear, biological, chemical or radiological events.

If actual claims exceed our claims and claim adjustment expense reserves, or if changes in the estimated level of claims and claim adjustment expense reserves are necessary, including as a result of, among other things, changes in the legal/ tort, regulatory and economic environments in which the Company operates, our financial results could be materially and adversely affected. Claims and claim adjustment expense reserves ("loss reserves") represent management estimates of what the ultimate settlement and administration of claims will cost, generally utilizing actuarial expertise and projection techniques, at a given accounting date. The process of estimating loss reserves involves a high degree of judgment and is subject to a number of variables. These variables can be affected by both internal and external events, such as: changes in claims handling procedures, including automation; adverse changes in loss cost trends, including inflationary pressures, technology or other changes that may impact medical, auto and home repair costs (e.g., more costly technology in vehicles, labor shortages, higher costs of used vehicles and parts, and increased demand and decreased supply for raw materials, all of which results in increased severity of claims); economic conditions, including general and wage inflation; legal trends, including adverse changes in the tort environment that have continued to persist at elevated levels for a number of years (e.g., increased and more aggressive attorney involvement in insurance claims, increased litigation, expanded theories of liability, higher jury awards, lawsuit abuse and third-party litigation finance, among others); labor shortages, which can result in companies hiring less experienced workers; and legislative changes, among others. The impact of many of these items on ultimate costs for loss reserves could be material and is difficult to estimate, particularly in light of the recent disruptions to the judicial system, supply chain and labor market. For example, the ongoing backlog of cases in the courts due to shutdowns related to COVID-19 has resulted in claims being unresolved for longer periods of time, which the Company believes has contributed, and will continue to contribute, to increased loss costs. Loss reserve estimation difficulties also differ significantly by product line due to differences in claim complexity, the volume of claims, the potential severity of individual claims, the determination of occurrence date for a claim and lags in reporting of events to insurers, among other factors.

The increase in inflation in recent periods has significantly increased our loss costs in our auto and property businesses. It is possible that inflation could remain at high levels for a prolonged period, or increase from these high levels, which could in turn lead to further increases in our loss costs. The impact of inflation on loss costs could be more pronounced for those lines of

business that are considered “long tail,” such as general liability and workers' compensation, as they require a relatively long period of time to finalize and settle claims for a given accident year or require payouts over a long period of time. In addition, a significant portion of claims costs, including those in “long tail” lines of business, consists of medical costs. As a result, an increase in medical inflation could materially and adversely impact our loss costs and our claims and claim adjustment expense reserves. Recent changes in the macroeconomic environment have impacted medical labor and materials costs, the potential persistency of which could result in future loss costs which are higher than our current expectations. In addition to the impact of inflation on reserves, on a going forward basis, we may not be able to offset the impact of inflation on our loss costs with sufficient price increases. The estimation of loss reserves may also be more difficult during extreme events, such as a pandemic, or during volatile or uncertain economic conditions, due to unexpected changes in behavior of claimants and policyholders, including an increase in fraudulent reporting of exposures and/or losses, reduced maintenance of insured properties, increased frequency of small claims or delays in the reporting or adjudication of claims.

We refine our loss reserve estimates as part of a regular, ongoing process as historical loss experience develops, additional claims are reported and settled, and the legal, regulatory and economic environment evolves. Business judgment is applied throughout the process, including the application of various individual experiences and expertise to multiple sets of data and analyses. Different experts may apply different assumptions and judgments when faced with material uncertainty, based on their individual backgrounds, professional experiences and areas of focus. As a result, these experts may at times produce estimates materially different from each other. This risk may be exacerbated in the context of an extreme event or an acquisition. Experts providing input to the various estimates and underlying assumptions include actuaries, underwriters, claim personnel and lawyers, as well as other members of management. Therefore, management often considers varying individual viewpoints as part of its estimation of loss reserves.

Due to the inherent uncertainty underlying loss reserve estimates, the final resolution of the estimated liability for claims and claim adjustment expenses will likely be higher or lower than the related loss reserves at the reporting date. In addition, our estimate of claims and claim adjustment expenses may change. These additional liabilities or increases in estimates, or a range of either, could vary significantly from period to period and could materially and adversely affect our results of operations and/or our financial position. For a discussion of loss reserves by product line, including examples of common factors that can affect reserves, see "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Estimates—Claims and Claim Adjustment Expense Reserves."

Our business could be harmed because of our potential exposure to asbestos and environmental claims and related litigation. We continue to receive a significant number of asbestos claims. Factors underlying these claim filings include continued intensive advertising by lawyers seeking asbestos claimants and the continued focus by plaintiffs on defendants, such as manufacturers of talcum powder, who were not traditionally primary targets of asbestos litigation. We also continue to be involved in coverage litigation concerning a number of policyholders, some of whom have filed for bankruptcy, who in some instances have asserted that all or a portion of their asbestos-related claims are not subject to aggregate limits on coverage and/or that each individual bodily injury claim should be treated as a separate occurrence under the policy. To the extent both issues are resolved in a policyholder’s favor and our other defenses are not successful, our coverage obligations under the policies at issue would be materially increased and bounded only by the applicable per-occurrence limits and the number of asbestos bodily injury claims against the policyholders. Although we have seen a moderation in the overall risk associated with these lawsuits, it remains difficult to predict the ultimate cost of these claims. Further, in addition to claims against policyholders, proceedings have been launched directly against insurers, including us, by individuals challenging insurers’ conduct with respect to the handling of past asbestos claims and by individuals seeking damages arising from alleged asbestos-related bodily injuries. It is possible that the filing of other direct actions against insurers, including us, could be made in the future.

We also continue to receive claims from policyholders who allege that they are liable for injury or damage arising out of their alleged disposition of toxic substances. Liability for investigation and cleanup of environmental contamination and for some related losses under federal laws, such as the Comprehensive Environmental Response, Compensation and Liability Act, and under similar state laws, may be imposed on certain parties even if they did not cause the release or threatened release of hazardous substances and may be joint and several with other responsible parties.

The Company has been, and continues to be, involved in litigation involving insurance coverage issues pertaining to asbestos and environmental claims. The Company believes that some court decisions have interpreted the insurance coverage to be broader than the original intent of the insurers and policyholders. These decisions continue to be inconsistent and vary from jurisdiction to jurisdiction. Uncertainties surrounding the final resolution of these asbestos and environmental claims continue, and it is difficult to estimate our ultimate liability for such claims and related litigation. As a result, these reserves are subject to revision as new information becomes available and as claims develop. It is also not possible to predict changes in the legal, regulatory and legislative environment and their impact on the future development of asbestos and environmental claims. This environment could be affected by changes in applicable legislation and future court and regulatory decisions and interpretations,

including the outcome of legal challenges to legislative and/or judicial reforms establishing medical criteria for the pursuit of asbestos claims. It is also difficult to predict the ultimate outcome of complex coverage disputes until settlement negotiations near completion and significant legal questions are resolved or, failing settlement, until the dispute is adjudicated. This is particularly the case with policyholders in bankruptcy where negotiations often involve a large number of claimants and other parties and require court approval to be effective.

It is possible that the outcome of the continued uncertainties regarding these claims could result in liability in future periods that differs from current reserves by an amount that could materially and adversely affect our results of operations. See the "Asbestos Claims and Litigation," "Environmental Claims and Litigation" and "Uncertainty Regarding Adequacy of Asbestos and Environmental Reserves" sections of "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations." Also see "Item 3—Legal Proceedings."

We are exposed to, and may face adverse developments involving, mass tort claims such as those relating to exposure to potentially harmful products or substances. We face potential exposure to mass tort claims, including claims related to exposure to potentially harmful products or substances, such as lead paint, perfluoroalkyl and polyfluoroalkyl substances (PFAS), talc and opioids. Establishing loss reserves for mass tort claims is subject to significant uncertainties because of many factors, including adverse changes to the tort environment that have continued to persist at elevated levels for a number of years (e.g., increased and more aggressive attorney involvement in insurance claims, increased litigation, expanded theories of liability, higher jury awards, lawsuit abuse and third-party litigation finance, among others); evolving judicial interpretations, including application of various theories of joint and several liabilities; disputes concerning medical causation with respect to certain diseases; geographical concentration of the lawsuits asserting the claims; and the potential for a large rise in the total number of claims without underlying epidemiological developments suggesting an increase in disease rates. Because of the uncertainties set forth above, additional liabilities may arise for amounts in excess of the current loss reserves. In addition, our estimate of loss reserves may change. These additional liabilities or increases in estimates, or a range of either, could vary significantly from period to period and could materially and adversely affect our results of operations and/or our financial position.

The effects of emerging claim and coverage issues on our business are uncertain, and court decisions or legislative changes that take place after we issue our policies can result in an unexpected increase in the number of claims and have a material adverse impact on our results of operations. As industry practices and legal, judicial, social and other environmental conditions change, unexpected and unintended issues related to claim and coverage may emerge. These issues may adversely affect our business, including by extending coverage beyond our underwriting intent, by increasing the number, size or types of claims or by mandating changes to our underwriting practices. Examples of such claims and coverage issues include, but are not limited to:

- judicial expansion of policy coverage and the impact of new or expanded theories of liability;
- plaintiffs targeting insurers in purported class action litigation relating to claims handling and other practices;
- claims relating to construction defects, which often present complex coverage and damage valuation questions;
- claims related to data and network security breaches, information system failures or cyber events, including cases where coverage was not intended to be provided;
- the assertion of "public nuisance" or similar theories of liability, pursuant to which plaintiffs, including governmental entities, seek to recover monies spent to respond to harm caused to members of the public, abate hazards to public health and safety and/or recover expenditures purportedly attributable to a "public nuisance," such as litigation against manufacturers or distributors of lead paint, opioids, perfluoroalkyl and polyfluoroalkyl substances (PFAS) and other allegedly harmful products, and entities that caused or contributed to harm to the environment;
- claims related to liability, business interruption or workers' compensation arising out of infectious disease or pandemic;
- claims related to vaccine mandates, testing protocols or other matters related to employees returning to the workplace;
- claims relating to abuse by an employee or a volunteer of an insured;
- claims that link health issues to particular causes (for example, cumulative traumatic head injury from sports or other causes), resulting in liability or workers' compensation claims;
- claims alleging that one or more of our underwriting criteria have a disparate impact on persons belonging to a protected class in violation of the law, including the Fair Housing Act;
- claims arising out of modern techniques and practices used in connection with the extraction of natural resources, such as hydraulic fracturing or wastewater injection;
- claims arising out of the use of personal property in commercial transactions, such as ride or home sharing;
- claims against fiduciaries of retirement plans, including allegations regarding excessive fees;
- claims under laws protecting biometric data;

- claims relating to unanticipated consequences of current or new technologies or business models or processes, including as a result of related behavioral changes; and
- claims relating to changing climate conditions, including claims alleging that our policyholders cause or contribute to changing climate conditions.

In some instances, emerging issues may not become apparent for some time after we have issued the affected insurance policies. As a result, the full extent of liability under our insurance policies may not be known for many years after the policies are issued.

In addition, the passage of new legislation designed to expand the right to sue, to remove limitations on recovery, to deem by statute the existence of a covered occurrence, to extend or eliminate the statutes of limitations or otherwise to repeal or weaken tort reforms could have a material and adverse effect on our results of operations. For example, over the past few years, a number of states have enacted legislation allowing victims of sexual molestation to file or proceed with claims that otherwise would have been time-barred and additional states are considering similar legislative changes.

The effects of these and other unforeseen emerging claim and coverage issues are extremely hard to predict and could harm our business and materially and adversely affect our results of operations.

Financial, Economic and Credit Risks

During or following a period of financial market disruption or an economic downturn, our business could be materially and adversely affected. If financial markets experience significant disruption or if economic conditions deteriorate, such as in a period of recession or stagflation, our results of operations, financial position and/or liquidity likely would be adversely impacted. For example, financial market disruptions and economic downturns in the past have resulted in, among other things, reduced business volume, heightened credit risk, reduced valuations for certain of our investments and heightened vulnerability for smaller vendors with whom we do business. Future actions or inactions of the United States government related to the "debt-ceiling" could increase the actual or perceived risk that the United States may not ultimately pay its obligations when due. This could result in downgrades to the credit rating of the United States and potential disruption to financial markets, including capital markets.

Several of the risk factors discussed above and below identify risks that could result from, or be exacerbated by, financial market disruption, an economic slowdown or economic uncertainty. These include risks discussed above related to our estimates of claims and claim adjustment expense reserves and emerging claim and coverage issues, and those discussed below related to our investment portfolio, the competitive environment, reinsurance arrangements, other credit exposures, regulatory developments and the impact of rating agency actions. See also "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations," particularly the "Outlook" section, for additional information about these risks and the potential impact on our business.

Our investment portfolio is subject to credit and interest rate risk, and may suffer reduced or low returns or material realized or unrealized losses. Investment returns are an important part of our overall profitability. Fixed maturity and short-term investments comprised approximately 93% of the carrying value of our investment portfolio as of December 31, 2022. Changes in interest rates affect the carrying value of our fixed maturity investments and returns on our fixed maturity and short-term investments. A decline in interest rates reduces the returns available on short-term investments and new fixed maturity investments (including those purchased to re-invest maturities from the existing portfolio), thereby negatively impacting our net investment income on a going-forward basis, while rising interest rates reduce the market value of existing fixed maturity investments, thereby negatively impacting our book value, as we experienced in 2022. While interest rates have risen rapidly during 2022, they continue to remain at low levels relative to historical experience, and rates may remain at low levels relative to historical experience for a prolonged period. See also "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Outlook." The value of our fixed maturity and short-term investments is also subject to the risk that certain investments may default or become impaired due to a deterioration in the financial condition of one or more issuers of the securities held in our portfolio, or due to a deterioration in the financial condition of an insurer that guarantees an issuer's payments of such investments. Such defaults and impairments could reduce our net investment income and result in realized investment losses. During an economic downturn, fixed maturity and short-term investments could be subject to a higher risk of default, and our non-fixed income investments could be negatively impacted as well.

A significant portion of our fixed maturity investment portfolio is invested in obligations of states, municipalities and political subdivisions. This municipal bond portfolio could be subject to default or impairment. In particular:

- Many state and local governments have from time to time operated under deficits or projected deficits, particularly during and after a financial market disruption or economic downturn. The severity and duration of these deficits could have an adverse impact on the collectability and valuation of our municipal bond portfolio. These deficits may also be exacerbated by the impact of unfunded pension plan obligations and other postretirement obligations or by declining municipal tax bases and revenues in times of financial stress.

- Some municipal bond issuers may be unwilling to increase tax rates, or to reduce spending, to fund interest or principal payments on their municipal bonds, or may be unable to access the municipal bond market to fund such payments. The risk of widespread defaults may increase if some issuers voluntarily choose to default, instead of implementing difficult fiscal measures, and the actual or perceived consequences are less severe than expected.

- The risk of widespread defaults may also increase if there are changes in legislation that permit states, municipalities and political subdivisions to file for bankruptcy protection where they were not permitted before. In addition, the collectability and valuation of municipal bonds may be adversely affected if there are judicial interpretations in a bankruptcy or other proceeding that lessen the value of structural protections. For example, debtors may challenge the effectiveness of structural protections thought to be provided by municipal securities backed by a dedicated source of revenue. The collectability and valuation may also be adversely affected if there are judicial interpretations in a bankruptcy or other proceeding that question the payment priority of municipal bonds.

Our portfolio has benefited from tax exemptions (such as those related to interest from municipal bonds) and certain other tax laws, including, but not limited to, those governing dividends-received deductions and tax credits. Changes in these laws could adversely impact the value of our investment portfolio.

Our investment portfolio includes: residential mortgage-backed securities; collateralized mortgage obligations; pass-through securities and asset-backed securities collateralized by sub-prime mortgages; commercial mortgage-backed securities; and wholly-owned real estate and real estate partnerships, all of which could be adversely impacted by declines in real estate valuations, including as a result of changes in the use of commercial office and retail space since the COVID-19 pandemic.

We also invest a portion of our assets in equity securities, private equity limited partnerships, hedge funds and real estate partnerships. From time to time, we may also invest in other types of non-fixed maturity investments, including investments with exposure to commodity price risk. All of these asset classes are subject to greater volatility in their investment returns than fixed maturity investments. General economic and market conditions, changes in applicable tax laws and many other factors beyond our control can adversely affect the value of our non-fixed maturity investments and the realization of net investment income, and/or result in realized investment losses. As a result of these factors, we may realize reduced returns on these investments, incur losses on sales of these investments and be required to write down the value of these investments, which could reduce our net investment income and result in realized investment losses. From time to time, the Company enters into short positions in U.S. Treasury futures contracts to manage the duration of its fixed maturity portfolio, which can result in realized investment losses.

Our investment portfolio is also subject to increased valuation uncertainties when investment markets are illiquid. The valuation of investments is more subjective when markets are illiquid, thereby increasing the risk that the estimated fair value (i.e., the carrying amount) of the portion of the investment portfolio that is carried at fair value as reflected in our financial statements is not reflective of prices at which actual transactions could occur.

We may, depending on circumstances in the future, including as a result of changes in economic and market conditions, make changes to the mix of investments in our investment portfolio as part of our ongoing efforts to seek appropriate risk-adjusted returns. These changes may impact the duration, volatility and risk of our investment portfolio.

Because of the risks set forth above, the value of our investment portfolio could decrease, we could experience reduced net investment income and we could experience realized and/or unrealized investment losses, which could materially and adversely affect our results of operations, financial position and/or liquidity.

We may not be able to collect all amounts due to us from reinsurers, reinsurance coverage may not be available to us in the future at commercially reasonable rates or at all and we are exposed to credit risk related to our structured settlements. Although the reinsurer is liable to us to the extent of the reinsurance, we remain liable as the direct insurer on all risks reinsured. As a result, reinsurance arrangements do not eliminate our obligation to pay claims. Accordingly, we are subject to credit risk with respect to our ability to recover amounts due from reinsurers. In the past, certain reinsurers have ceased writing business and entered into runoff. Some of our reinsurance claims may be disputed by the reinsurers, and we may ultimately receive partial or no payment. This is a particular risk in the case of claims that relate to insurance policies written

many years ago, including those relating to asbestos and environmental claims. In addition, in a number of jurisdictions a reinsurer is permitted to transfer a reinsurance arrangement to another reinsurer, which may be less creditworthy, without a counterparty's consent. Also, the reinsurance that we purchase may not cover all of the risks covered by the policies that we issue.

Included in reinsurance recoverables are amounts related to certain structured settlements. Structured settlements are annuities purchased from various life insurance companies to settle certain personal physical injury claims, of which workers' compensation claims comprise a significant portion. In cases where we did not receive a release from the claimant, the structured settlement is included in reinsurance recoverables and the related claim cost is included in the liability for loss reserves, as we retain the contingent liability to the claimant. Some of the life insurance companies from which we have purchased annuities have been downgraded to below investment grade credit ratings subsequent to the time of the purchase. If it is expected that the life insurance company is not able to pay, we would recognize an impairment of the related reinsurance recoverable if, and to the extent, the purchased annuities are not covered by state guaranty associations. In the event that the life insurance company fails to make the required annuity payments, we would be required to make such payments. For a discussion of the top five providers of our reinsurance and structured settlements, see "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Reinsurance Recoverables."

Both the availability of reinsurance capacity and its cost can be impacted, and in recent periods have been impacted, by general economic conditions and conditions in the reinsurance market, such as the occurrence of significant reinsured events or unexpected adverse trends. The availability and cost of reinsurance could affect our business volume and profitability. In addition, the Covered Agreements between the U.S. and each of the EU and U.K. eliminate the requirement for European and U.K. reinsurers operating in the U.S. to provide collateral, which could make it more difficult for U.S. companies, including us, to obtain collateral from European and U.K. reinsurers.

Because of the risks set forth above, we may not be able to collect all amounts due to us from reinsurers, and reinsurance coverage may not be available to us in the future at commercially reasonable rates or at all, and/or life insurance companies may fail to make required annuity payments, and thus our results of operations could be materially and adversely affected.

We are exposed to credit risk in certain of our insurance operations and with respect to certain guarantee or indemnification arrangements that we have with third parties. We are exposed to credit risk in several areas of our business operations, including credit risk relating to policyholders, independent agents and brokers. To a significant degree, the extent of the credit risk that we face is a function of the health of the economy; accordingly, we face an increased credit risk in an economic downturn.

We are exposed to credit risk in our surety insurance operations, where we guarantee to a third party that our customer will satisfy certain performance obligations (e.g., a construction contract) or certain financial obligations, including exposure to large customers who may have obligations to multiple third parties. If our customer defaults, we may suffer losses and not be reimbursed by that customer, even though we are entitled to indemnification from such customer. In addition, it is customary practice for multiple insurers to participate as co-sureties on large surety bonds. Under these arrangements, the co-surety obligations are typically joint and several, in which case we are also exposed to credit risk with respect to our co-sureties.

In addition, a portion of our business is written with large deductible insurance policies. Under casualty insurance contracts with deductible features, we are obligated to pay the claimant the full amount of the settled claim. We are subsequently reimbursed by the contractholder for the deductible amount, and, as a result, we are exposed to credit risk to the policyholder. Moreover, certain policyholders purchase retrospectively rated policies (i.e., where premiums are adjusted after the policy period based on the actual loss experience of the policyholder during the policy period). Retrospectively rated policies expose us to additional credit risk to the extent that the adjusted premium is greater than the original premium.

Our efforts to mitigate the credit risk that we have to our insureds may not be successful. For example, we may not be able to obtain collateral and any collateral obtained may subsequently have little or no value.

In accordance with industry practice, when policyholders purchase insurance policies from us through independent agents and brokers, the premiums relating to those policies are often paid to the agents and brokers for payment to us. In most jurisdictions, the premiums will be deemed to have been paid to us whether or not they are actually received by us. Consequently, we assume a degree of credit risk associated with amounts due from independent agents and brokers.

We are also exposed to credit risk related to certain guarantee or indemnification arrangements that we have with third parties. See note 17 of the notes to the consolidated financial statements. Our exposure to the above credit risks could materially and adversely affect our results of operations.

A downgrade in our claims-paying and financial strength ratings could adversely impact our business volumes, adversely impact our ability to access the capital markets and increase our borrowing costs. Claims-paying and financial strength ratings are important to an insurer's competitive position. A downgrade in one or more of our ratings could negatively impact our business volumes or make it more difficult or costly for us to access the capital markets or borrow money. If significant losses, including, but not limited to, those resulting from one or more major catastrophes, or significant reserve additions or significant investment losses were to cause our capital position to deteriorate significantly, or if one or more rating agencies substantially increase their capital requirements, we may need to raise equity capital in the future (which we may not be able to do at a reasonable cost or at all, especially at a time of financial market disruption) in order to maintain our ratings or limit the extent of a downgrade. A continued trend of more frequent and severe catastrophes or a prolonged financial market disruption or economic downturn may lead rating agencies to substantially increase their capital requirements. Furthermore, S&P has proposed changes to its capital model that could adversely impact such agency's assessment of capital adequacy for participants in the insurance industry, including the Company. See also "Item 1—Business—Ratings."

The inability of our insurance subsidiaries to pay dividends to our holding company in sufficient amounts would harm our ability to meet our obligations, pay future shareholder dividends and/or make future share repurchases. Our holding company relies on dividends from our U.S. insurance subsidiaries to meet our obligations for payment of interest and principal on outstanding debt, to pay dividends to shareholders, to make contributions to our qualified domestic pension plan, to pay other corporate expenses and to make share repurchases. The ability of our insurance subsidiaries to pay dividends to our holding company in the future will depend on their statutory capital and surplus, earnings and regulatory restrictions.

We are subject to state insurance regulation as an insurance holding company system. Our U.S. insurance subsidiaries are subject to various regulatory restrictions that limit the maximum amount of dividends available to be paid to their parent without prior approval of insurance regulatory authorities. In a time of prolonged economic downturn or otherwise, insurance regulators may choose to further restrict the ability of insurance subsidiaries to make payments to their parent companies. The ability of our insurance subsidiaries to pay dividends to our holding company is also restricted by regulations that set standards of solvency that must be met and maintained.

The inability of our insurance subsidiaries to pay dividends to our holding company in an amount sufficient to meet our debt service obligations and other cash requirements could harm our ability to meet our obligations, to pay future shareholder dividends and to make share repurchases.

Business and Operational Risks

The ongoing impact of COVID-19 and related risks, and any future pandemics (including new variants of COVID-19), could materially affect our results of operations, financial position and/or liquidity. While the Company believes that many of the risks related to COVID-19 have moderated, some significant risks remain, such as inflation; supply chain disruption; labor shortages; backlogs in the court system (which increase the time and costs to resolve claims); regulators rejecting rate increases in the face of claim frequency rates returning to pre-pandemic levels and increased severity due to inflation; behavioral changes that began to manifest during the pandemic and have continued, such as driving at faster speeds, which have resulted in the increased frequency and severity of claims; "long-COVID" and other claims in our workers compensation line; and litigation seeking business interruption coverage. Risks related to future pandemics (including new variants of COVID-19) include, in addition to those discussed above, reduced earned premiums; higher claim and claim adjustment expenses in certain lines of business; adverse legislative or regulatory actions; operational disruptions; increased general and administrative expenses; financial market disruption; and an economic downturn. These risks could materially and adversely impact our results of operations, financial position and/or liquidity. For a further discussion of risks that can impact us as a result of financial market disruption or an economic downturn, see "During or following a period of financial market disruption or an economic downturn, our business could be materially and adversely affected" above and "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Outlook."

The intense competition that we face, including with respect to attracting and retaining employees, and the impact of innovation, technological change and changing customer preferences on the insurance industry and the markets in which we operate, could harm our ability to maintain or increase our business volumes and our profitability. The property and casualty insurance industry is highly competitive, and we believe that it will remain highly competitive for the foreseeable future. We compete with both domestic and foreign insurers, including start-ups, which may offer products at prices and on terms that are not consistent with our economic standards in an effort to maintain or increase their business. The competitive environment in which we operate could also be impacted by current general economic conditions, which could reduce the volume of business available to us as well as to our competitors. Pension and hedge funds and other entities with substantial available capital, more flexible legal structures and/or potentially lower return objectives have increasingly sought to participate in the property and casualty insurance and reinsurance businesses. Well-capitalized new entrants to the property and

casualty insurance and reinsurance industries and existing competitors that receive substantial infusions of capital may conduct business in ways that adversely impact our business volumes and profitability. In addition, the competitive environment could be impacted by changes in customer preferences, including customer demand for direct distribution channels and/or greater choice, not only in personal lines, but also in commercial lines (where direct writers may become a more significant source of competition in the future, particularly in the small commercial market). Similarly, comparative rating technology has impacted competition in personal lines and is now being used to access comparative rates for small commercial business as well, and that trend is likely to continue and may accelerate. In recent years, there have been new entrants into the small commercial business, and this trend may continue. Customer behavior could also evolve in the future towards buying insurance in point-of-sale or other non-traditional distribution channels where we may not have a meaningful presence or which are designed to sell products that we currently do not provide. Consolidation within the insurance industry also could impact our business volumes and/or the rates or terms of our products.

Other technological changes also present competitive risks. For example, our competitive position could be impacted if we are unable to deploy, in a cost effective and competitive manner, technology such as artificial intelligence and machine learning that collects and analyzes a wide variety of data points (so-called “big data” analysis) to make underwriting or other decisions, or if our competitors collect and use data which we do not have the ability to access or use. In addition, innovations, such as telematics and other usage-based methods of determining premiums, can impact product design and pricing and are becoming an increasingly important competitive factor.

Competitive dynamics may impact the success of efforts to improve our underwriting margins on our insurance products. These efforts could include seeking improved rates or improved terms and conditions, and could also include other initiatives, such as reducing operating expenses and acquisition costs. These efforts may not be successful and/or may result in lower business volumes. In addition, if our underwriting is not effective, further efforts to increase rates could also lead to “adverse selection”, whereby accounts retained have higher losses, and are less profitable, than accounts lost. For more detail, see "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Outlook."

Similar to other industries, the insurance industry is undergoing rapid and significant technological and other change. Traditional insurance industry participants, technology companies, “InsurTech” start-up companies, the number of which has increased significantly in recent years and some of which are supported by traditional insurance industry participants, and others are focused on using technology and innovation to simplify and improve the customer experience, increase efficiencies, redesign products, alter business or distribution models and effect other potentially disruptive changes in the insurance industry. If we do not anticipate, keep pace with and adapt to technological and other changes impacting the insurance industry, it will harm our ability to compete, decrease the value of our products to customers, and materially and adversely affect our business. Furthermore, innovation, technological change and changing customer preferences in the markets in which we operate also pose risks to our business. For example, technologies such as driverless vehicles, assisted-driving or accident prevention technologies, technologies that facilitate ride, car or home sharing, smart homes or automation could reduce the number of vehicles in use and/or the demand for, or profitability of, certain of our products, create coverage issues or impact the frequency or severity of losses, and we may not be able to respond effectively. While there is substantial uncertainty as to the timing of any impact, in the case of driverless vehicles in particular, new legal frameworks or business practices could be adopted that reduce the size of the auto insurance market. If competition or technological or other changes to the markets in which we operate limit our ability to retain existing business or write new business at adequate rates or on appropriate terms, our results of operations could be materially and adversely affected. See "Competition" sections of the discussion on business segments in "Item 1—Business." Technological change can impact us in other ways as well. For example, rapid changes in the sophistication and use of certain types of cyber-attacks, such as ransomware and social engineering attacks, on our insureds have increased the frequency and severity of losses under our policies. The risk of cyber attacks could be exacerbated by geopolitical tensions, including hostile actions taken by nation-states and terrorist organizations.

There is significant competition from within the property and casualty insurance industry and from businesses outside the industry for qualified employees, especially those in key positions and those possessing highly specialized knowledge in areas such as underwriting, data and analytics, technology and e-commerce. This competition has increased in recent periods and, with the increase in remote work, is taking place on a broader geographic scale. In addition, the competition for talent and the difficulty in attracting and retaining employees has also increased due to the increase in the number of individuals exiting the workforce since the onset of the pandemic and to the retirement of members of the “baby boomer” generation. This dynamic has also impacted our agents, brokers, regulators, vendors and other business partners. If we and our business partners are not able to successfully attract, train, retain and motivate our respective employees, our business, financial results and reputation could be materially and adversely affected.

Disruptions to our relationships with our independent agents and brokers or our inability to manage effectively a changing distribution landscape could adversely affect us. We market our insurance products primarily through independent agents and brokers. An important part of our business is written through less than a dozen such intermediaries, including the agency affiliate of GEICO, with whom we have had a distribution arrangement for homeowners' business since 1995. Further, there has been a trend of increased consolidation by agents and brokers, which could impact our relationships with, and fees paid to, some agents and brokers, and/or otherwise negatively impact the pricing or distribution of our products. Agents and brokers may increasingly compete with us to the extent that markets increasingly provide them with direct access to providers of capital seeking exposure to insurance risk or if they become affiliated with carriers that compete with us. In all of the foregoing situations, loss of all or a substantial portion of the business provided through such agents and brokers could materially and adversely affect our future business volume and results of operations.

Our efforts or the efforts of agents and brokers with respect to new products or markets, alternate distribution channels, changes to commission terms as well as changes in the way agents and brokers utilize data and technology, including in ways that may be in direct competition with us, could adversely impact our business relationship with independent agents and brokers who currently market our products, resulting in a lower volume and/or profitability of business generated from these sources.

In certain markets, brokers increasingly have been packaging portfolios of risks together and offering them to fewer carriers. In these and other situations, agents and brokers have an increased influence over policy language and compensation structure which, if we participate on that basis, could adversely impact our ability to profitably manage underwriting risk. It could also lead to commoditization of products, which could increase the focus on price and cost management and decrease our ability to differentiate our products in the marketplace with customers based on other factors.

Customers in the past have brought claims against us for the actions of our agents. Even with proper controls in place, actual or alleged errors or inaccuracies by our agents could result in our involvement in disputes, litigation or regulatory actions.

Our efforts to develop new products or services, expand in targeted markets, improve business processes and workflows or make acquisitions may not be successful and may create enhanced risks. From time to time, to protect and grow market share and/or improve our productivity and efficiency, we invest in strategic initiatives and pursue acquisitions. These efforts may require us to make substantial expenditures and not be successful, and even if successful, they may create additional risks:

- Changes to our business processes or workflow, including the use of new technologies, may give rise to execution risk;
- Models underlying automated underwriting and pricing decisions may not be effective;
- Demand for new products or expansion into new markets may not meet our expectations;
- New products or services and expansion into new markets may change our risk exposures, and the data and models we use to manage such exposures may not be as effective as those we use in existing markets or with existing products;
- Acquisitions may not be successfully integrated, resulting in substantial disruption, costs or delays and adversely affecting our ability to compete, and may also result in unforeseen liabilities or impact our credit ratings; and
- In connection with the conversion of policyholders to a new product, some policyholders' pricing may increase while the pricing for other policyholders may decrease, the net impact of which could negatively impact retention and profit margins.

These efforts may require us to make substantial expenditures, which may negatively impact results in the near term, and if not successful, could materially and adversely affect our results of operations.

We may be adversely affected if our pricing and capital models provide materially different indications than actual results. Our profitability substantially depends on the extent to which our actual claims experience is consistent with the assumptions we use in pricing our policies. We utilize proprietary and third-party models to help us price business in a manner that is intended to be consistent, over time, with actual results and return objectives. We incorporate our historical loss experience, external industry and other data, and economic indices into our modeling processes, and we use various methods, including predictive modeling, forecasting and sophisticated simulation modeling techniques, to analyze loss trends and the risks associated with our assets and liabilities. We also use these modeling processes, analyses and methods in making underwriting, pricing and reinsurance decisions as part of managing our exposure to catastrophes and other extreme adverse events. These modeling processes incorporate numerous assumptions and forecasts about the future level and variability of the frequency and severity of losses, inflation, interest rates and capital requirements, among others, that are difficult to make and may differ materially from actual results. In addition, as the number of third-party models increases, it becomes more difficult to validate, manage and integrate such models as they evolve over time, and the risk associated with assimilating the output from such models into our decisions increases.

If we fail to appropriately price the risks we insure or fail to change our pricing models to appropriately reflect our experience, or if our claims experience is more frequent or severe than our underlying risk assumptions, for example due to inflation,

changing climate conditions, legislative or regulatory changes, changes in behavior such as distracted or faster driving or a more aggressive tort environment, our profit margins may be negatively affected. If we underestimate the frequency and/or severity of extreme adverse events occurring, our financial condition may be adversely affected. If we overestimate the risks we are exposed to, we may overprice our products, and new business growth and retention of our existing business may be adversely affected. See "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Catastrophe Modeling."

We are subject to additional risks associated with our business outside the United States. We conduct business outside the United States primarily in Canada, the United Kingdom and the Republic of Ireland. In addition, we conduct business in Brazil and Colombia through joint ventures. We may also explore opportunities in other countries. In conducting business outside of the United States, we are subject to a number of risks, particularly in emerging economies. These risks include restrictions such as price controls, capital controls, currency exchange limits, ownership limits and other restrictive or anti-competitive governmental actions or requirements, which could have an adverse effect on our business and our reputation. A portion of our premiums from outside of the United States is generated in Canada, a substantial portion of which consists of automobile premiums from the province of Ontario, which is a highly regulated market that can result in rate inadequacy. Our business activities outside the United States may also subject us to currency risk and, in some markets, it may be difficult to effectively hedge that risk, or we may choose not to hedge that risk. In addition, in some markets, we invest as part of a joint venture with a local counterparty. Because our governance rights may be limited, we may not have control over the ability of the joint venture to make certain decisions and/or mitigate risks it faces, and significant disagreements with a joint venture counterparty may adversely impact our investment and/or reputation. Our business activities outside the United States could subject us to increased volatility in earnings resulting from the need to recognize and subsequently revise a valuation allowance associated with income taxes if we became unable to fully utilize any deferred tax assets, including loss carry-forwards from those foreign operations. Also, political instability and geopolitical tensions could result in financial market disruption or an economic downturn in such regions. The U.K.'s withdrawal from the European Union, for example, has by some estimates resulted in reduced trade levels in the U.K. In addition, supply chain disruptions and the war in Ukraine have resulted in increased inflation and reduced growth in the U.K. and the European Union. For certain specialty business, we give managing general agents binding authority, which exposes us to additional risks.

Our business activities outside the United States also subject us to additional domestic and foreign laws and regulations, including the Foreign Corrupt Practices Act and similar laws in other countries that prohibit the making of improper payments to foreign officials. Although we have policies and controls in place that are designed to ensure compliance with these laws, if those controls are ineffective and/or an employee or intermediary fails to comply with applicable laws and regulations, we could suffer civil and criminal penalties and our business and our reputation could be adversely affected. Some countries, particularly emerging economies, have laws and regulations that lack clarity and, even with local expertise and effective controls, it can be difficult to determine the exact requirements of, and potential liability under, the local laws. In some jurisdictions, including Brazil, parties to a joint venture may, in some circumstances, have liability for some obligations of the venture, and that liability may extend beyond the capital invested. Failure to comply with local laws in a particular market may result in substantial liability and could have a significant and negative effect not only on our business in that market but also on our reputation generally.

Loss of or significant restrictions on the use of particular types of underwriting criteria, such as credit scoring, or other data or methodologies, in the pricing and underwriting of our products could reduce our future profitability. Our underwriting profitability depends in large part on our ability to competitively price our products at a level that will adequately compensate us for the risks assumed. As a result, risk selection and pricing through the application of actuarially sound and segmented underwriting criteria is critical. However, laws or regulations, or judicial or administrative findings, could significantly curtail the use of particular types of underwriting criteria. For example, we may use credit scoring as a factor in pricing decisions where allowed by state law. Some consumer groups and/or regulators have alleged that the use of credit scoring violates the law by discriminating against persons belonging to a protected class and are calling for the prohibition or restrictions on the use of credit scoring in underwriting and pricing. A variety of other underwriting criteria and other data or methodologies used in personal and commercial insurance have been and continue to be criticized by regulators, government agencies, consumer groups or individuals on similar or other grounds, such as the impact of external data sources, artificial intelligence, algorithms and predictive models on protected classes of customers, and a number of states have begun rulemaking efforts in response or are considering doing so. Resulting legislative or regulatory actions or litigation could result in negative publicity and/or generate adverse rules or findings, such as curtailing the use of important underwriting criteria, or other data or methodologies, which could materially and adversely affect our results of operations.

Technology and Intellectual Property Risks

Our business success and profitability depend, in part, on effective information technology systems and on continuing to develop and implement improvements in technology, particularly as our business processes become more digital. We depend in large part on our technology systems for conducting business and processing claims, as well as for providing the data and analytics we utilize to manage our business. As a result, our business success is dependent on maintaining the effectiveness of existing technology systems and on continuing to develop and enhance technology systems that support our business processes and strategic initiatives in an efficient manner, particularly as our business processes become more digital and certain of our products, such as cyber insurance, are more technology-based. Some system development projects are long-term in nature, may negatively impact our expense ratios as we invest in the projects and may cost more than we expect to complete. In addition, system development projects may not deliver the benefits or perform as expected, or may be replaced or become obsolete more quickly than expected, which could result in operational difficulties, additional costs or accelerated recognition of expenses. Attracting and retaining technology personnel has also become significantly more challenging in recent periods. If we do not effectively and efficiently manage and upgrade our technology portfolio, or if the costs of doing so are higher than we expect, our ability to provide competitive services to, and conduct business with, new and existing customers in a cost effective manner and our ability to implement our strategic initiatives could be adversely impacted.

If we experience difficulties with technology, data and network security (including as a result of cyber attacks), outsourcing relationships or cloud-based technology, our ability to conduct our business could be negatively impacted. A shut-down of, or inability to access, one or more of our facilities (including our primary data processing facility); a power outage; or a failure of one or more of our systems could significantly impair our ability to perform necessary business functions on a timely basis. In the event of a computer virus or natural or other disaster, our systems could be inaccessible for an extended period of time, including as a result of hostile actions taken by nation-states or terrorist organizations. In addition, because our systems increasingly interface with and depend on third-party systems, including cloud-based, we could experience service denials or failures of controls if demand for our service exceeds capacity or a third-party system fails or experiences an interruption. Business interruptions and failures of controls could also result if our internal systems do not interface with each other as intended or if changes to such systems or our other business processes, such as new payment technologies, are not effectively implemented. Business continuity can also be disrupted by an event, such as a pandemic, that renders large numbers of a workforce unable to work as needed, particularly at critical locations. If our business continuity plans do not sufficiently address a business interruption, system failure or service denial, this could result in a deterioration of our ability to write and process new and renewal business, provide customer service, pay claims in a timely manner or perform other necessary business functions. In addition, should internet disruptions occur, or frustration with our business platforms or distribution initiatives develop among our independent agents and brokers, any resulting loss of business could materially and adversely affect our future business volume and results of operations.

Our operations rely on the secure processing, storage and transmission of confidential and other information in our computer systems and networks. Computer viruses, hackers and employee or vendor misconduct, and other external hazards (such as social engineering attacks), could expose our data systems to security breaches, cyber-attacks or other disruptions. Increased use of data supplied by third parties in our business increases our exposure to this risk. While we attempt to develop secure transmission capabilities with third-party vendors and others with whom we do business, we may not be successful and, in addition, these third parties may not have appropriate controls in place to protect the confidentiality of the information.

Like other global companies, our computer systems are regularly subject to and will continue to be the target of computer viruses, malware or other malicious codes (including ransomware), unauthorized access, cyber-attacks or other computer-related penetrations. The Company, like other property and casualty insurers, may be under greater threat from cybercriminals seeking sensitive personal or other insurance-related information. The risk of cyber attacks could be exacerbated by geopolitical tensions, including hostile actions taken by nation-states or terrorist organizations.

While we have experienced cyber-attacks, to date, we are not aware that we have experienced a material cyber-security breach. The sophistication of these threats continues to increase, and the preventative actions we take to reduce the risk of cyber incidents and protect our systems and information may be insufficient. In addition, new technology that could result in greater operational efficiency may further expose our computer systems to the risk of cyber-attacks. Also, our increased use of open source software, cloud technology and software as a service can make it more difficult to identify and remedy such situations due to the disparate location of code utilized in our operations.

We have outsourced certain technology and business process functions to third parties and may increasingly do so in the future. If we do not effectively develop, implement and monitor our vendor relationships, if third party providers do not perform as anticipated, if we experience technological or other problems with a transition, or if vendor relationships relevant to our business process functions are terminated, we may not realize expected productivity improvements or cost efficiencies and may

experience operational difficulties, increased costs and a loss of business**.** Our outsourcing of certain technology and business process functions to third parties may expose us to increased risk related to data and cyber security, service disruptions or the effectiveness of our control system. These risks could increase as additional functions move to the cloud and as dependencies and interconnections with the third parties with whom we do business increase.

The increased risks identified above could expose us to data loss or manipulation, disruption of service, monetary and reputational damages, competitive disadvantage and significant increases in compliance costs and costs to improve the security and resiliency of our computer systems. The compromise of personal, confidential or proprietary information could also subject us to legal liability or regulatory action under evolving cyber-security, data protection and privacy laws and regulations enacted by the U.S. federal and state governments, Canada, the European Union or other jurisdictions or by various regulatory organizations or exchanges. As a result, our ability to conduct our business and our results of operations might be materially and adversely affected.

Intellectual property is important to our business, and we may be unable to protect and enforce our own intellectual property or we may be subject to claims for infringing the intellectual property of others. Our success depends in part upon our ability to protect our proprietary trademarks, technology and other intellectual property. See "Item 1—Business—Other Information—Intellectual Property." We may not, however, be able to protect our intellectual property from unauthorized use and disclosure by others. Further, the intellectual property laws may not prevent our competitors from independently developing trademarks, products and services that are similar to ours. We may incur significant costs in our efforts to protect and enforce our intellectual property, including the initiation of expensive and protracted litigation, and we may not prevail. Any inability to enforce our intellectual property rights could have a material adverse effect on our business and our ability to compete.

We may be subject to claims by third parties from time to time that our products, services and technologies infringe on their intellectual property rights. In recent years, certain entities have acquired patents in order to allege claims of infringement against companies, including in some cases, us. Any intellectual property infringement claims brought against us could cause us to spend significant time and money to defend ourselves, regardless of the merits of the claims. If we are found to infringe any third-party intellectual property rights, it could result in reputational harm, payment of significant monetary damages or fees and/or substantial time and expense to redesign our products, services or technologies to avoid the infringement. In addition, we use third-party software in some of our products, services and technologies. If any of our software vendors or licensors are faced with infringement claims, we may lose our ability to use such software until the dispute is resolved. If we cannot successfully redesign an infringing product, service or technology (or procure a substitute version), this could have a material adverse effect on our business and ability to compete.

Regulatory and Compliance Risks

Our businesses are heavily regulated by the states and countries in which we conduct business, including licensing, market conduct and financial supervision, and changes in regulation, including higher tax rates, may reduce our profitability and limit our growth. These regulatory systems are generally designed to protect the interests of policyholders, and not necessarily the interests of insurers, their shareholders and other investors. For example, to protect policyholders whose insurance company becomes financially insolvent, guaranty funds have been established in all 50 states to pay the covered claims of policyholders in the event of an insolvency of an insurer, subject to applicable state limits. The funding of guaranty funds is provided through assessments levied against remaining insurers in the marketplace. As a result, the insolvency of one or more insurance companies or an increase in amounts paid by guaranty funds could result in additional assessments levied against us.

These regulatory systems also address authorization for lines of business, statutory capital and surplus requirements, limitations on the types and amounts of certain investments, underwriting limitations, transactions with affiliates, dividend limitations, changes in control, premium rates and a variety of other financial and non-financial components of an insurer’s business including, recently, cyber-security. In addition, many jurisdictions restrict the timing and/or the ability of an insurer to discontinue writing a line of business or to cancel or non-renew certain policies. Insurance regulators may also increase the statutory capital and surplus requirements for our insurance subsidiaries or, as has happened recently in certain states, reject rate increases or other terms and conditions due to the economic environment or other factors. In addition, state tax laws that specifically impact the insurance industry, such as premium taxes, or more general tax laws, such as U.S. federal corporate taxes, could be enacted or changed and could have a material adverse impact on us. Other legislative actions could impact our business as well. For example, changes to state law regarding workers' compensation insurance could impact the demand for our products, and the legalization of cannabis in certain states has, according to some studies, resulted in more automobile accidents. In addition, the potential repeal of the McCarran-Ferguson Act (which exempts insurance from most federal regulation) or a change to the federal health care system that eliminates or reduces the need for the medical coverage

component of workers' compensation insurance, could also significantly harm the insurance industry, including us. Changes in applicable legislation and regulations and future court and regulatory decisions may be more restrictive and may result in lower revenues and/or higher costs of compliance and, as a result, could materially and adversely affect our results of operations. See also “Item 1 – Business – Regulation.”

We could be adversely affected if our controls designed to ensure compliance with guidelines, policies and legal and regulatory standards are not effective. Our business is highly dependent on our ability to engage on a real-time basis in a large number of insurance underwriting, claim processing, treasury and investment activities, many of which are highly complex and constantly evolving, including from a systems perspective. These activities often are subject to internal guidelines and policies, as well as legal and regulatory standards. A control system, no matter how well designed and operated, can provide only reasonable assurance that the control system’s objectives will be met. If our controls, or the controls of our joint ventures or recently acquired businesses, are not effective (including with respect to the prevention or identification of misconduct by employees or others with whom we do business), it could lead to financial loss, unanticipated risk exposure (including underwriting, credit and investment risk), errors in financial reporting, litigation, regulatory proceedings or damage to our reputation.

Item 1B. UNRESOLVED STAFF COMMENTS

NONE.

Item 2. PROPERTIES

The Company leases its principal executive offices in New York, New York, as well as approximately 162 field and claim offices throughout the United States under leases or subleases with third parties. The Company also leases offices outside the United States, including in Canada, the United Kingdom and the Republic of Ireland. The Company owns six buildings in Hartford, Connecticut. The Company also owns buildings located in other areas of Connecticut; Norcross, Georgia; St. Paul, Minnesota; and Omaha, Nebraska.

In the opinion of the Company’s management, the Company’s properties are adequate and suitable for its business as presently conducted and are adequately maintained.

Item 3. LEGAL PROCEEDINGS

The information required with respect to this item can be found under "Contingencies" in note 17 of the notes to the consolidated financial statements in this annual report and is incorporated by reference into this Item 3.

Item 4. MINE SAFETY DISCLOSURES

NONE.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

Information about the Company's executive officers is incorporated by reference from Part III—Item 10 of this annual report.

PART II

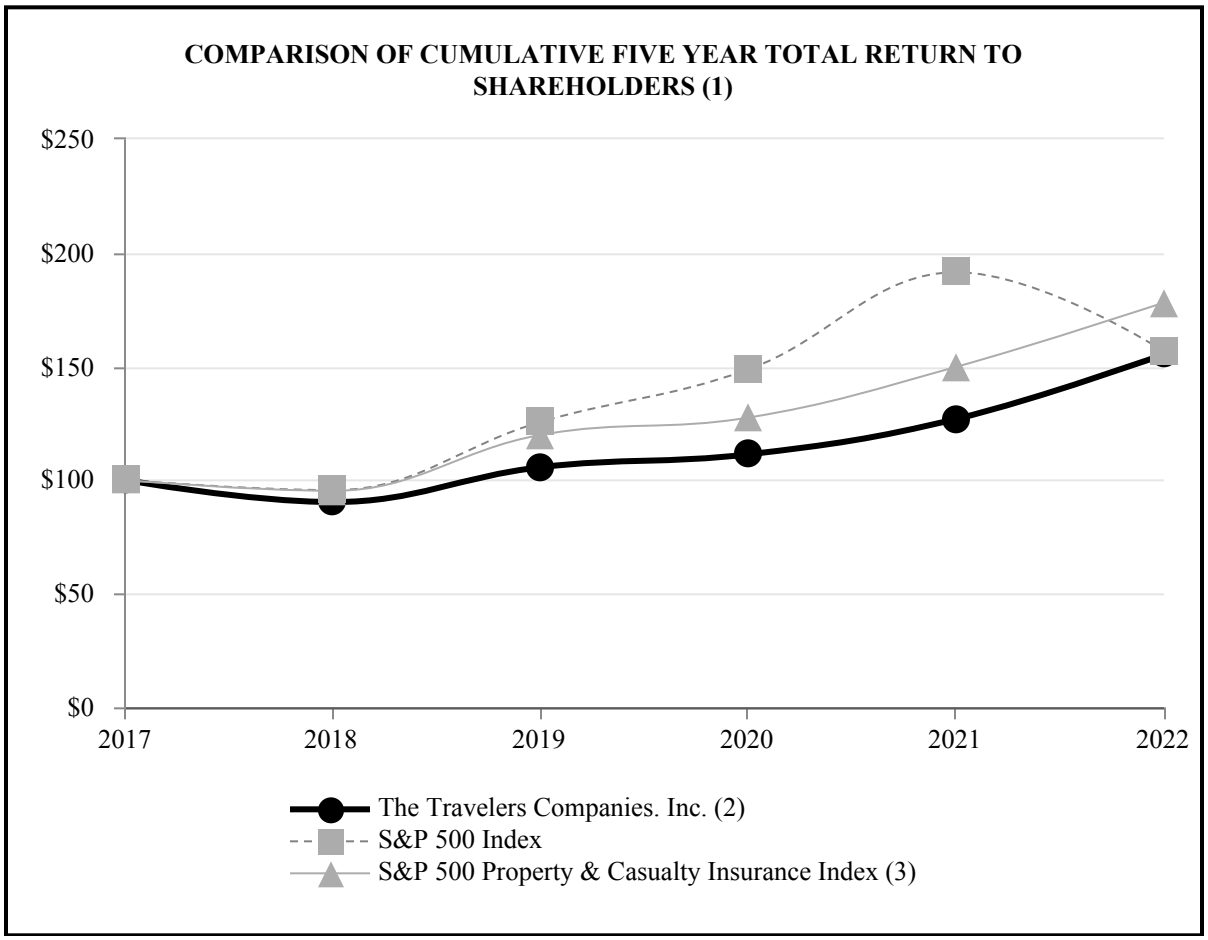
Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED SHAREHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

The Company’s common stock is traded on the New York Stock Exchange under the symbol “TRV.” The number of holders of record of the Company’s common stock was 32,871 as of February 13, 2023. This is not the actual number of beneficial owners of the Company’s common stock as some shares are held in “street name” by brokers and others on behalf of individual owners.

For information regarding dividends paid to shareholders in 2022 and 2021 and the declaration and payment of future dividends, see "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Financing Activities—Dividends."

SHAREHOLDER RETURN PERFORMANCE GRAPH

The following graph shows a five-year comparison of the cumulative total return to shareholders for the Company's common stock and the common stock of companies included in the S&P 500 Index and the S&P 500 Property & Casualty Insurance Index, which the Company believes is the most appropriate comparative index.



	As of December 31,					
	2017	2018	2019	2020	2021	2022
The Travelers Companies, Inc.	$ 100.00	$ 90.35	$ 105.72	$ 111.38	$ 126.95	$ 155.40
S&P 500 Index	100.00	95.61	125.70	148.81	191.48	156.77
S&P 500 Property & Casualty Insurance Index	100.00	95.31	119.96	127.56	149.89	178.18

(1) The cumulative total return to shareholders is a concept used to compare the performance of a company's stock over time. Cumulative total return to shareholders is calculated as the net stock price change for the specified time period plus the cumulative amount of dividends (assuming dividend reinvestment on the respective dividend payment dates) divided by the stock price at the beginning of the time period.

(2) Assumes $100 invested in common shares of The Travelers Companies, Inc. on December 31, 2017.

(3) Companies in the S&P 500 Property & Casualty Insurance Index as of December 31, 2022 were the following: The Travelers Companies, Inc., Chubb Limited, Cincinnati Financial Corporation, The Progressive Corporation, The Allstate Corporation, Loews Corporation (CNA), W.R. Berkley Corporation and Arch Capital Group Limited. Returns of each of the companies included in this index have been weighted according to their respective market capitalizations.

A long-term perspective is particularly important in the property and casualty insurance industry, where the periodic occurrences of significant catastrophes have historically produced results that can vary significantly year-to-year. Accordingly, the Company manages with a long-term perspective. From January 1, 2007, the year prior to the financial crisis, through

December 31, 2022, the Company's cumulative return to shareholders was 416% as compared to 274% for the S&P 500 Index and 294% for the S&P 500 Property & Casualty Insurance Index.

ISSUER PURCHASES OF EQUITY SECURITIES

The table below sets forth information regarding repurchases by the Company of its common stock during the periods indicated.

Period Beginning	Period Ending	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of publicly announced plans or programs	Approximate dollar value of shares that may yet be purchased under the plans or programs (in millions)
Oct. 1, 2022	Oct. 31, 2022	463,999	$ 178.21	460,350	$ 2,423
Nov. 1, 2022	Nov. 30, 2022	1,243,293	$ 184.21	1,240,668	$ 2,194
Dec. 1, 2022	Dec. 31, 2022	1,013,204	$ 186.94	1,013,112	$ 2,005
Total		2,720,496	$ 184.20	2,714,130	$ 2,005

The Company’s Board of Directors has approved common share repurchase authorizations under which repurchases may be made from time to time in the open market, pursuant to pre-set trading plans meeting the requirements of Rule 10b5-1 under the Securities Exchange Act of 1934, in private transactions or otherwise. The most recent authorization was approved by the Board of Directors on April 20, 2021 and added $5.0 billion of repurchase capacity to the $805 million capacity remaining at that date. The authorizations do not have a stated expiration date. The timing and actual number of shares to be repurchased in the future will depend on a variety of factors, including the Company’s financial position, earnings, share price, catastrophe losses, maintaining capital levels appropriate for the Company’s business operations, changes in levels of written premiums, funding of the Company’s qualified pension plan, capital requirements of the Company’s operating subsidiaries, legal requirements, regulatory constraints, other investment opportunities (including mergers and acquisitions and related financings), market conditions, changes in tax laws (including the Inflation Reduction Act) and other factors.

The Company acquired 6,366 shares for a total cost of approximately $1 million during the three months ended December 31, 2022 that were not part of the publicly announced share repurchase authorization. These shares consisted of shares retained to cover payroll withholding taxes in connection with the vesting of restricted stock unit awards and performance share awards, and shares used by employees to cover the price of certain stock options that were exercised.

For additional information regarding the Company's share repurchases, see "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources."

Information relating to compensation plans under which the Company's equity securities are authorized for issuance is set forth in "Part III—Item 12" of this Report.

Item 6. RESERVED

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following is a discussion and analysis of the Company's financial condition and results of operations for the years ended December 31, 2022 and 2021, including year-to-year comparisons between 2022 and 2021. Year-to-year comparisons between 2021 and 2020 have been omitted from this Form 10-K, but may be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of the Company's Annual Report on Form 10-K for the year ended December 31, 2021.

FINANCIAL HIGHLIGHTS

2022 Consolidated Results of Operations

- Net income of $2.84 billion, or $11.91 per share basic and $11.77 per share diluted
- Net earned premiums of $33.76 billion
- Catastrophe losses of $1.88 billion ($1.48 billion after-tax)
- Net favorable prior year reserve development of $649 million ($512 million after-tax)
- Combined ratio of 95.6%
- Net investment income of $2.56 billion ($2.17 billion after-tax)
- Operating cash flows of $6.47 billion

2022 Consolidated Financial Condition

- Total investments of $80.45 billion; fixed maturities and short-term securities comprise 93% of total investments
- Total assets of $115.72 billion
- Total debt of $7.29 billion, resulting in a debt-to-total capital ratio of 25.3% (21.6% excluding net unrealized investment losses, net of tax, included in shareholders' equity)
- Total capital returned to shareholders of $2.94 billion, comprising $2.06 billion of share repurchases and $880 million of dividends
- Shareholders' equity of $21.56 billion
- Net unrealized investment losses of $6.22 billion ($4.90 billion after-tax)
- Book value per common share of $92.90
- Holding company liquidity of $1.45 billion

CONSOLIDATED OVERVIEW

Consolidated Results of Operations

(for the year ended December 31, in millions except per share amounts)	2022	2021	2020
Revenues			
Premiums	**$ 33,763**	$ 30,855	$ 29,044
Net investment income	**2,562**	3,033	2,227
Fee income	**412**	402	429
Net realized investment gains (losses)	**(204)**	171	2
Other revenues	**351**	355	279
Total revenues	**36,884**	34,816	31,981
Claims and expenses			
Claims and claim adjustment expenses	**22,854**	20,298	19,123
Amortization of deferred acquisition costs	**5,515**	5,043	4,773
General and administrative expenses	**4,810**	4,677	4,509
Interest expense	**351**	340	339
Total claims and expenses	**33,530**	30,358	28,744
Income before income taxes	**3,354**	4,458	3,237
Income tax expense	**512**	796	540
Net income	**$ 2,842**	$ 3,662	$ 2,697
Net income per share			
Basic	**$ 11.91**	$ 14.63	$ 10.56
Diluted	**$ 11.77**	$ 14.49	$ 10.52
Combined ratio			
Loss and loss adjustment expense ratio	**67.1 %**	65.1 %	65.1 %
Underwriting expense ratio	**28.5**	29.4	29.9
Combined ratio	**95.6 %**	94.5 %	95.0 %

The following discussions of the Company's net income and segment income (loss) are presented on an after-tax basis. Discussions of the components of net income and segment income (loss) are presented on a pre-tax basis, unless otherwise noted. Discussions of earnings per common share are presented on a diluted basis.

Overview

Diluted net income per share of $11.77 in 2022 decreased by 19% from diluted net income per share of $14.49 in 2021. Net income of $2.84 billion in 2022 decreased by 22% from net income of $3.66 billion in 2021. The lower rate of decrease in diluted net income per share reflected the impact of share repurchases in recent periods. The decrease in income before income taxes primarily reflected the pre-tax impacts of (i) lower net investment income, (ii) net realized investment losses compared to net realized investment gains in 2021 and (iii) lower underwriting margins excluding catastrophe losses and prior year reserve development ("underlying underwriting margins"), partially offset by (iv) higher net favorable prior year reserve development. Net favorable prior year reserve development in 2022 and 2021 was $649 million and $538 million, respectively. Catastrophe losses in 2022 and 2021 were $1.88 billion and $1.85 billion, respectively. The lower underlying underwriting margins in 2022 were driven by Personal Insurance, partially offset by Business Insurance and Bond & Specialty Insurance. Underlying underwriting margins in 2021 reflected a net favorable impact associated with the pandemic. Income tax expense in 2022 was lower than in 2021, primarily reflecting the impact of the decrease in income before income taxes and a $47 million reduction in income tax expense in the first quarter of 2022 as a result of the resolution of prior year tax matters.

The Company has insurance operations in Canada, the United Kingdom, the Republic of Ireland and throughout other parts of the world as a corporate member of Lloyd's, as well as in Brazil and Colombia, primarily through joint ventures. Because these operations are conducted in local currencies other than the U.S. dollar, the Company is subject to changes in foreign currency exchange rates. For the years ended December 31, 2022 and 2021, changes in foreign currency exchange rates had the impact of lowering the reported line items in the statement of income by insignificant amounts. The impact of these changes was not material to the Company's net income or segment income for the periods reported.

Revenues

Earned Premiums

Earned premiums in 2022 were $33.76 billion, $2.91 billion or 9% higher than in 2021. In Business Insurance, earned premiums in 2022 increased by 9% over 2021. Earned premiums in Business Insurance in 2021 were negatively impacted by lower net written premiums primarily in the latter half of 2020 due to a modest reduction in exposures and a decrease in new business volume, in each case impacted by COVID-19 and related economic conditions. In Bond & Specialty Insurance, earned premiums in 2022 increased by 9% over 2021. In Personal Insurance, earned premiums in 2022 increased by 11% over 2021. Earned premiums in Bond & Specialty Insurance and Personal Insurance in 2021 were not materially impacted by COVID-19 and related economic conditions. Factors contributing to the change in earned premiums in each segment in 2022 as compared with 2021 are discussed in more detail in the segment discussions that follow.

Net Investment Income

The following table sets forth information regarding the Company's investments.

(for the year ended December 31, in millions)	2022	2021	2020
Average investments[1]	**$ 87,191**	$ 83,574	$ 78,070
Pre-tax net investment income	**2,562**	3,033	2,227
After-tax net investment income	**2,170**	$ 2,541	1,908
Average pre-tax yield[2]	**2.9 %**	3.6 %	2.9 %
Average after-tax yield[2]	**2.5 %**	3.0 %	2.4 %

(1) Excludes net unrealized investment gains and losses and reflects cash, receivables for investment sales, payables on investment purchases and accrued investment income.

(2) Excludes net realized and net unrealized investment gains and losses.

Net investment income in 2022 was $2.56 billion, $471 million or 16% lower than in 2021. Net investment income from fixed maturity investments in 2022 was $2.11 billion, $124 million higher than in 2021. The increase primarily resulted from a higher average level of fixed maturity investments and higher average yields. Net investment income from short-term securities in 2022 was $73 million, $66 million higher than in 2021. The increase primarily resulted from higher short-term average yields, partially offset by a lower level of short-term investments. The Company's remaining investment portfolios had net investment income of $419 million in 2022, $658 million lower than in 2021, primarily reflecting the impact of lower returns from private equity partnerships as compared to very strong returns in 2021. Included in other investments are private equity, hedge fund and real estate partnerships that are accounted for under the equity method of accounting and typically report their financial statement information to the Company one month to three months following the end of the reporting period. Accordingly, net investment income from these other investments is generally reflected in the Company's financial statements on a quarter lag basis.

Fee Income

Fee income in 2022 was $412 million, $10 million higher than in 2021. The National Accounts market in Business Insurance is the primary source of the Company's fee-based business and is discussed in the Business Insurance segment discussion that follows.

Net Realized Investment Gains (Losses)

The following table sets forth information regarding the Company's net pre-tax realized investment gains (losses).

(for the year ended December 31, in millions)	2022	2021	2020
Impairment gains (losses):			
Fixed maturities	**$ (26)**	$ (2)	$ (15)
Real estate investments	**(12)**	—	—
Other investments	**—**	—	(40)
Net realized investment gains (losses) on equity securities still held	**(61)**	78	27
Other net realized investment gains (losses), including from sales	**(105)**	95	30
Total	**$ (204)**	$ 171	$ 2

Net realized investment losses on equity securities still held of $61 million in 2022 were driven by the impact of changes in fair value attributable to unfavorable equity markets. Net realized investment gains on equity securities still held of $78 million in 2021 were driven by the impact of changes in fair value attributable to favorable equity markets.

Other net realized investment losses in 2022 included $72 million of net realized investment losses related to fixed maturity investments, $8 million of net realized investment losses related to equity securities sold and $25 million of net realized investment losses related to other investments. Other net realized investment gains in 2021 included $69 million of net realized investment gains related to fixed maturity investments, $17 million of net realized investment gains related to equity securities sold and $9 million of net realized investment gains related to other investments.

Other Revenues

Other revenues in 2022 were $351 million, $4 million lower than 2021. Other revenues include revenues from Simply Business, installment premium charges and other policyholder service charges. Other revenues from Simply Business were negatively impacted by changes in foreign currency exchange rates.

Claims and Expenses

Claims and Claim Adjustment Expenses

Claims and claim adjustment expenses in 2022 were $22.85 billion, $2.56 billion or 13% higher than 2021, primarily reflecting the impacts of (i) higher business volumes, (ii) loss cost trends, including elevated losses in both the automobile and homeowners and other product lines in Personal Insurance and (iii) favorable loss activity associated with the pandemic in 2021 in Business Insurance, partially offset by (iv) higher net favorable prior year reserve development. Catastrophes in 2022 primarily resulted from a significant winter storm that impacted most of the U.S. and parts of Canada and Hurricanes Ian and Fiona, as well as severe wind and hail storms in several regions of the United States. Catastrophes in 2021 primarily resulted from winter storms, Hurricane Ida, tornado activity in Kentucky and severe wind and hail storms in several regions of the United States, as well as a wildfire in Colorado. Catastrophe and non-catastrophe weather-related losses in 2021 were reduced by the full $350 million of recoveries available under the Company's 2021 Underlying Property Aggregate Catastrophe Excess-of-Loss Reinsurance Treaty.

Factors contributing to net favorable prior year reserve development during the years ended December 31, 2022, 2021 and 2020 are discussed in more detail in note 8 of the notes to the consolidated financial statements.

Significant Catastrophe Losses

The Company defines a "catastrophe" as an event:

- that is designated a catastrophe by internationally recognized organizations that track and report on insured losses resulting from catastrophic events, such as Property Claim Services (PCS) for events in the United States and Canada; and
- for which the Company's estimates of its ultimate losses before reinsurance and taxes exceed a pre-established dollar threshold.

The Company's threshold for disclosing catastrophes is primarily determined at the reportable segment level. If a threshold for one segment or a combination thereof is exceeded and the other segments have losses from the same event, losses from the event are identified as catastrophe losses in the segment results and for the consolidated results of the Company. Additionally, an aggregate threshold is applied for International business across all reportable segments. The threshold for 2022 ranged from approximately $20 million to $30 million of losses before reinsurance and taxes.

The following table presents the amount of losses recorded by the Company for significant catastrophes that occurred in 2022, 2021 and 2020, the amount of net unfavorable (favorable) prior year reserve development recognized in 2022 and 2021 for catastrophes that occurred in 2021 and 2020, and the estimate of ultimate losses for those catastrophes at December 31, 2022, 2021 and 2020. For purposes of the table, a significant catastrophe is an event for which the Company estimates its ultimate losses will be $100 million or more after reinsurance and before taxes.

	Losses Incurred / Unfavorable (Favorable) Prior Year Reserve Development for the Year Ended December 31,			Estimated Ultimate Losses at December 31,		
(in millions, pre-tax and net of reinsurance)[1]	2022	2021	2020	2022	2021	2020
2020						
PCS Serial Number:						
16 — Tennessee tornado activity	3	(9)	151	145	142	151
19 — Severe storms	(2)	(9)	134	123	125	134
20 — Severe storms	6	(25)	165	146	140	165
33 — Civil unrest	(7)	(7)	100	86	93	100
44 — Tropical Storm Isaias	3	(22)	140	121	118	140
46 — Midwest derecho	3	(10)	212	205	202	212
68 — California wildfire - Glass fire [2]	(19)	(9)	145	117	136	145
2021						
PCS Serial Number:						
15 — Winter storm	(13)	228	n/a	215	228	n/a
17 — Winter storm	(25)	508	n/a	483	508	n/a
29 — Severe wind storms	(12)	105	n/a	93	105	n/a
60 — Hurricane Ida	(81)	417	n/a	336	417	n/a
76 — Tornado outbreak	(18)	131	n/a	113	131	n/a
2022						
PCS Serial Number:						
33 — Severe wind and hail storms	137	n/a	n/a	137	n/a	n/a
35 — Severe wind and hail storms	184	n/a	n/a	184	n/a	n/a
43 — Severe wind and hail storms	122	n/a	n/a	122	n/a	n/a
61 — Hurricane Ian	227	n/a	n/a	227	n/a	n/a
73 — Winter storm	512	n/a	n/a	512	n/a	n/a

(1) Amounts are reported pre-tax and net of recoveries under all applicable reinsurance treaties, except for the Company's 2022, 2021 and 2020 Underlying Property Aggregate Catastrophe Excess-of-Loss Treaties. Those treaties covered the accumulation of certain property losses arising from one or multiple occurrences (both catastrophe and non-catastrophe events) for the period January 1, 2022 through and including December 31, 2022, the period January 1, 2021 through and including December 31, 2021 and the period January 1, 2020 through and including December 31, 2020, respectively. As a result, the benefit from the 2021 and 2020 treaties are not included in the table as the allocation of the treaties' benefit to each identified catastrophe changes each time there are additional events or changes in estimated losses from any covered event.

(2) In addition to the Glass fire, there were 16 other PCS-designated wildfires in 2020. While none of the 16 wildfires were individually large enough to meet the Company's threshold for disclosure as a significant catastrophe in this table, total losses in 2020 from those wildfires were $169 million, of which two wildfires totaling $73 million met the Company's threshold for disclosure as catastrophes.

n/a: not applicable.

Amortization of Deferred Acquisition Costs

Amortization of deferred acquisition costs in 2022 was $5.52 billion, $472 million or 9% higher than in 2021. The increase in 2022 was generally consistent with the increase in earned premiums. Amortization of deferred acquisition costs is discussed in more detail in the segment discussions that follow.

General and Administrative Expenses

General and administrative expenses in 2022 were $4.81 billion, $133 million or 3% higher than in 2021, primarily reflecting the impact of costs associated with higher business volumes. General and administrative expenses in 2021 included the benefit of lower net expenses related to COVID-19 and related economic conditions. General and administrative expenses are discussed in more detail in the segment discussions that follow.

Interest Expense

Interest expense in 2022 and 2021 was $351 million and $340 million, respectively.

Income Tax Expense

Income tax expense in 2022 was $512 million, $284 million or 36% lower than in 2021, primarily reflecting the impact of the $1.10 billion decrease in income before income taxes in 2022 and the $47 million reduction in income tax expense in the first quarter of 2022 as a result of the resolution of prior year tax matters.

The Company's effective tax rate was 15% and 18% in 2022 and 2021, respectively. The effective tax rates in both years were lower than the statutory rate of 21%, primarily due to the impact of tax-exempt investment income on the calculation of the Company's income tax provision. In addition, the effective tax rate for 2022 was reduced by the impact of the resolution of prior year tax matters discussed above.

Combined Ratio

The combined ratio of 95.6% in 2022 was 1.1 points higher than the combined ratio of 94.5% in 2021. The loss and loss adjustment expense ratio of 67.1% in 2022 was 2.0 points higher than the loss and loss adjustment expense ratio of 65.1% in 2021. The underwriting expense ratio of 28.5% in 2022 was 0.9 points lower than the underwriting expense ratio of 29.4% in 2021.

Catastrophe losses in 2022 and 2021 accounted for 5.5 points and 6.0 points, respectively, of the combined ratio. Net favorable prior year reserve development in 2022 and 2021 provided 1.9 points and 1.8 points of benefit, respectively, to the combined ratio. The combined ratio excluding prior year reserve development and catastrophe losses ("underlying combined ratio") in 2022 was 1.7 points higher than the 2021 ratio on the same basis, primarily reflecting the impacts of (i) elevated losses in both the automobile and homeowners and other product lines in Personal Insurance and (ii) a favorable impact associated with the pandemic in 2021 in Business Insurance, partially offset by (iii) the benefit of earned pricing in Business Insurance and Bond & Specialty Insurance and (iv) a lower expense ratio.

The combined ratio continues to be impacted by the tort environment, including more aggressive attorney involvement in insurance claims.

Written Premiums

Consolidated gross and net written premiums were as follows:

(for the year ended December 31, in millions)	Gross Written Premiums 2022	2021	2020
Business Insurance	**$ 19,521**	$ 17,829	$ 17,060
Bond & Specialty Insurance	**4,082**	3,725	3,184
Personal Insurance	**14,273**	12,690	11,519
Total	**$ 37,876**	$ 34,244	$ 31,763

(for the year ended December 31, in millions)	Net Written Premiums 2022	2021	2020
Business Insurance	**$ 17,635**	$ 16,092	$ 15,431
Bond & Specialty Insurance	**3,732**	3,376	2,951
Personal Insurance	**14,047**	12,491	11,350
Total	**$ 35,414**	$ 31,959	$ 29,732

Gross and net written premiums in 2022 both increased by 11% over 2021. Factors contributing to the changes in gross and net written premiums in each segment are discussed in more detail in the segment discussions that follow.

RESULTS OF OPERATIONS BY SEGMENT

Business Insurance

Results of Business Insurance were as follows:

(for the year ended December 31, in millions)	2022	2021	2020
Revenues			
Earned premiums	**$ 17,095**	$ 15,734	$ 15,294
Net investment income	**1,864**	2,265	1,633
Fee income	**382**	375	405
Other revenues	**248**	235	176
Total revenues	**19,589**	18,609	17,508
Total claims and expenses	**16,522**	15,725	15,986
Segment income before income taxes	**3,067**	2,884	1,522
Income tax expense	**536**	499	213
Segment income	**$ 2,531**	$ 2,385	$ 1,309
Loss and loss adjustment expense ratio	**62.8 %**	65.0 %	69.4 %
Underwriting expense ratio	**29.7**	30.7	30.9
Combined ratio	**92.5 %**	95.7 %	100.3 %

Overview

Segment income in 2022 was $2.53 billion, $146 million or 6% higher than segment income of $2.39 billion in 2021. The increase in segment income before income taxes primarily reflected the pre-tax impacts of (i) higher underlying underwriting margins, (ii) higher net favorable prior year reserve development and (iii) lower catastrophe losses, partially offset by (iv) lower net investment income. Net favorable prior year reserve development in 2022 and 2021 was $381 million and $173 million, respectively. Catastrophe losses in 2022 and 2021 were $654 million and $793 million, respectively. The higher underlying underwriting margins primarily reflected the impacts of (i) higher business volumes and (ii) the benefit of earned pricing, partially offset by (iii) a favorable impact associated with the pandemic in 2021. Income tax expense in 2022 was higher than in 2021, primarily reflecting the impact of the increase in segment income before income taxes.

Revenues

Earned Premiums

Earned premiums in 2022 were $17.10 billion, $1.36 billion or 9% higher than in 2021, primarily reflecting the increase in net written premiums over the preceding twelve months. Earned premiums in 2021 were negatively impacted by lower net written premiums primarily in the latter half of 2020 due to a modest reduction in exposures and a decrease in new business volume, in each case impacted by COVID-19 and related economic conditions.

Net Investment Income

Net investment income in 2022 was $1.86 billion, $401 million or 18% lower than in 2021. Refer to the "Net Investment Income" section of the "Consolidated Results of Operations" discussion for a description of the factors contributing to the decrease in the Company's consolidated net investment income in 2022 compared with 2021. In addition, refer to note 2 of the notes to the consolidated financial statements for a discussion of the Company's net investment income allocation methodology.

Fee Income

National Accounts is the primary source of fee income due to revenue from its large deductible policies and service businesses, which include risk management, claims administration, loss control and risk management information services provided to third parties, as well as policy issuance and claims management services to workers' compensation residual market pools. Fee income in 2022 was $382 million, $7 million or 2% higher than in 2021, primarily reflecting higher serviced premium volume from the workers' compensation residual market pool, partially offset by lower claim volume under administration associated with large deductible policies.

Other Revenues

Other revenues in 2022 were $248 million, $13 million or 6% higher than in 2021, and include the receipt of a surplus distribution from a state workers' compensation fund. Other revenues also included revenues from Simply Business, installment premium charges and other policyholder service charges. Other revenues from Simply Business were negatively impacted by changes in foreign currency exchange rates.

Claims and Expenses

Claims and Claim Adjustment Expenses

Claims and claim adjustment expenses in 2022 were $10.91 billion, $509 million or 5% higher than in 2021, primarily reflecting the impacts of (i) loss cost trends, (ii) higher business volumes and (iii) favorable loss activity associated with the pandemic in 2021, partially offset by (iv) higher net favorable prior year reserve development and (v) lower catastrophe losses. Catastrophe losses and non-catastrophe weather-related losses in 2021 were reduced by recoveries under the Company's 2021 Underlying Property Aggregate Catastrophe Excess-of-Loss Reinsurance Treaty.

Factors contributing to net prior year reserve development during the years ended December 31, 2022, 2021 and 2020 are discussed in more detail in note 8 of the notes to the consolidated financial statements.

Amortization of Deferred Acquisition Costs

Amortization of deferred acquisition costs in 2022 was $2.79 billion, $207 million or 8% higher than in 2021, generally consistent with the increase in earned premiums.

General and Administrative Expenses

General and administrative expenses in 2022 were $2.83 billion, $81 million or 3% higher than in 2021, primarily reflecting the impact of higher business volumes. General and administrative expenses in 2021 included the benefit of lower travel-related expenses attributable to COVID-19 and related economic conditions.

Income Tax Expense

Income tax expense in 2022 was $536 million, $37 million or 7% higher than in 2021, primarily reflecting the impact of the $183 million increase in segment income before income taxes in 2022. Income tax expense in 2022 was reduced by $3 million as a result of the resolution of prior year tax matters.

Combined Ratio

The combined ratio of 92.5% in 2022 was 3.2 points lower than the combined ratio of 95.7% in 2021. The loss and loss adjustment expense ratio of 62.8% in 2022 was 2.2 points lower than the loss and loss adjustment expense ratio of 65.0% in 2021. The underwriting expense ratio of 29.7% in 2022 was 1.0 points lower than the underwriting expense ratio of 30.7% in 2021.

Catastrophe losses in 2022 and 2021 accounted for 3.8 points and 5.1 points, respectively, of the combined ratio. Net favorable prior year reserve development in 2022 and 2021 provided 2.2 points and 1.1 points of benefit, respectively, to the combined ratio. The underlying combined ratio in 2022 was 0.8 points lower than the 2021 ratio on the same basis, primarily reflecting the impacts of (i) a lower expense ratio and (ii) the benefit of earned pricing, partially offset by (iii) a favorable impact associated with the pandemic in 2021.

Written Premiums

Business Insurance's gross and net written premiums by market were as follows:

	Gross Written Premiums		
(for the year ended December 31, in millions)	**2022**	**2021**	**2020**
Domestic:			
Select Accounts	**$ 3,126**	$ 2,860	$ 2,848
Middle Market	**10,532**	9,487	9,017
National Accounts	**1,642**	1,517	1,540
National Property and Other	**2,942**	2,701	2,460
Total Domestic	**18,242**	16,565	15,865
International	**1,279**	1,264	1,195
Total Business Insurance	**$ 19,521**	$ 17,829	$ 17,060

(for the year ended December 31, in millions)	Net Written Premiums 2022	2021	2020
Domestic:			
Select Accounts	**$ 3,099**	$ 2,833	$ 2,821
Middle Market	**9,923**	8,933	8,511
National Accounts	**1,085**	987	996
National Property and Other	**2,467**	2,265	2,086
Total Domestic	**16,574**	15,018	14,414
International	**1,061**	1,074	1,017
Total Business Insurance	**$ 17,635**	$ 16,092	$ 15,431

Gross and net written premiums in 2022 increased by 9% and 10%, respectively, over 2021.

Select Accounts. Net written premiums of $3.10 billion in 2022 increased by 9% over 2021. Retention rates remained strong in 2022 and increased over 2021. Renewal premium changes in 2022 remained positive and were lower than in 2021. New business premiums in 2022 increased over 2021.

Middle Market. Net written premiums of $9.92 billion in 2022 increased by 11% over 2021. Retention rates remained strong in 2022 and increased over 2021. Renewal premium changes in 2022 remained positive and were lower than in 2021. New business premiums in 2022 increased over 2021.

National Accounts. Net written premiums of $1.09 billion in 2022 increased by 10% over 2021. Retention rates remained strong in 2022 and increased over 2021. Renewal premium changes in 2022 remained positive and were higher than in 2021. New business premiums in 2022 decreased from 2021.

National Property and Other. Net written premiums of $2.47 billion in 2022 increased by 9% over 2021. Retention rates remained strong in 2022 and increased over 2021. Renewal premium changes in 2022 remained positive and were higher than in 2021. New business premiums in 2022 increased over 2021.

International. Net written premiums of $1.06 billion in 2022 decreased by 1% from 2021, primarily driven by the impact of changes in foreign currency exchange rates.

Bond & Specialty Insurance

Results of Bond & Specialty Insurance were as follows:

(for the year ended December 31, in millions)	2022	2021	2020
Revenues			
Earned premiums	**$ 3,418**	$ 3,138	$ 2,823
Net investment income	**258**	247	213
Other revenues	**20**	23	27
Total revenues	**3,696**	3,408	3,063
Total claims and expenses	**2,593**	2,575	2,483
Segment income before income taxes	**1,103**	833	580
Income tax expense	**195**	165	107
Segment income	**$ 908**	$ 668	$ 473
Loss and loss adjustment expense ratio	**39.9 %**	46.6 %	51.5 %
Underwriting expense ratio	**35.4**	34.9	35.9
Combined ratio	**75.3 %**	81.5 %	87.4 %

Overview

Segment income in 2022 was $908 million, $240 million or 36% higher than segment income of $668 million in 2021. The increase in segment income before income taxes primarily reflected the pre-tax impacts of (i) higher underlying underwriting margins and (ii) higher net favorable prior year reserve development. Net favorable prior year reserve development in 2022 and 2021 was $222 million and $105 million, respectively. Catastrophe losses in 2022 and 2021 were $25 million and $40 million, respectively. The higher underlying underwriting margins primarily reflected the impacts of (i) higher business volumes and (ii) the benefit of earned pricing, partially offset by (iii) higher general and administrative expenses. Income tax expense in 2022 was higher than in 2021, primarily reflecting the impact of the increase in segment income before income taxes, partially offset by a $24 million reduction in income tax expense in the first quarter of 2022 as a result of the resolution of prior year tax matters.

Revenues

Earned Premiums

Earned premiums in 2022 were $3.42 billion, $280 million or 9% higher than in 2021, primarily reflecting an increase in net written premiums over the preceding twelve months.

Net Investment Income

Net investment income in 2022 was $258 million, $11 million or 4% higher than in 2021. Included in Bond & Specialty Insurance are certain legal entities whose invested assets and related net investment income are reported exclusively in this segment and not allocated among all business segments. Refer to the "Net Investment Income" section of the "Consolidated Results of Operations" discussion for a description of the factors contributing to the decrease in the Company's consolidated net investment income in 2022 as compared with 2021. In addition, refer to note 2 of the notes to the consolidated financial statements for a discussion of the Company's net investment income allocation methodology.

Claims and Expenses

Claims and Claim Adjustment Expenses

Claims and claim adjustment expenses in 2022 were $1.38 billion, $95 million or 6% lower than in 2021, primarily reflecting the impacts of (i) higher net favorable prior year reserve development and (ii) lower catastrophe losses, partially offset by (iii) higher business volumes.

Factors contributing to net prior year reserve development during the years ended December 31, 2022, 2021 and 2020 are discussed in more detail in note 8 of the notes to the consolidated financial statements.

Amortization of Deferred Acquisition Costs

Amortization of deferred acquisition costs in 2022 was $625 million, $55 million or 10% higher than in 2021, generally consistent with the increase in earned premiums.

General and Administrative Expenses

General and administrative expenses in 2022 were $590 million, $58 million or 11% higher than in 2021, primarily reflecting the impact of higher business volumes.

Income Tax Expense

Income tax expense in 2022 was $195 million, $30 million or 18% higher than in 2021, primarily reflecting the impact of the $270 million increase in segment income before income taxes in 2022, partially offset by the $24 million reduction in income tax expense in the first quarter of 2022 as a result of the resolution of prior year tax matters.

Combined Ratio

The combined ratio of 75.3% in 2022 was 6.2 points lower than the combined ratio of 81.5% in 2021. The loss and loss adjustment expense ratio of 39.9% in 2022 was 6.7 points lower than the loss and loss adjustment expense ratio of 46.6% in

2021. The underwriting expense ratio of 35.4% in 2022 was 0.5 points higher than the underwriting expense ratio of 34.9% in 2021.

Net favorable prior year reserve development in 2022 and 2021 provided 6.5 points and 3.3 points of benefit, respectively, to the combined ratio. Catastrophe losses in 2022 and 2021 accounted for 0.7 points and 1.3 points, respectively, of the combined ratio. The underlying combined ratio in 2022 was 2.4 points lower than the 2021 ratio on the same basis, primarily reflecting the benefit of earned pricing.

Written Premiums

Bond & Specialty Insurance's gross and net written premiums were as follows:

	Gross Written Premiums		
(for the year ended December 31, in millions)	**2022**	**2021**	**2020**
Domestic:			
Management Liability	**$ 2,361**	$ 2,243	$ 1,920
Surety	**1,153**	952	910
Total Domestic	**3,514**	3,195	2,830
International	**568**	530	354
Total Bond & Specialty Insurance	**$ 4,082**	$ 3,725	$ 3,184

	Net Written Premiums		
(for the year ended December 31, in millions)	**2022**	**2021**	**2020**
Domestic:			
Management Liability	**$ 2,112**	$ 1,983	$ 1,769
Surety	**1,081**	888	845
Total Domestic	**3,193**	2,871	2,614
International	**539**	505	337
Total Bond & Specialty Insurance	**$ 3,732**	$ 3,376	$ 2,951

Gross written premiums and net written premiums in 2022 increased by 10% and 11%, respectively, over 2021.

Domestic. Net written premiums in 2022 were $3.19 billion, $322 million or 11% higher than in 2021. Excluding the surety line of business, for which the following are not relevant measures, retention rates remained strong in 2022 and increased over 2021. Renewal premium changes in 2022 remained positive and were lower than in 2021. New business premiums in 2022 increased over 2021.

International. Net written premiums in 2022 were $539 million, $34 million or 7% higher than in 2021, primarily driven by increases in the United Kingdom and broader Europe, as well as Canada, partially offset by the impact of changes in foreign currency exchange rates.

Personal Insurance

Results of Personal Insurance were as follows:

(for the year ended December 31, in millions)	2022	2021	2020
Revenues			
Earned premiums	**$ 13,250**	$ 11,983	$ 10,927
Net investment income	**440**	521	381
Fee income	**30**	27	24
Other revenues	**83**	97	76
Total revenues	**13,803**	12,628	11,408
Total claims and expenses	**14,033**	11,689	9,905
Segment income (loss) before income taxes	**(230)**	939	1,503
Income tax expense (benefit)	**(90)**	179	308
Segment income (loss)	**$ (140)**	$ 760	$ 1,195
Loss and loss adjustment expense ratio	**79.8 %**	70.3 %	62.8 %
Underwriting expense ratio	**25.1**	26.2	26.9
Combined ratio	**104.9 %**	96.5 %	89.7 %

Overview

Segment loss in 2022 was $140 million, compared with segment income of $760 million in 2021. Segment loss before income taxes primarily reflected the pre-tax impacts of (i) lower underlying underwriting margins, (ii) lower net favorable prior year reserve development, (iii) higher catastrophe losses and (iv) lower net investment income. Catastrophe losses in 2022 and 2021 were $1.20 billion and $1.01 billion, respectively. Net favorable prior year reserve development in 2022 and 2021 was $46 million and $260 million, respectively. The lower underlying underwriting margins primarily reflected the impacts of (i) elevated losses in both the automobile and homeowners and other product lines, partially offset by (ii) higher business volumes. The segment recorded an income tax benefit in 2022 compared to income tax expense in 2021, primarily reflecting the impact of the segment loss before income taxes compared with segment income before income taxes in 2021 and a $20 million reduction in income tax expense in the first quarter of 2022 as a result of the resolution of prior year tax matters.

Revenues

Earned Premiums

Earned premiums in 2022 were $13.25 billion, $1.27 billion or 11% higher than in 2021, primarily reflecting the increase in net written premiums over the preceding twelve months.

Net Investment Income

Net investment income in 2022 was $440 million, $81 million or 16% lower than in 2021. Refer to the "Net Investment Income" section of the "Consolidated Results of Operations" discussion for a description of the factors contributing to the decrease in the Company's consolidated net investment income in 2022 as compared with 2021. In addition, refer to note 2 of the notes to the consolidated financial statements for a discussion of the Company's net investment income allocation methodology.

Other Revenues

Other revenues in all years presented primarily consisted of installment premium charges.

Claims and Expenses

Claims and Claim Adjustment Expenses

Claims and claim adjustment expenses in 2022 were $10.57 billion, $2.14 billion or 25% higher than in 2021, primarily reflecting the impacts of (i) loss cost trends, including elevated losses in both the automobile and homeowners and other product lines, (ii) higher business volumes, (iii) lower net favorable prior year reserve development and (iv) higher catastrophe losses. Catastrophe losses and non-catastrophe weather-related losses in 2021 were reduced by recoveries under the Company's 2021 Underlying Property Aggregate Catastrophe Excess-of-Loss Reinsurance Treaty.

Net favorable prior year reserve development was not significant for the year ended December 31, 2022. Factors contributing to net favorable prior year reserve development during the years ended December 31, 2021 and 2020 are discussed in more detail in note 8 of the notes to the consolidated financial statements.

Amortization of Deferred Acquisition Costs

Amortization of deferred acquisition costs in 2022 was $2.10 billion, $210 million or 11% higher than in 2021, generally consistent with the increase in earned premiums.

General and Administrative Expenses

General and administrative expenses in 2022 were $1.36 billion, $8 million or 1% lower than in 2021, primarily reflecting lower contingent commissions, partially offset by the impact of higher business volumes.

Income Tax Expense (Benefit)

The income tax benefit in 2022 was $90 million, compared with income tax expense of $179 million in 2021, primarily reflecting the impact of the segment loss before income taxes of $230 million in 2022 compared with segment income before income taxes of $939 million in 2021 and the $20 million reduction in income tax expense in the first quarter of 2022 as a result of the resolution of prior year tax matters.

Combined Ratio

The combined ratio of 104.9% in 2022 was 8.4 points higher than the combined ratio of 96.5% in 2021. The loss and loss adjustment expense ratio of 79.8% in 2022 was 9.5 points higher than the loss and loss adjustment expense ratio of 70.3% in 2021. The underwriting expense ratio of 25.1% in 2022 was 1.1 points lower than the underwriting expense ratio of 26.2% in 2021.

Catastrophe losses accounted for 9.0 points and 8.5 points of the combined ratio in 2022 and 2021, respectively. Net favorable prior year reserve development in 2022 and 2021 provided 0.3 points and 2.2 points of benefit, respectively, to the combined ratio. The underlying combined ratio in 2022 was 6.0 points higher than the 2021 ratio on the same basis, primarily reflecting the impacts of (i) elevated losses in both the automobile and homeowners and other product lines, partially offset by (ii) a lower expense ratio.

Written Premiums

Personal Insurance's gross and net written premiums were as follows:

	Gross Written Premiums		
(for the year ended December 31, in millions)	**2022**	**2021**	**2020**
Domestic:			
Automobile	**$ 6,507**	$ 5,852	$ 5,395
Homeowners and Other	**7,099**	6,137	5,457
Total Domestic	**13,606**	11,989	10,852
International	**667**	701	667
Total Personal Insurance	**$ 14,273**	$ 12,690	$ 11,519

	Net Written Premiums		
(for the year ended December 31, in millions)	**2022**	**2021**	**2020**
Domestic:			
Automobile	**$ 6,482**	$ 5,827	$ 5,369
Homeowners and Other	**6,916**	5,980	5,329
Total Domestic	**13,398**	11,807	10,698
International	**649**	684	652
Total Personal Insurance	**$ 14,047**	$ 12,491	$ 11,350

Gross and net written premiums in 2022 both increased by 12% over 2021.

Domestic

Automobile net written premiums of $6.48 billion in 2022 increased by 11% over 2021. Retention rates remained strong in 2022 but were lower than in 2021. Renewal premium changes in 2022 remained positive and were higher than in 2021. New business premiums in 2022 increased over 2021.

Homeowners and Other net written premiums of $6.92 billion in 2022 increased by 16% over 2021. Retention rates remained strong in 2022 but were lower than in 2021. Renewal premium changes in 2022 remained positive and were higher than in 2021. New business premiums in 2022 were comparable with 2021.

For its Domestic business, Personal Insurance had approximately 9.2 million and 8.9 million active policies at December 31, 2022 and 2021, respectively.

International

International net written premiums of $649 million in 2022 decreased by 5% from 2021, driven by the impact of changes in foreign currency exchange rates and declines in the automobile product line.

For its International business, Personal Insurance had approximately 449,000 and 477,000 active policies at December 31, 2022 and 2021, respectively.

Interest Expense and Other

(for the year ended December 31, in millions)	**2022**	**2021**	**2020**
Income (loss)	**$ (301)**	$ (291)	$ (291)

The income (loss) for Interest Expense and Other in 2022 and 2021 was $(301) million and $(291) million, respectively. Pre-tax interest expense in 2022 and 2021 was $351 million and $340 million, respectively. After-tax interest expense in 2022 and 2021 was $277 million and $269 million, respectively.

ASBESTOS CLAIMS AND LITIGATION

The Company believes that the property and casualty insurance industry has suffered from court decisions and other trends that have expanded insurance coverage for asbestos claims far beyond the original intent of insurers and policyholders. The Company has received and continues to receive a significant number of asbestos claims. Factors underlying these claim filings include continued intensive advertising by lawyers seeking asbestos claimants and the focus by plaintiffs on defendants, such as manufacturers of talcum powder, who were not traditionally primary targets of asbestos litigation. The focus on these defendants is primarily the result of the number of traditional asbestos defendants who have sought bankruptcy protection in previous years. The bankruptcy of many traditional defendants has also caused increased settlement demands against those policyholders who are not in bankruptcy but remain in the tort system. Currently, in many jurisdictions, those who allege very serious injury and who can present credible medical evidence of their injuries are receiving priority trial settings in the courts, while those who have not shown any credible disease manifestation are having their hearing dates delayed or placed on an inactive docket. Prioritizing claims involving credible evidence of injuries, along with the focus on defendants who were not traditionally primary targets of asbestos litigation, contributes to the claims and claim adjustment expense payment patterns experienced by the Company. The Company's asbestos-related claims and claim adjustment expense experience also has been impacted by the unavailability of other insurance sources potentially available to policyholders, whether through exhaustion of policy limits or through the insolvency of other participating insurers.

The Company continues to be involved in disputes, including litigation, with a number of policyholders, some of whom are in bankruptcy, over coverage for asbestos-related claims. Many coverage disputes with policyholders are only resolved through settlement agreements. Because many policyholders make exaggerated demands, it is difficult to predict the outcome of settlement negotiations. Settlements involving bankrupt policyholders may include extensive releases which are favorable to the Company, but which could result in settlements for larger amounts than originally anticipated. Although the Company has seen a reduction in the overall risk associated with these disputes, it remains difficult to predict the ultimate cost of these claims. As in the past, the Company will continue to pursue settlement opportunities.

In addition to claims against policyholders, proceedings have been launched directly against insurers, including the Company, by individuals challenging insurers' conduct with respect to the handling of past asbestos claims and by individuals seeking damages arising from alleged asbestos-related bodily injuries. It is possible that other direct actions against insurers, including the Company, could be filed in the future. It is difficult to predict the outcome of these proceedings, including whether the plaintiffs would be able to sustain these actions against insurers based on novel legal theories of liability. The Company believes it has meritorious defenses to any such claims and has received favorable rulings in certain jurisdictions.

Because each policyholder presents different liability and coverage issues, the Company generally reviews the exposure presented by each policyholder with open claims at least annually. Among the factors the Company may consider in the course of this review are: available insurance coverage, including the role of any umbrella or excess insurance the Company has issued to the policyholder; limits and deductibles; an analysis of the policyholder's potential liability; the jurisdictions involved; past and anticipated future claim activity and loss development on pending claims; past settlement values of similar claims; allocated claim adjustment expense; the potential role of other insurance; the role, if any, of non-asbestos claims or potential non-asbestos claims in any resolution process; and 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 Company's net asbestos reserves at December 31, 2022 and 2021 were $1.31 billion and $1.34 billion, respectively, and include case reserves, IBNR reserves and reserves for the costs of defending asbestos-related coverage litigation. IBNR reserves include amounts for new claims and adverse development on existing policyholders, as well as reserves for claims from policyholders reporting asbestos claims for the first time and for policyholders for which there is, or may be, litigation. Asbestos reserves also include amounts related to certain policyholders with whom the Company has entered into permanent settlement agreements, which are based on the expected payout for each policyholder under the applicable agreement. Additionally, a portion of the asbestos reserves relates to assumed reinsurance contracts primarily consisting of reinsurance of excess coverage, including various pool participations.

The Company conducts an annual review of domestic policyholders with open asbestos claims. Policyholders are identified for this review based upon, among other factors: a combination of past payments and current case reserves in excess of a specified threshold (currently $100,000), perceived level of exposure, number of reported claims, products/completed operations and potential "non-product" exposures, size of policyholder and geographic distribution of products or services sold by the policyholder.

In the third quarter of 2022, the Company completed its annual in-depth asbestos claim review, including a review of policyholders with open claims and litigation cases for potential product and "non-product" liability. The number of policyholders with open asbestos claims and net asbestos payments were relatively flat compared to 2021. Payments on behalf of these policyholders continue to be influenced by an increase in severity for certain policyholders and a high level of litigation activity in a limited number of jurisdictions where individuals alleging serious asbestos-related injury, primarily mesothelioma, continue to target defendants who were not traditionally primary targets of asbestos litigation.

The Company's quarterly asbestos reserve reviews include an analysis of exposure and claim payment patterns by policyholder, as well as recent settlements, policyholder bankruptcies, judicial rulings and legislative actions. The Company also analyzes developing payment patterns among policyholders and the assumed reinsurance component of reserves, as well as projected reinsurance billings and recoveries. In addition, the Company reviews its historical gross and net loss and expense paid experience, year-by-year, to assess any emerging trends, fluctuations, or characteristics suggested by the aggregate paid activity. Conventional actuarial methods are not utilized to establish asbestos reserves, and the Company's evaluations have not resulted in a reliable method to determine a meaningful average asbestos defense or indemnity payment.

The completion of these reviews and analyses in 2022, 2021 and 2020 resulted in $212 million, $225 million and $295 million increases, respectively, to the Company's net asbestos reserves. In each year, the reserve increases were primarily driven by increases in the Company's estimate of projected settlement and defense costs related to a broad number of policyholders. The increase in the estimate of projected settlement and defense costs primarily resulted from payment trends that continue to be higher than previously anticipated due to the continued high level of mesothelioma claim filings and the impact of the current litigation environment surrounding those claims discussed above. Over the past decade, the property and casualty insurance industry, including the Company, has experienced net unfavorable prior year reserve development with regard to asbestos reserves, but the Company believes that over that period there has been a reduction in the volatility associated with the Company's overall asbestos exposure as the overall asbestos environment has evolved from one dominated by exposure to significant litigation risks, particularly coverage disputes relating to policyholders in bankruptcy who were asserting that their claims were not subject to the aggregate limits contained in their policies, to an environment primarily driven by a frequency of litigation related to individuals with mesothelioma. The Company's overall view of the current underlying asbestos environment is essentially unchanged from recent periods, and there remains a high degree of uncertainty with respect to future exposure to asbestos claims.

Net asbestos paid loss and loss expenses in 2022, 2021 and 2020 were $245 million, $221 million and $237 million, respectively. Approximately 2%, 9% and 1% of total net paid losses in 2022, 2021 and 2020, respectively, related to policyholders with whom the Company entered into settlement agreements that limit those policyholders' ability to present future claims to the Company.

The following table displays activity for asbestos losses and loss expenses and reserves:

(at and for the year ended December 31, in millions)	2022	2021	2020
Beginning reserves:			
Gross	**$ 1,687**	$ 1,668	$ 1,601
Ceded	**(346)**	(330)	(322)
Net	**1,341**	1,338	1,279
Incurred losses and loss expenses:			
Gross	**287**	287	362
Ceded	**(75)**	(62)	(67)
Net	**212**	225	295
Paid loss and loss expenses:			
Gross	**298**	267	295
Ceded	**(53)**	(46)	(58)
Net	**245**	221	237
Foreign exchange and other:			
Gross	**(2)**	(1)	—
Ceded	**(1)**	—	1
Net	**(3)**	(1)	1
Ending reserves:			
Gross	**1,674**	1,687	1,668
Ceded	**(369)**	(346)	(330)
Net	**$ 1,305**	$ 1,341	$ 1,338

ENVIRONMENTAL CLAIMS AND LITIGATION

The Company has received and continues to receive claims from policyholders who allege that they are liable for injury or damage arising out of the alleged storage, emissions or disposal of toxic substances, frequently under policies issued prior to the mid-1980s. These claims are mainly brought pursuant to various state or federal statutes that require a liable party to undertake or pay for environmental remediation. For example, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) enables private parties as well as federal and state governments to take action with respect to releases and threatened releases of hazardous substances. This federal statute permits the recovery of response costs from some liable parties and may require liable parties to undertake their own remedial action. Liability under these statutes may be joint and several with other responsible parties. The Company has also been, and continues to be, involved in litigation involving insurance coverage issues pertaining to environmental claims. The Company believes that some court decisions pertaining to environmental claims have interpreted the insurance coverage to be broader than the original intent of the insurers and policyholders. For more information regarding environmental claims and litigation, see note 8 of the notes to the consolidated financial statements.

In 2022, 2021 and 2020, the Company increased its net environmental reserves by $132 million, $89 million and $54 million, respectively. Net environmental paid loss and loss expenses in 2022, 2021 and 2020 were $82 million, $75 million and $69 million, respectively. Net environmental reserves were $371 million, $321 million and $307 million at December 31, 2022, 2021 and 2020, respectively.

UNCERTAINTY REGARDING ADEQUACY OF ASBESTOS AND ENVIRONMENTAL RESERVES

As a result of the processes and procedures discussed above, management believes that the reserves carried for asbestos and environmental claims are appropriately established based upon known facts, current law and management's judgment. However, the uncertainties surrounding the final resolution of these claims continue, and it is difficult to determine the ultimate exposure for asbestos and environmental claims and related litigation. As a result, these reserves are subject to revision as new information becomes available and as claims develop. The continuing uncertainties include, without limitation:

- the risks and lack of predictability inherent in complex litigation;

- a further increase in the cost to resolve, and/or the number of, asbestos and environmental claims beyond that which is anticipated;
- the emergence of a greater number of asbestos claims than anticipated as a result of extended life expectancies resulting from medical advances and lifestyle improvements;
- the role of any umbrella or excess policies we have issued;
- the resolution or adjudication of disputes concerning coverage for asbestos and environmental claims in a manner inconsistent with our previous assessment of these disputes;
- the number and outcome of direct actions against us;
- future developments pertaining to our ability to recover reinsurance for asbestos and environmental claims;
- any impact on asbestos defendants we insure due to the bankruptcy of other asbestos defendants;
- the unavailability of other insurance sources potentially available to policyholders, whether through exhaustion of policy limits or through the insolvency of other participating insurers; and
- uncertainties arising from the insolvency or bankruptcy of policyholders.

Changes in the legal, regulatory and legislative environment may impact the future resolution of asbestos and environmental claims and result in adverse loss reserve development. The emergence of a greater number of asbestos or environmental claims beyond that which is anticipated may result in adverse loss reserve development. Changes in applicable legislation and future court and regulatory decisions and interpretations, including the outcome of legal challenges to legislative and/or judicial reforms establishing medical criteria for the pursuit of asbestos claims, could affect the settlement of asbestos and environmental claims. It is also difficult to predict the ultimate outcome of complex coverage disputes until settlement negotiations near completion and significant legal questions are resolved or, failing settlement, until the dispute is adjudicated. This is particularly the case with policyholders in bankruptcy where negotiations often involve a large number of claimants and other parties and require court approval to be effective. As part of its continuing analysis of asbestos and environmental reserves, the Company continues to study the implications of these and other developments.

Because of the uncertainties set forth above, additional liabilities may arise for amounts in excess of the Company's current reserves. In addition, the Company's estimate of claims and claim adjustment expenses may change. These additional liabilities or increases in estimates, or a range of either, cannot now be reasonably estimated and could result in income statement charges that could be material to the Company's operating results in future periods.

INVESTMENT PORTFOLIO

The Company's invested assets at December 31, 2022 were $80.45 billion, of which 93% was invested in fixed maturity and short-term investments, 1% in equity securities, 1% in real estate investments and 5% in other investments. Because the primary purpose of the investment portfolio is to fund future claims payments, the Company employs a thoughtful investment philosophy that focuses on appropriate risk-adjusted returns. A significant majority of funds available for investment are deployed in a widely diversified portfolio of high quality, liquid, taxable U.S. government, tax-exempt and taxable U.S. municipal and taxable corporate and U.S. agency mortgage-backed bonds.

The carrying value of the Company's fixed maturity portfolio at December 31, 2022 was $71.16 billion. The Company closely monitors the duration of its fixed maturity investments, and investment purchases and sales are executed with the objective of having adequate funds available to satisfy the Company's insurance and debt obligations. The weighted average credit quality of the Company's fixed maturity portfolio, both including and excluding U.S. Treasury securities, was "Aa2" at both December 31, 2022 and 2021. Below investment grade securities represented 1.3% and 1.4% of the total fixed maturity investment portfolio at December 31, 2022 and 2021, respectively. The weighted average effective duration of fixed maturities and short-term securities was 4.6 (4.8 excluding short-term securities) at December 31, 2022 and 4.2 (4.4 excluding short-term securities) at December 31, 2021.

The carrying values of investments in fixed maturities classified as available for sale at December 31, 2022 and 2021 were as follows:

(at December 31, in millions)	2022 Carrying Value	2022 Weighted Average Credit Quality (1)	2021 Carrying Value	2021 Weighted Average Credit Quality (1)
U.S. Treasury securities and obligations of U.S. government and government agencies and authorities	**$ 5,438**	**Aaa/Aa1**	$ 3,562	Aaa/Aa1
Obligations of U.S. states, municipalities and political subdivisions:				
Local general obligation	**17,823**	**Aaa/Aa1**	19,667	Aaa/Aa1
Revenue	**10,198**	**Aaa/Aa1**	11,940	Aaa/Aa1
State general obligation	**1,019**	**Aaa/Aa1**	1,223	Aaa/Aa1
Pre-refunded	**2,339**	**Aaa/Aa1**	4,032	Aaa/Aa1
Total obligations of U.S. states, municipalities and political subdivisions	**31,379**		36,862	
Debt securities issued by foreign governments	**994**	**Aaa/Aa1**	1,041	Aaa/Aa1
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities	**1,991**	**Aaa/Aa1**	1,817	Aaa/Aa1
Corporate and all other bonds:				
Financial:				
Bank	**4,505**	**A1**	4,473	A1
Insurance	**1,628**	**Aa3**	1,626	Aa3
Finance/leasing	**47**	**Ba2**	34	Ba3
Brokerage and asset management	**136**	**A1**	101	Aa3
Total financial	**6,316**		6,234	
Industrial	**17,237**	**A3**	19,459	A3
Public utility	**4,064**	**A2**	4,706	A2
Canadian municipal securities	**1,523**	**Aa1**	1,687	Aa2
Sovereign corporate securities [2]	**559**	**Aaa**	607	Aaa
Commercial mortgage-backed securities and project loans [3]	**1,136**	**Aaa**	1,304	Aaa
Asset-backed and other	**523**	**Aa1**	531	Aa1
Total corporate and all other bonds	**31,358**		34,528	
Total fixed maturities	**$ 71,160**	**Aa2**	$ 77,810	Aa2

(1) Rated using external rating agencies or by the Company when a public rating does not exist.

(2) Sovereign corporate securities include corporate securities that are backed by a government and include sovereign banks and securities issued under the Federal Ship Financing Programs.

(3) Included in commercial mortgage-backed securities and project loans at December 31, 2022 and 2021 were $131 million and $207 million of securities guaranteed by the U.S. government, respectively.

The following table sets forth the Company's fixed maturity investment portfolio rated using external ratings agencies or by the Company when a public rating does not exist:

(at December 31, 2022, in millions)	Carrying Value	Percent of Total Carrying Value
Quality Rating:		
Aaa	$ 31,688	44.6 %
Aa	16,217	22.8
A	13,333	18.7
Baa	8,992	12.6
Total investment grade	70,230	98.7
Below investment grade	930	1.3
Total fixed maturities	$ 71,160	100.0 %

Obligations of U.S. States, Municipalities and Political Subdivisions

The Company's fixed maturity investment portfolio at December 31, 2022 and 2021 included $31.38 billion and $36.86 billion, respectively, of securities which are obligations of U.S. states, municipalities and political subdivisions (collectively referred to as the municipal bond portfolio). The municipal bond portfolio is diversified across the United States, the District of Columbia and Puerto Rico and includes general obligation and revenue bonds issued by states, cities, counties, school districts and similar issuers. Included in the municipal bond portfolio at December 31, 2022 and 2021 were $2.34 billion and $4.03 billion, respectively, of pre-refunded bonds, which are bonds for which U.S. states or municipalities have established irrevocable trusts, almost exclusively comprised of U.S. Treasury securities and obligations of U.S. government and government agencies and authorities. These trusts were created to fund the payment of principal and interest due under the bonds. The irrevocable trusts are verified as to their sufficiency by an independent verification agent of the underwriter, issuer or trustee. All of the Company's holdings of securities issued by Puerto Rico and related entities have either been pre-refunded and therefore are defeased by U.S. Treasury securities or have FHA guarantees subject to federal appropriation.

The following table shows the geographic distribution of the $29.04 billion of municipal bonds at December 31, 2022 that were not pre-refunded:

(at December 31, 2022, in millions)	State General Obligation	Local General Obligation	Revenue	Total Carrying Value	Weighted Average Credit Quality(1)
State:					
Texas	$ 38	$ 2,928	$ 1,457	$ 4,423	Aaa
California	—	1,905	453	2,358	Aaa/Aa1
Virginia	41	967	780	1,788	Aaa/Aa1
Washington	114	1,140	305	1,559	Aaa/Aa1
North Carolina	167	756	462	1,385	Aaa
Minnesota	142	954	175	1,271	Aaa/Aa1
Colorado	—	775	364	1,139	Aa1
Massachusetts	—	202	843	1,045	Aaa/Aa1
Maryland	31	866	126	1,023	Aaa/Aa1
Wisconsin	68	769	97	934	Aa1
Tennessee	7	807	88	902	Aa1
Florida	50	148	603	801	Aa1
Georgia	141	541	51	733	Aaa/Aa1
All others [2]	220	5,065	4,394	9,679	Aaa/Aa1
Total	$ 1,019	$ 17,823	$ 10,198	$ 29,040	Aaa/Aa1

(1) Rated using external rating agencies or by the Company when a public rating does not exist. Ratings shown are the higher of the rating of the underlying issuer or the insurer in the case of securities enhanced by third-party insurance for the payment of principal and interest in the event of issuer default.

(2) No other single state accounted for 2.5% or more of the total non-pre-refunded municipal bonds.

The following table displays the funding sources for the $10.20 billion of municipal bonds identified as revenue bonds in the foregoing table at December 31, 2022:

(at December 31, 2022, in millions)	Carrying Value	Weighted Average Credit Quality(1)
Source:		
Water	$ 2,830	Aaa/Aa1
Higher education	2,563	Aaa/Aa1
Sewer	1,005	Aaa/Aa1
Power utilities	703	Aa1
Special tax	486	Aaa/Aa1
Transit	355	Aaa/Aa1
Highway tolls	227	Aa2
Industrial	183	Aa3
Fuel sales	181	Aa1
Health care	177	Aa2
Housing	30	Aaa/Aa1
Lease	30	Aaa/Aa1
Natural gas	10	Aa2
Lottery	7	Aa1
Other revenue sources	1,411	Aaa/Aa1
Total	$ 10,198	Aaa/Aa1

(1) Rated using external rating agencies or by the Company when a public rating does not exist. Ratings shown are the higher of the rating of the underlying issuer or the insurer in the case of securities enhanced by third-party insurance for the payment of principal and interest in the event of issuer default.

The Company bases its investment decision on the underlying credit characteristics of the municipal security. The weighted average credit rating of the municipal bond portfolio was "Aaa/Aa1" at December 31, 2022.

Debt Securities Issued by Foreign Governments

The following table shows the geographic distribution of the Company's long-term fixed maturity investments in debt securities issued by foreign governments at December 31, 2022:

(at December 31, 2022, in millions)	Carrying Value	Weighted Average Credit Quality (1)
Foreign Government:		
Canada	$ 800	Aaa/Aa1
United Kingdom	177	Aa3
All others [2,3]	17	Aa1
Total	$ 994	Aaa/Aa1

(1) Rated using external rating agencies or by the Company when a public rating does not exist.

(2) The Company does not have direct exposure to sovereign debt issued by the Republic of Ireland, Italy, Greece, Portugal or Spain.

(3) No other country accounted for 2.5% or more of total debt securities issued by foreign governments.

The following table shows the Company's Eurozone exposure at December 31, 2022 to all debt securities issued by foreign governments, financial companies, sovereign corporations (including sovereign banks) whose securities are backed by the respective country's government and all other corporate securities (comprised of industrial corporations and utility companies) which could be affected if economic conditions deteriorated due to a prolonged recession:

(at December 31, 2022, in millions)	Debt Securities Issued by Foreign Governments		Corporate Securities					
			Financial		Sovereign Corporates		All Other	
	Carrying Value	Weighted Average Credit Quality (1)	Carrying Value	Weighted Average Credit Quality (1)	Carrying Value	Weighted Average Credit Quality (1)	Carrying Value	Weighted Average Credit Quality (1)
Eurozone Periphery								
Spain	$ —	—	$ 57	Aa3	$ —	—	$ 6	Baa3
Ireland	—	—	—	—	—	—	151	Baa2
Italy	—	—	—	—	—	—	—	—
Greece	—	—	—	—	—	—	—	—
Portugal	—	—	—	—	—	—	—	—
Subtotal	—		57		—		157	
Eurozone Non-Periphery								
Germany	10	Aaa	—	—	275	Aaa/Aa1	435	A3
France	75	Aa2	—	—	—	—	537	A1
Netherlands	—	—	92	A1	104	Aaa	184	A2
Finland	—	—	44	Aa3	—	—	—	—
Belgium	—	—	—	—	—	—	113	Baa1
Austria	—	—	—	—	137	Aa2	—	—
Subtotal	85		136		516		1,269	
Total	$ 85		$ 193		$ 516		$ 1,426	

(1) Rated using external rating agencies or by the Company when a public rating does not exist. The table includes $487 million of short-term securities which have the highest ratings issued by external rating agencies for short-term issuances. For purposes of this table, the short-term securities, which are rated "A-1+" and/or "P-1," are included as "Aaa" rated securities.

In addition to fixed maturities noted in the foregoing table, the Company has exposure totaling $289 million to private equity limited partnerships and real estate partnerships (both of which are included in other investments in the Company's consolidated balance sheet) whose primary investing focus is across Europe. The Company has unfunded commitments totaling $169 million to these partnerships.

Mortgage-Backed Securities, Collateralized Mortgage Obligations and Pass-Through Securities

The Company's fixed maturity investment portfolio at December 31, 2022 and 2021 included $1.99 billion and $1.82 billion, respectively, of residential mortgage-backed securities, including pass-through-securities and collateralized mortgage obligations (CMOs), all of which are subject to prepayment risk (either shortening or lengthening of duration). While prepayment risk for securities and its effect on income cannot be fully controlled, particularly when interest rates move dramatically, the Company's investment strategy generally favors securities that reduce this risk within expected interest rate ranges. The Company makes investments in residential CMOs that are either guaranteed by GNMA, FNMA or FHLMC, or if not guaranteed, are senior or super-senior positions within their respective securitizations. Both guaranteed and non-guaranteed residential CMOs allocate the distribution of payments from the underlying mortgages among different classes of bondholders. In addition, non-guaranteed residential CMOs provide structures that allocate the impact of credit losses to different classes of bondholders. Senior and super-senior CMOs are protected, to varying degrees, from credit losses as those losses are initially allocated to subordinated bondholders. The Company's investment strategy is to purchase CMO tranches that are expected to offer the most favorable return given the Company's assessment of associated risks. The Company does not purchase residual interests in CMOs. For more information regarding the Company's investments in residential mortgage-backed securities, see note 3 of the notes to the consolidated financial statements.

Commercial Mortgage-Backed Securities and Project Loans

At December 31, 2022 and 2021, the Company held commercial mortgage-backed securities (including FHA project loans) of $1.14 billion and $1.30 billion, respectively. For more information regarding the Company's investments in commercial mortgage-backed securities, see note 3 of the notes to the consolidated financial statements.

Equity Securities, Real Estate and Short-Term Investments

See note 1 of the notes to the consolidated financial statements for further information about these invested asset classes.

Other Investments

The Company also invests in private equity, hedge fund and real estate partnerships, and joint ventures. These asset classes have historically provided a higher return than investments in fixed maturities but are subject to more volatility. The Company also enters into certain derivative financial instruments from time to time that are reported as part of other investments. At December 31, 2022 and 2021, the carrying value of the Company's other investments was $4.07 billion and $3.86 billion, respectively. The Company has unfunded commitments to private equity limited partnerships, real estate partnerships and others in which it invests. These commitments totaled $1.80 billion and $1.70 billion at December 31, 2022 and 2021, respectively. It is the opinion of the Company's management that the Company has adequate liquidity to meet these commitments.

Securities Lending

The Company has, from time to time, engaged in securities lending activities from which it generates net investment income by lending certain of its investments to other institutions for short periods of time. At December 31, 2022 and 2021, the Company had $445 million and $253 million, respectively, of securities on loan, respectively, as part of a tri-party lending agreement. The average monthly balance of securities on loan during 2022 and 2021 was $347 million and $329 million, respectively. Borrowers of these securities provide collateral equal to at least 102% of the market value of the loaned securities plus accrued interest. The Company did not incur any investment losses in its securities lending program for the years ended December 31, 2022 and 2021.

Lloyd's Trust Deposits

The Company meets its capital requirements to support its underwriting at Lloyd's using a combination of the share capital and retained earnings of the Company's subsidiaries participating in Lloyd's, trust deposits and uncollateralized letters of credit. Securities with a fair value of approximately $28 million and $33 million held by a wholly-owned subsidiary at December 31, 2022 and 2021, respectively, and $58 million and $34 million held by TRV at December 31, 2022 and 2021, respectively, were pledged into Lloyd's trust accounts to provide a portion of the Lloyd's capital requirements. For more information regarding the Company's utilization of uncollateralized letters of credit, see "Liquidity and Capital Resources" herein.

Net Unrealized Investment Gains (Losses)

The net unrealized investment gains (losses) that were included in shareholders' equity were as follows:

(at December 31, in millions)	2022	2021	2020
Fixed maturities	**$ (6,217)**	$ 3,062	$ 5,175
Other	**(3)**	(2)	—
Unrealized investment gains (losses) before tax	**(6,220)**	3,060	5,175
Tax expense (benefit)	**(1,322)**	645	1,101
Net unrealized investment gains (losses) included in shareholders' equity at end of year	**$ (4,898)**	$ 2,415	$ 4,074

Net unrealized investment losses included in shareholders' equity were $4.90 billion at December 31, 2022 compared with net unrealized investment gains of $2.42 billion at December 31, 2021. At December 31, 2022, the Company had $2.18 billion fixed maturity investments reported at fair value for which fair value was less than 80% of amortized cost. At December 31, 2021, the Company had no fixed maturity investments reported at fair value for which fair value was less than 80% of amortized cost. These year-over-year changes were driven by rising interest rates. Since the Company generally holds its high-quality fixed maturity investments to maturity, these net unrealized losses are considered temporary in nature and are not expected to result in significant realized losses. In addition, given the temporary nature of net unrealized losses combined with the Company's strong operating cash flows, which include income received on investments and the proceeds received upon maturity of the investments, the net unrealized investment loss is not expected to meaningfully impact the Company's assessment of capital adequacy or liquidity. Equity securities, which include common and non-redeemable preferred stocks, are reported at fair value with changes in fair value recognized in net income.

For fixed maturity investments where fair value is less than the carrying value and the Company did not reach a decision to impair, the Company continues to have the intent and ability to hold such investments to a projected recovery in value, which may not be until maturity.

At December 31, 2022 and 2021, below investment grade securities comprised 1.3% and 1.4%, respectively, of the fair value of the Company's fixed maturity investment portfolio. Included in below investment grade securities at December 31, 2022 were securities in an unrealized loss position that, in the aggregate, had an amortized cost of $937 million and a fair value of $844 million, resulting in a net pre-tax unrealized investment loss of $93 million. These securities in an unrealized loss position represented 1% of both the amortized cost and fair value of the fixed maturity portfolio at December 31, 2022 and accounted for 1.5% of the total gross pre-tax unrealized investment loss in the fixed maturity portfolio at December 31, 2022.

Impairment Charges

Impairment charges included in net realized investment gains (losses) in the consolidated statement of income were $38 million, $2 million and $55 million for the years ended December 31, 2022, 2021 and 2020, respectively. See note 3 of the notes to the consolidated financial statements for further information.

Purchases and Sales of Investment Securities

Purchases and sales of investments are based on cash requirements, the characteristics of the insurance liabilities and current market conditions. The Company identifies investments to be sold to achieve its primary investment goals of assuring the Company's ability to meet policyholder obligations as well as to optimize investment returns, given these obligations.

During the year ended December 31, 2022, the Company incurred pre-tax realized losses of $99 million on the sale of fixed maturity investments having a fair value of $2.07 billion.

CATASTROPHE MODELING

The Company uses various analyses and methods, including proprietary and third-party modeling processes, to make underwriting and reinsurance decisions designed to manage its exposure to catastrophic events. There are no industry-standard methodologies or assumptions for projecting catastrophe exposure. Accordingly, catastrophe estimates provided by different insurers may not be comparable.

The Company actively monitors and evaluates changes in third-party models and, when necessary, calibrates the catastrophe risk model estimates delivered via its own proprietary modeling processes. The Company considers historical loss experience, recent events, underwriting practices, market share analyses, external scientific analysis and various other factors, including non-modeled losses, to refine its proprietary view of catastrophe risk. These proprietary models are updated regularly as new information and techniques emerge.

Based on the proprietary and third-party models utilized by the Company, the tables below set forth, as of December 31, 2022, the probabilities that estimated losses, comprising claims and allocated claim adjustment expenses (but excluding unallocated claim adjustment expenses), from a single event occurring in a one-year timeframe will equal or exceed the indicated loss amounts (expressed in dollars, net of tax, and as a percentage of the Company's common equity). For example, on the basis described below the tables, the Company estimates that there is a one percent chance that the Company's loss from a single U.S. and Canadian hurricane in a one-year timeframe would equal or exceed $2.1 billion, or 8% of the Company's common equity at December 31, 2022.

	Dollars (in billions)	
Likelihood of Exceedance (1)	**Single U.S. and Canadian Hurricane**	**Single U.S. and Canadian Earthquake**
2.0% (1-in-50)	**$ 1.7**	**$ 0.6**
1.0% (1-in-100)	**$ 2.1**	**$ 1.1**
0.4% (1-in-250)	**$ 3.4**	**$ 1.9**
0.1% (1-in-1,000)	**$ 7.4**	**$ 3.1**

Likelihood of Exceedance	Percentage of Common Equity (2)	
	Single U.S. and Canadian Hurricane	Single U.S. and Canadian Earthquake
2.0% (1-in-50)	**6 %**	**2 %**
1.0% (1-in-100)	**8 %**	**4 %**
0.4% (1-in-250)	**13 %**	**7 %**
0.1% (1-in-1,000)	**28 %**	**12 %**

(1) An event that has, for example, a 2% likelihood of exceedance is sometimes described as a "1-in-50 year event." As noted above, however, the probabilities in the table represent the likelihood of losses from a single event equaling or exceeding the indicated threshold loss amount in a one-year timeframe, not over a multi-year timeframe. Also, because the probabilities relate to a single event, the probabilities do not address the likelihood of more than one event occurring in a particular period, and, therefore, the amounts do not address potential aggregate catastrophe losses occurring in a one-year timeframe.

(2) The percentage of common equity is calculated by dividing (a) indicated loss amounts in dollars by (b) total common equity excluding net unrealized investment gains and losses, net of taxes, included in shareholders' equity. Net unrealized investment gains and losses can be significantly impacted by both discretionary and other economic factors and are not necessarily indicative of operating trends. Accordingly, the Company's management uses the percentage of common equity calculated on this basis as a metric to evaluate the potential impact of a single hurricane or single earthquake on the Company's financial position for purposes of making underwriting and reinsurance decisions.

The threshold loss amounts in the tables above, which are based on the Company's in-force portfolio at December 31, 2022 and catastrophe reinsurance program at January 1, 2023, are net of reinsurance, after-tax and exclude unallocated claim adjustment expenses, which historically have been less than 10% of loss estimates. For further information regarding the Company's reinsurance, see "Item 1-Business-Reinsurance." The amounts for hurricanes reflect U.S. and Canadian exposures and include property exposures, property residual market exposures and an adjustment for certain non-property exposures. The hurricane loss amounts are based on the Company's catastrophe risk model estimates and include losses from the hurricane hazards of wind and storm surge. The amounts for earthquakes reflect U.S. and Canadian property and workers' compensation exposures. These loss amounts include the effects of exposure growth, inflation and modeling updates based on recent trends and scientific analysis. The Company does not believe that the inclusion of hurricane or earthquake losses arising from other geographical areas or other exposures would materially change the estimated threshold loss amounts.

Catastrophe modeling relies upon inputs based on experience, science, engineering and history. These inputs reflect a significant amount of judgment and are subject to changes which may result in volatility in the modeled output. Catastrophe modeling output may also fail to account for risks that are outside the range of normal probability or are otherwise unforeseeable. Catastrophe modeling assumptions include, among others, the portion of purchased reinsurance that is collectible after a catastrophic event, which may prove to be materially incorrect. Consequently, catastrophe modeling estimates are subject to significant uncertainty. In the tables above, the uncertainty associated with the estimated threshold loss amounts increases significantly as the likelihood of exceedance decreases. In other words, in the case of a relatively more remote event (e.g., 1-in-1,000), the estimated threshold loss amount is relatively less reliable. Actual losses from an event could materially exceed the indicated threshold loss amount. In addition, more than one such event could occur in any period.

Moreover, the Company is exposed to the risk of material losses from other than property and workers' compensation coverages arising out of hurricanes and earthquakes, and it is exposed to catastrophe losses from perils other than hurricanes and earthquakes, such as tornadoes and other windstorms, hail, wildfires, severe winter weather, floods, tsunamis, volcanic eruptions, solar flares and other naturally-occurring events, as well as acts of terrorism and cyber events.

In addition, compared to models for hurricanes, models for earthquakes are less reliable due to there being a more limited number of significant historical events to analyze, while models for tornadoes, hail storms, wildfires and winter storms are newer and may be less reliable due to the highly random geographic nature and size of these events. Accordingly, these models may be less accurate in predicting risks and estimating losses. Further, changes in climate conditions could cause our underlying modeling data to be less predictive, thus limiting our ability to effectively evaluate and manage catastrophe risk. As compared to natural catastrophes, modeling for man-made catastrophes, such as terrorism and cyber events, is even more difficult and less reliable, and for some events (both natural and man-made), models are either in early stages of development and, therefore, not widely adopted, or are not available.

For more information about the Company's exposure to catastrophe losses, see "Item 1A-Risk Factors-High levels of catastrophe losses, including as a result of factors such as increased concentrations of insured exposures in catastrophe-prone areas, could materially and adversely affect our results of operations, our financial position and/or liquidity, and could adversely impact our ratings, our ability to raise capital and the availability and cost of reinsurance" and "Item 1A-Risk Factors- We may be adversely affected if our pricing and capital models provide materially different indications than actual results."

CHANGING CLIMATE CONDITIONS

Severe weather events over the last two decades underscore the unpredictability of climate trends. For example, the frequency and/or severity of hurricane, tornado, hail and wildfire events in the United States have been more volatile during this time period. The insurance industry has experienced increased catastrophe losses due to a number of potential causal factors, including, in addition to weather/climate variability, aging infrastructure, more people living in, and moving to, high-risk areas, population growth in areas with weaker enforcement of building codes, urban expansion, an increase in the number of amenities included in, and average size of, a home and increased inflation, including as a result of post-event demand surge. We believe that changing climate conditions have also likely added to the frequency and severity of natural disasters and created additional uncertainty as to future trends and exposures. Climate studies by government agencies, academic institutions, catastrophe modeling organizations and other groups indicate that an increase in frequency and/or intensity of hurricanes, heavy precipitation events, flash flooding, sea level rise, droughts, heat waves and wildfires has occurred, and can be expected into the future. Understanding the potential impacts of changing climate conditions is important to the Company's business. Changing climate conditions are expected to evolve over decades. Importantly, because most of its policies renew annually, the Company is able to respond to these changes over time through adjustments to its underwriting strategy, product pricing and related policy terms and conditions, as appropriate. As an example, in recent years the Company has focused on enhancing the strategic management of its catastrophe exposure, adding experts in data science, meteorology, including climate and flood science, wind and structural engineering and geophysics, among others, to its catastrophe management organization. The Company has also established dedicated teams for each catastrophe peril, with the goal of developing industry-leading scientific and underwriting expertise. This expertise has been incorporated into the Company's product development, risk selection, pricing, capital allocation and claim response.

The Company discusses how changing climate conditions may present other issues for its business under "Item 1A - Risk Factors." and "Outlook." For example, among other things:

- Increasingly unpredictable and severe weather conditions could result in increased frequency and severity of claims under policies issued by the Company. See "Item 1A—Risk Factors—High levels of catastrophe losses, including as a result of factors such as increased concentrations of insured exposures in catastrophe-prone areas and changing climate conditions, could materially and adversely affect our results of operations, our financial position and/or liquidity, and could adversely impact our ratings, our ability to raise capital and the availability and cost of reinsurance" and "-Outlook-Underwriting Gain/Loss." Moreover, the Company's catastrophe models may be less reliable due to the increased unpredictability in frequency and severity of severe weather events, emerging trends in climate conditions and regulatory responses to catastrophe events not being appropriately reflected in the models, in addition to the other factors mentioned above. Accordingly, the Company may be subject to increased losses from catastrophes and other weather-related events.

- Changing climate conditions could also impact the creditworthiness of issuers of securities in which the Company invests. For example, water supply adequacy could impact the creditworthiness of bond issuers with significant assets or business activities in the Southwestern United States; more frequent and/or severe hurricanes could impact the creditworthiness of issuers with significant assets or business activities in the Southeastern United States, among other areas; and increased regulation adopted in response to potential changes in climate conditions could impact the creditworthiness of issuers affected by such regulations. In addition, as issuers of securities in which the Company invests become increasingly focused on mitigating the potential environmental impact of their operations, the costs associated with such initiatives could affect the business models and realized returns of such issuers. See "Item 1A—Risk Factors—Our investment portfolio is subject to credit and interest rate risk, and may suffer reduced or low returns or material realized or unrealized losses."

- Increased regulation adopted in response to potential changes in climate conditions may impact the Company and its customers, including state insurance regulations that could impact the Company's ability to manage property exposures in areas vulnerable to significant climate driven losses. For example, state laws have been passed that restrict a carrier's ability to cancel or non-renew certain policies within or adjacent to declared state of emergency zip codes and mandate discounts for risk mitigation practices that may not be effective. If the Company is unable to implement risk-based pricing, modify policy terms or reduce exposures to the extent necessary to address rising losses

related to catastrophes and smaller scale weather events (should those increased losses occur), its business may be adversely affected. See "Item 1—Business—U.S. State and Federal Regulation—Regulatory and Legislative Responses to Catastrophes." In addition, climate change regulation could increase the Company's customers' costs of doing business. For example, insureds faced with carbon management regulatory requirements may have less available capital for investment in loss prevention and safety features which may, over time, increase loss exposures. Increased regulation may also result in reduced economic activity, which would decrease the amount of insurable assets and businesses, and increased claim costs, to the extent such regulations require that damaged homes or businesses be rebuilt according to more expensive specifications.

- The full range of potential liability exposures related to changing climate conditions continues to evolve. For example, from time to time third parties sue our policyholders alleging that they caused or contributed to changing climate conditions. Through the Company's Enterprise Casualty Emerging Risk Committee and its Committee on Climate, Energy and the Environment, the Company works with its business units and corporate groups, as appropriate, to identify and try to assess climate change-related liability issues, which are continually evolving and often hard to fully evaluate. The Company regularly reviews emerging issues, including changing climate conditions, to consider potential changes to its modeling and the use of such modeling, as well as to help determine the need for new underwriting strategies, coverage modifications or new products. See "Item 1A—Risk Factors—The effects of emerging claim and coverage issues on our business are uncertain, and court decisions or legislative changes that take place after we issue our policies can result in an unexpected increase in the number of claims and have a material adverse impact on our results of operations."

REINSURANCE RECOVERABLES

The Company reinsures a portion of the risks it underwrites in order to control its exposure to losses. For additional discussion regarding the Company's reinsurance coverage, see "Part I—Item 1—Business—Reinsurance."

The following table summarizes the composition of the Company's reinsurance recoverables:

(at December 31, in millions)	2022	2021
Gross reinsurance recoverables on paid and unpaid claims and claim adjustment expenses	**$ 3,792**	$ 3,931
Gross structured settlements	**2,802**	2,900
Mandatory pools and associations	**1,601**	1,762
Gross reinsurance recoverables	**8,195**	8,593
Allowance for estimated uncollectible reinsurance	**(132)**	(141)
Net reinsurance recoverables	**$ 8,063**	$ 8,452

Net reinsurance recoverables at December 31, 2022 decreased by $389 million from December 31, 2021, primarily reflecting cash collections and decreases in mandatory pools and associations and structured settlements in 2022.

The following table presents the Company's top five reinsurer groups by reinsurance recoverable at December 31, 2022 (in millions). Also included is the A.M. Best rating of the Company's predominant reinsurer from each such reinsurer group at February 16, 2023:

Reinsurer Group	Reinsurance Recoverable	A.M. Best Rating of Group's Predominant Reinsurer	
Swiss Re Group	$ 561	A+	second highest of 16 ratings
Berkshire Hathaway	515	A++	highest of 16 ratings
Munich Re Group	318	A+	second highest of 16 ratings
Axa Group	152	A+	second highest of 16 ratings
PartnerRe Group	140	A+	second highest of 16 ratings

At December 31, 2022, the Company held $1.00 billion of collateral in the form of letters of credit, funds and trust agreements held to fully or partially collateralize certain reinsurance recoverables.

Included in net reinsurance recoverables are amounts related to structured settlements, which are annuities purchased from various life insurance companies to settle certain personal physical injury claims, of which workers' compensation claims comprise a significant portion. In cases where the Company did not receive a release from the claimant, the amount due from the life insurance company related to the structured settlement is included in the Company's consolidated balance sheet as a reinsurance recoverable and the related claim cost is included in the liability for claims and claim adjustment expense reserves, as the Company retains the contingent liability to the claimant. If it is expected that the life insurance company is not able to pay, the Company would recognize an impairment of the related reinsurance recoverable if, and to the extent, the purchased annuities are not covered by state guaranty associations. In the event that the life insurance company fails to make the required annuity payments, the Company would be required to make such payments. The following table presents the Company's top five groups by structured settlements at December 31, 2022 (in millions). Also included is the A.M. Best rating of the Company's predominant insurer from each such insurer group at February 16, 2023:

Group	Structured Settlements	A.M. Best Rating of Group's Predominant Insurer	
Fidelity & Guaranty Life Group	$ 699	A-	fourth highest of 16 ratings
Genworth Financial Group	310	B-	eighth highest of 16 ratings
John Hancock Group	249	A+	second highest of 16 ratings
Symetra Financial Corporation	215	A	third highest of 16 ratings
Brighthouse Financial, Inc.	207	A	third highest of 16 ratings

The Company considers the ratings and related outlook assigned to reinsurance companies and life insurance companies by various independent ratings agencies in assessing the adequacy of its allowance for uncollectible amounts.

OUTLOOK

The following discussion provides outlook information for certain key drivers of the Company's results of operations and capital position.

Premiums. The Company's earned premiums are a function of net written premium volume. Net written premiums comprise both renewal business and new business and are recognized as earned premium over the term of the underlying policies. When business renews, the amount of net written premiums associated with that business may increase or decrease (renewal premium change) as a result of increases or decreases in rate and/or insured exposures, which the Company considers as a measure of units of exposure (such as the number and value of vehicles or properties insured). Net written premiums from both renewal and new business, and therefore earned premiums, are impacted by competitive market conditions as well as general economic conditions, which, particularly in the case of Business Insurance, affect audit premium adjustments, policy endorsements and mid-term cancellations. Net written premiums may also be impacted by the structure of reinsurance programs and related costs, as well as changes in foreign currency exchange rates.

Overall, the Company expects that retention levels (the amount of expiring premium that renews, before the impact of renewal premium changes) will remain strong by historical standards during 2023.

Property and casualty insurance market conditions are expected to remain competitive during 2023 for new business. In each of the Company's business segments, new business generally has less of an impact on underwriting profitability than renewal business, given the volume of new business relative to renewal business. However, in periods of meaningful increases in new business, despite its positive impact on underwriting gains over time, the impact of higher new business levels may negatively impact the combined ratio for a period of time. In periods of meaningful decreases in new business, despite its negative impact on underwriting gains over time, the impact of lower new business levels may positively impact the combined ratio for a period of time.

Effective January 1, 2023, the Company entered into a quota share reinsurance agreement with subsidiaries of Fidelis Insurance Holdings Limited (Fidelis) pursuant to which the Company will assume 20% of the business written by Fidelis during 2023, subject to a loss ratio cap. The Company's portion of net written premiums from Fidelis is expected to be approximately $550 million to $600 million for the full year and will be reported as part of the International results of Business Insurance. The Company also has a minority investment in Fidelis.

Underwriting Gain/Loss. The Company's underwriting gain/loss can be significantly impacted by catastrophe losses and net favorable or unfavorable prior year reserve development, as well as underlying underwriting margins. Underlying underwriting margins can be impacted by a number of factors, including variability in non-catastrophe weather, large loss and other loss

activity; changes in current period loss estimates resulting from prior period loss development; changes in loss cost trends; changes in business mix; changes in reinsurance coverages and/or costs; premium adjustments; and variability in expenses and assessments.

Catastrophe losses and non-catastrophe weather-related losses are inherently unpredictable from period to period. The Company's results of operations could be adversely impacted if significant catastrophe and non-catastrophe weather-related losses were to occur.

On average for the ten-year period ended December 31, 2022, the Company experienced approximately 41% of its annual catastrophe losses during the second quarter, primarily arising out of severe wind and hail storms, including tornadoes. Hurricanes, wildfires and winter storms tend to happen at other times of the year and can also have a material impact on the Company's results of operations. Catastrophe losses incurred in a particular quarter in any given year may differ materially from historical experience. In addition, most of the Company's reinsurance programs renew on January 1 or July 1 of each year, and, therefore, any changes to the availability, cost or coverage terms of such programs will be effective after such dates.

Over much of the past decade, the Company's results have included significant amounts of net favorable prior year reserve development driven by better than expected loss experience. However, given the inherent uncertainty in estimating claims and claim adjustment expense reserves, loss experience could develop such that the Company recognizes in future periods higher or lower levels of favorable prior year reserve development, no favorable prior year reserve development or unfavorable prior year reserve development. In addition, the ongoing review of prior year claims and claim adjustment expense reserves, or other changes in current period circumstances, may result in the Company revising current year loss estimates upward or downward in future periods of the current year.

It is possible that changes in economic conditions, the supply chain, the labor market and geopolitical tensions, as well as steps taken by federal, state and/or local governments and the Federal Reserve, could lead to higher or lower inflation than the Company anticipated, which could in turn lead to an increase or decrease in the Company's loss costs and the need to strengthen or reduce claims and claim adjustment expense reserves. These impacts of inflation on loss costs and claims and claim adjustment expense reserves could be more pronounced for those lines of business that require a relatively longer period of time to finalize and settle claims for a given accident year and, accordingly, are relatively more inflation sensitive. Labor shortages, higher costs of used vehicles and parts, and increased demand and decreased supply for raw materials are adversely impacting severity in our auto and property businesses and may continue to do so in future quarters. For a further discussion, see "Part I—Item 1A—Risk Factors—If actual claims exceed our claims and claim adjustment expense reserves, or if changes in the estimated level of claims and claim adjustment expense reserves are necessary, including as a result of, among other things, changes in the legal/tort, regulatory and economic environments in which the Company operates, our financial results could be materially and adversely affected."

The Company's results of operations may be impacted by a number of other factors, including an economic slowdown, a recession, financial market volatility, supply chain disruptions, monetary and fiscal policy measures (including future actions or inactions of the United States government related to the "debt-ceiling"), heightened geopolitical tensions, fluctuations in interest rates and foreign currency exchange rates, the political and regulatory environment, changes to the U.S. Federal budget and potential changes in tax laws.

Investment Portfolio. The Company expects to continue to focus its investment strategy on maintaining a high-quality investment portfolio and a relatively short average effective duration. The weighted average effective duration of fixed maturities and short-term securities was 4.6 (4.8 excluding short-term securities) at December 31, 2022. From time to time, the Company enters into short positions in U.S. Treasury futures contracts to manage the duration of its fixed maturity portfolio. At December 31, 2022, the Company had no open U.S. Treasury futures contracts. The Company regularly evaluates its investment alternatives and mix. Currently, the majority of the Company's investments are comprised of a widely diversified portfolio of high-quality, liquid, taxable U.S. government, tax-exempt and taxable U.S. municipal and taxable corporate and U.S. agency mortgage-backed bonds.

The Company also invests much smaller amounts in equity securities, real estate, and private equity, hedge fund and real estate partnerships, and joint ventures. These investment classes have the potential for higher returns but also the potential for greater volatility and higher degrees of risk, including less stable rates of return and less liquidity.

Approximately 26% of the fixed maturity portfolio is expected to mature over the next three years (including the early redemption of bonds, assuming interest rates (including credit spreads) do not rise significantly by applicable call dates). As a result, the overall yield on and composition of its portfolio could be meaningfully impacted by the types of investments available for reinvestment with the proceeds of maturing bonds.

Net investment income is a material contributor to the Company's results of operations. Based on our current expectations for slightly higher levels of fixed income investments and the impact of expected higher reinvestment yields on fixed income investments, the Company expects that after-tax net investment income from that portfolio will be approximately $515 million in the first quarter of 2023, increasing to an estimated $560 million by the fourth quarter of 2023. This expectation could be impacted by the direction of interest rates and disruptions in global financial markets. Included in other investments are private equity, hedge fund and real estate partnerships that are accounted for under the equity method of accounting and typically report their financial statement information to the Company one month to three months following the end of the reporting period. Accordingly, net investment income or loss from these other investments is generally reflected in the Company's financial statements on a quarter lag basis. The Company's net investment income in future periods from its non-fixed income investment portfolio will be impacted, positively or negatively, by the performance of global financial markets.

The Company had net pre-tax realized investment losses of $204 million in 2022. Changes in global financial markets could result in net realized investment gains or losses in the Company's investment portfolio.

The Company had a net pre-tax unrealized investment loss of $6.22 billion ($4.90 billion after-tax) in its fixed maturity investment portfolio at December 31, 2022, compared to a net pre-tax unrealized investment gain of $3.06 billion ($2.42 billion after-tax) at December 31, 2021, primarily due to the increases in interest rates during 2022. While the Company does not attempt to predict future interest rate movements, a rising interest rate environment reduces the market value of fixed maturity investments and, therefore, reduces shareholders' equity, and a declining interest rate environment has the opposite effects. Since the Company generally holds its high-quality fixed maturity investments to maturity, the net unrealized loss discussed above is considered temporary in nature and is not expected to result in significant realized losses. In addition, given the temporary nature of net unrealized losses combined with the Company's strong operating cash flows, which include income received on investments and the proceeds received upon maturity of the investments, the net unrealized investment loss is not expected to meaningfully impact the Company's assessment of capital adequacy or liquidity. Additionally, disruptions in global financial markets could also impact the market value of the Company's investment portfolio. The Company's investment portfolio has benefited from certain tax exemptions (primarily those related to interest from municipal bonds) and certain other tax laws, including, but not limited to, those governing dividends-received deductions and tax credits (such as foreign tax credits). Changes in these laws could adversely impact the value of the Company's investment portfolio. See "Our businesses are heavily regulated by the states and countries in which we conduct business, including licensing, market conduct and financial supervision, and changes in regulation, including higher tax rates, may reduce our profitability and limit our growth" included in "Part I—Item 1A—Risk Factors."

For further discussion of the Company's investment portfolio, see "Investment Portfolio." For a discussion of the risks to the Company's business during or following a financial market disruption and risks to the Company's investment portfolio, see the risk factors entitled "During or following a period of financial market disruption or an economic downturn, our business could be materially and adversely affected" and "Our investment portfolio is subject to credit and interest rate risk, and may suffer reduced or low returns or material realized or unrealized losses" included in "Part I—Item 1A—Risk Factors." For a discussion of the risks to the Company's investments from foreign currency exchange rate fluctuations, see the risk factor entitled "We are subject to additional risks associated with our business outside the United States" included in "Part I—Item 1A—Risk Factors" and see "Part II—Item 7A—Quantitative and Qualitative Disclosures About Market Risk—Foreign Currency Exchange Rate Risk."

Capital Position. The Company believes it has a strong capital position and, as part of its ongoing efforts to create shareholder value, expects to continue to return capital not needed to support its business operations to its shareholders, subject to the considerations described below. The Company expects that, generally over time, the combination of dividends to common shareholders and common share repurchases will likely not exceed net income. The Company also expects that to the extent that it continues to grow premium volumes, the level of capital to support the Company's financial strength ratings will also increase, and accordingly, the amount of capital returned to shareholders relative to earnings would be somewhat less than it otherwise would have been absent the growth in premium volumes. The timing and actual number of shares to be repurchased in the future will depend on a variety of additional factors, including the Company's financial position, earnings, share price, catastrophe losses, maintaining capital levels appropriate for the Company's business operations, changes in levels of written premiums, funding of the Company's qualified pension plan, capital requirements of the Company's operating subsidiaries, legal requirements, regulatory constraints, other investment opportunities (including mergers and acquisitions and related financings), market conditions, changes in tax laws (including the Inflation Reduction Act) and other factors. For information regarding the Company's common share repurchases in 2022, see "Liquidity and Capital Resources" herein. S&P has announced that it intends to change its capital adequacy model. While the proposed model has not been finalized, it could increase the level of capital S&P requires for a particular financial strength rating. As part of its capital management strategy, the Company will continue to make its own assessment of the appropriate level of capital to support the Company's business

operations. For a discussion of the risks to the Company's claims-paying and financial strength ratings, see the risk factor entitled "A downgrade in our claims-paying and financial strength ratings could adversely impact our business volumes, adversely impact our ability to access the capital markets and increase our borrowing costs" included in "Part I—Item 1A—Risk Factors."

As a result of the Company's business outside of the United States, primarily in Canada, the United Kingdom (including Lloyd's), the Republic of Ireland and in Brazil through a joint venture, the Company's capital is also subject to the effects of changes in foreign currency exchange rates. Strengthening of the U.S. dollar in comparison to other currencies could result in a reduction in shareholders' equity, while a weakening of the U.S. dollar in comparison to other currencies could result in an increase in shareholders' equity. For additional discussion of the Company's foreign exchange market risk exposure, see "Part II—Item 7A—Quantitative and Qualitative Disclosures About Market Risk."

Many of the statements in this "Outlook" section and in "Liquidity and Capital Resources" are forward-looking statements, which are subject to risks and uncertainties that are often difficult to predict and beyond the Company's control. Actual results could differ materially from those expressed or implied by such forward-looking statements. Further, such forward-looking statements speak only as of the date of this report and the Company undertakes no obligation to update them. See "—Forward Looking Statements." For a discussion of potential risks and uncertainties that could impact the Company's results of operations or financial position, see "Part I—Item 1A—Risk Factors" and "Critical Accounting Estimates."

LIQUIDITY AND CAPITAL RESOURCES

Consistent with 2021, the Company's liquidity and capital resources were not materially impacted by COVID-19 and related economic conditions during 2022.

Liquidity is a measure of a company's ability to generate sufficient cash flows to meet the cash requirements of its business operations and to satisfy general corporate purposes when needed.

Operating Company Liquidity. The liquidity requirements of the Company's insurance subsidiaries are met primarily by funds generated from premiums, fees, income received on investments and investment maturities. Cash provided from these sources is used primarily for claims and claim adjustment expense payments and operating expenses. The insurance subsidiaries' liquidity requirements can be impacted by, among other factors, the timing and amount of catastrophe claims, which are inherently unpredictable, as well as the timing and amount of reinsurance recoveries, which may be affected by reinsurer solvency and reinsurance coverage disputes. Additionally, the variability of asbestos-related claim payments, as well as the volatility of potential judgments and settlements arising out of litigation, may also result in increased liquidity requirements. Increases in interest rates in 2022 resulted in net unrealized investment losses; however, since the Company generally holds its high-quality fixed maturity investments to maturity, the net unrealized loss is considered temporary in nature and is not expected to result in significant realized losses. In addition, given the temporary nature of net unrealized losses combined with the Company's strong operating cash flows, which include income received on investments and the proceeds received upon maturity of the investments, the net unrealized investment loss is not expected to meaningfully impact the Company's assessment of capital adequacy or liquidity. It is the opinion of the Company's management that the insurance subsidiaries' future liquidity needs will be adequately met from all of the sources described above. Subject to restrictions imposed by states in which the Company's insurance subsidiaries are domiciled, the Company's principal insurance subsidiaries pay dividends to their respective parent companies, which, in turn, pay dividends to the corporate holding (parent) company (TRV). For further information regarding restrictions on dividends paid by the Company's insurance subsidiaries, see "Part I—Item 1—Business—Regulation."

Holding Company Liquidity. TRV's liquidity requirements primarily include shareholder dividends, debt servicing, common share repurchases and, from time to time, contributions to its qualified domestic pension plan. At December 31, 2022, TRV held total cash and short-term invested assets in the United States aggregating $1.45 billion and having a weighted average maturity of 39 days. TRV has established a holding company liquidity target equal to its estimated annual pre-tax interest expense and common shareholder dividends (currently approximately $1.20 billion). TRV's holding company liquidity of $1.45 billion at December 31, 2022 exceeded this target, and it is the opinion of the Company's management that these assets are sufficient to meet TRV's current liquidity requirements.

TRV is not dependent on dividends or other forms of repatriation from its foreign operations to support its liquidity needs. The undistributed earnings of the Company's foreign operations are intended to be permanently reinvested in those operations, and such earnings were not material to the Company's financial position or liquidity at December 31, 2022.

TRV has a shelf registration statement filed with the Securities and Exchange Commission that expires on June 8, 2025 which permits it to issue securities from time to time. TRV also has a $1.0 billion line of credit facility with a syndicate of financial institutions that expires on June 15, 2027. At December 31, 2022, the Company had $100 million of commercial paper outstanding. TRV is not reliant on its commercial paper program to meet its operating cash flow needs. The Company has no senior notes or junior subordinated debentures maturing until April 2026, at which time $200 million of senior notes will mature.

The Company utilized uncollateralized letters of credit issued by major banks with an aggregate limit of $260 million to provide a portion of the capital needed to support its obligations at Lloyd's at December 31, 2022. If uncollateralized letters of credit are not available at a reasonable price or at all in the future, the Company can collateralize these letters of credit or may have to seek alternative means of supporting its obligations at Lloyd's, which could include utilizing holding company funds on hand.

Operating Activities

Net cash provided by operating activities were $6.47 billion and $7.27 billion in 2022 and 2021, respectively. The decrease in cash flows in 2022 primarily reflected the impacts of higher levels of payments for claims and claim adjustment expenses and commissions, partially offset by higher levels of cash received for premiums. The increase in cash paid for claims and claim adjustment expenses in 2022 was impacted by business growth and higher loss costs. Cash paid for claims and claim adjustment expenses continue to be impacted by reduced judicial system and claims settlement activity related to COVID-19 and related economic conditions. The increase in cash received for premiums in 2022 compared to the prior year was impacted by business growth including the impact of positive renewal premium changes.

Investing Activities

Net cash used in investing activities was $3.73 billion and $5.20 billion in 2022 and 2021, respectively. The Company's consolidated total investments at December 31, 2022 decreased by $6.92 billion, or 8% from December 31, 2021, primarily reflecting the impacts of (i) net unrealized losses on investments at December 31, 2022 as compared with net unrealized investment gains at December 31, 2021, due to the impact of higher interest rates during 2022 and (ii) net cash used in financing activities, partially offset by (iii) net cash flows provided by operating activities.

The Company's investment portfolio is managed to support its insurance operations; accordingly, the portfolio is positioned to meet obligations to policyholders. As such, the primary goals of the Company's asset-liability management process are to satisfy the insurance liabilities and maintain sufficient liquidity to cover fluctuations in projected liability cash flows. Generally, the expected principal and interest payments produced by the Company's fixed maturity portfolio adequately fund the estimated runoff of the Company's insurance reserves. Although this is not an exact cash flow match in each period, the substantial amount by which the market value of the fixed maturity portfolio exceeds the value of the net insurance liabilities, as well as the positive cash flow from newly sold policies and the large amount of high quality liquid bonds, contributes to the Company's ability to fund claim payments without having to sell illiquid assets or access credit facilities.

Financing Activities

Net cash used in financing activities were $2.67 billion and $2.04 billion in 2022 and 2021, respectively. The totals in both 2022 and 2021 reflected common share repurchases and dividends paid to shareholders, partially offset by the net proceeds from employee stock option exercises. The total in 2021 also included net proceeds from the issuance of debt. Common share repurchases in 2022 and 2021 were $2.06 billion and $2.20 billion, respectively.

Debt Transactions.

2021. On June 8, 2021, the Company issued $750 million aggregate principal amount of 3.05% senior notes that will mature on June 8, 2051. The net proceeds of the issuance, after the deduction of the underwriting discount and expenses payable by the Company, totaled approximately $739 million. Interest on the senior notes is payable semi-annually in arrears on June 8 and December 8. Prior to December 8, 2050, the senior notes may be redeemed, in whole or in part, at the Company's option, at any time or from time to time, at a redemption price equal to the greater of (a) 100% of the principal amount of any senior notes to be redeemed or (b) the sum of the present values of the remaining scheduled payments of principal and interest to but excluding December 8, 2050 on any senior notes to be redeemed (exclusive of interest accrued to the date of redemption) discounted to the date of redemption on a semi-annual basis (assuming a 360-day year consisting of twelve 30-day months) at the then current Treasury rate (as defined in the senior notes), plus 15 basis points. On or after December 8, 2050, the senior notes may be redeemed, in whole or in part, at the Company's option, at any time or from time to time, at a redemption price equal to 100% of the principal amount of any senior notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date.

Dividends. Dividends paid to shareholders were $875 million and $869 million in 2022 and 2021, respectively. The declaration and payment of future dividends to holders of the Company's common stock will be at the discretion of the Company's Board of Directors and will depend upon many factors, including the Company's financial position, earnings, capital requirements of the Company's operating subsidiaries, legal requirements, regulatory constraints and other factors as the Board of Directors deems relevant. Dividends will be paid by the Company only if declared by its Board of Directors out of funds legally available, subject to any other restrictions that may be applicable to the Company. On January 24, 2023, the Company announced that its Board of Directors declared a regular quarterly dividend of $0.93 per share, payable March 31, 2023 to shareholders of record on March 10, 2023.

Share Repurchases. The Company's Board of Directors has approved common share repurchase authorizations under which repurchases may be made from time to time in the open market, pursuant to pre-set trading plans meeting the requirements of Rule 10b5-1 under the Securities Exchange Act of 1934, in private transactions or otherwise. The authorizations do not have a stated expiration date. The most recent authorization was approved by the Board of Directors on April 20, 2021 and added $5.0 billion of repurchase capacity to the $805 million capacity remaining at that date. The Company expects that, generally over time, the combination of dividends to common shareholders and common share repurchases will likely not exceed net income. The Company also expects that to the extent that it continues to grow premium volumes, the amount of capital returned to shareholders relative to earnings would be somewhat less than it otherwise would have been. The timing and actual number of shares to be repurchased in the future will depend on a variety of factors, including the Company's financial position, earnings, share price, catastrophe losses, maintaining capital levels appropriate for the Company's business operations, changes in levels of written premiums, funding of the Company's qualified pension plan, capital requirements of the Company's operating subsidiaries, legal requirements, regulatory constraints, other investment opportunities (including mergers and acquisitions and related financings), market conditions, changes in tax laws (including the Inflation Reduction Act) and other factors. During 2022, the Company repurchased 11.6 million shares under its share repurchase authorization, for a total of $2.00 billion. The average cost per share repurchased was $172.82. Common share repurchases in 2022 were slightly lower than the total of $2.16 billion in 2021. At December 31, 2022, the Company had $2.00 billion of capacity remaining under its share repurchase authorization.

From the inception of the first authorization on May 2, 2006 through December 31, 2022, the Company has repurchased a cumulative total of 538.5 million shares for a total of $39.00 billion, or an average of $72.42 per share.

In 2022 and 2021, the Company acquired 0.4 million and 0.3 million shares of common stock, respectively, from employees as treasury stock primarily to cover payroll withholding taxes in connection with the vesting of restricted stock unit awards and performance share awards, and shares used by employees to cover the price of certain stock options that were exercised.

Capital Resources

Capital resources reflect the overall financial strength of the Company and its ability to borrow funds at competitive rates and raise new capital to meet its needs. The following table summarizes the components of the Company's capital structure at December 31, 2022 and 2021:

(at December 31, in millions)	2022	2021
Debt:		
Short-term	**$ 100**	$ 100
Long-term	**7,254**	7,254
Net unamortized fair value adjustments and debt issuance costs	**(62)**	(64)
Total debt	**7,292**	7,290
Shareholders' equity:		
Common stock and retained earnings, less treasury stock	**28,005**	27,694
Accumulated other comprehensive income	**(6,445)**	1,193
Total shareholders' equity	**21,560**	28,887
Total capitalization	**$ 28,852**	$ 36,177

Total capitalization at December 31, 2022 was $28.85 billion, $7.33 billion lower than at December 31, 2021, primarily reflecting the impacts of (i) other comprehensive loss of $7.64 billion, primarily reflecting the decrease in net unrealized appreciation on investments due to an increase in interest rates during 2022, (ii) common share repurchases totaling $2.00 billion under the Company's share repurchase authorization and (iii) shareholder dividends of $880 million, partially offset by (iv) net income of $2.84 billion and (v) proceeds from the exercise of employee share options of $267 million.

The following table provides a reconciliation of total capitalization presented in the foregoing table to total capitalization excluding net unrealized gains (losses) on investments, net of taxes, included in shareholders' equity:

(at December 31, dollars in millions)	2022	2021
Total capitalization	**$ 28,852**	$ 36,177
Less: net unrealized gains (losses) on investments, net of taxes, included in shareholders' equity	**(4,898)**	2,415
Total capitalization excluding net unrealized gains (losses) on investments, net of taxes, included in shareholders' equity	**$ 33,750**	$ 33,762
Debt-to-total capital ratio	**25.3 %**	20.2 %
Debt-to-total capital ratio excluding net unrealized gains (losses) on investments, net of taxes, included in shareholders' equity	**21.6 %**	21.6 %

The increase in the debt-to-total capital ratio was primarily due to net unrealized investment losses at December 31, 2022 compared to net unrealized investment gains at December 31, 2021 as a result of rising interest rates. The debt-to-total capital ratio excluding net unrealized gains (losses) on investments, net of taxes, included in shareholders' equity, is calculated by dividing (a) debt by (b) total capitalization excluding net unrealized gains and losses on investments, net of taxes, included in shareholders' equity. Net unrealized gains and losses on investments can be significantly impacted by both interest rate movements and other economic factors. Accordingly, in the opinion of the Company's management, the debt-to-total capital ratio calculated on this basis provides another useful metric for investors to understand the Company's financial leverage position. The Company's ratio of debt-to-total capital excluding after-tax net unrealized investment gains (losses) included in shareholders' equity of 21.6% at December 31, 2022 was within the Company's target range of 15% to 25%.

Credit Agreement. The Company is a party to a five-year, $1.0 billion revolving credit agreement with a syndicate of financial institutions that expires on June 15, 2027. Terms of the credit agreement are discussed in more detail in note 9 of the notes to the consolidated financial statements.

Shelf Registration. The Company has filed a universal shelf registration statement with the Securities and Exchange Commission that expires on June 8, 2025 for the potential offering and sale of securities. The Company may offer these securities from time to time at prices and on other terms to be determined at the time of offering.

Share Repurchase Authorization. At December 31, 2022, the Company had $2.00 billion of capacity remaining under its share repurchase authorization approved by the Board of Directors.

Cash Requirements from Contractual and Other Obligations

The following table summarizes, as of December 31, 2022, the Company's future payments under material contractual obligations and estimated claims and claim-related payments. The table includes only liabilities at December 31, 2022 that are expected to be settled in cash.

The table below includes the amount and estimated future timing of claims and claim-related payments. The amounts do not represent the exact liability, but instead represent estimates, generally utilizing actuarial projection techniques, at a given accounting date. These estimates include expectations of what the ultimate settlement and administration of claims will cost based on the Company's assessment of facts and circumstances known, review of historical settlement patterns, estimates of trends in claims severity, frequency, legal theories of liability and other factors. Variables in the reserve estimation process can be affected by both internal and external events, such as changes in claims handling procedures, economic inflation or deflation, legal trends and legislative changes. Many of these items are not directly quantifiable, particularly on a prospective basis. Additionally, there may be significant reporting lags between the occurrence of the policyholder event and the time it is actually reported to the insurer. The future cash flows related to the items contained in the table below required estimation of both amount (including severity considerations) and timing. Amount and timing are frequently estimated separately. An estimation of both amount and timing of future cash flows related to claims and claim-related payments has unavoidable estimation uncertainty.

The material cash requirements from contractual and other obligations at December 31, 2022 were as follows:

Payments Due by Period (in millions)	Total	Less than 1 Year	1-3 Years	3-5 Years	After 5 Years
Debt					
Senior notes	$ 7,000	$ —	$ —	$ 200	$ 6,800
Junior subordinated debentures	254	—	—	125	129
Total debt principal	7,254	—	—	325	6,929
Interest	6,571	348	696	673	4,854
Total long-term debt obligations [1]	13,825	348	696	998	11,783
Real estate and other operating leases [2]	308	93	121	70	24
Information systems-related commitments [3]	563	272	222	69	—
Long-term unfunded investment commitments [4]	1,802	399	544	601	258
Estimated claims and claim-related payments					
Claims and claim adjustment expenses [5]	57,014	12,897	14,599	7,223	22,295
Claims from large deductible policies [6]	—	—	—	—	—
Total estimated claims and claim-related payments	57,014	12,897	14,599	7,223	22,295
Total	$ 73,512	$ 14,009	$ 16,182	$ 8,961	$ 34,360

(1) See note 9 of the notes to the consolidated financial statements for a further discussion of outstanding indebtedness. Because the amounts reported in the foregoing table include principal and interest, the total long-term debt obligations will not agree with the amounts reported in note 9.

(2) Represents agreements entered into in the ordinary course of business to lease office space, equipment and furniture.

(3) Includes agreements with vendors to purchase system software (including software as a service), software maintenance services and technology-related costs.

(4) Represents estimated timing for fulfilling unfunded commitments for private equity limited partnerships, real estate partnerships and other, as well as a put/call option entered into by the Company in connection with a business acquisition.

(5) The amounts in "Claims and claim adjustment expenses" in the table above represent the estimated timing of future payments for both reported and unreported claims incurred and related claim adjustment expenses, gross of reinsurance recoverables, excluding structured settlements expected to be paid by annuity companies.

The Company has entered into reinsurance agreements to manage its exposure to losses and protect its capital as described in note 6 of the notes to the consolidated financial statements.

In order to qualify for reinsurance accounting, a reinsurance agreement must indemnify the insurer from insurance risk, i.e., the agreement must transfer amount and timing risk. Since the timing and amount of cash inflows from such reinsurance agreements are directly related to the underlying payment of claims and claim adjustment expenses by the insurer, reinsurance recoverables are recognized in a manner consistent with the liabilities (the estimated liability for claims and claim adjustment expenses) relating to the underlying reinsured contracts. The presence of any feature that can delay timely reimbursement of claims by a reinsurer results in the reinsurance contract being accounted for as a deposit rather than reinsurance. The assumptions used in estimating the amount and timing of the reinsurance recoverables are consistent with those used in estimating the amount and timing of the related liabilities.

The estimated future cash inflows from the Company's reinsurance contracts that qualify for reinsurance accounting are as follows:

(in millions)	Total	Less than 1 Year	1-3 Years	3-5 Years	After 5 Years
Reinsurance recoverables	**$ 5,088**	**$ 926**	**$ 1,055**	**$ 604**	**$ 2,503**

The Company manages its business and evaluates its liabilities for claims and claim adjustment expenses on a net of reinsurance basis. The estimated cash flows on a net of reinsurance basis are as follows:

(in millions)	Total	Less than 1 Year	1-3 Years	3-5 Years	After 5 Years
Claims and claim adjustment expenses, net	**$ 51,926**	**$ 11,971**	**$ 13,544**	**$ 6,619**	**$ 19,792**

For business underwritten by non-U.S. operations, future cash flows related to reported and unreported claims incurred and related claim adjustment expenses were translated at the spot rate on December 31, 2022.

The amounts reported in the table above and in the table of reinsurance recoverables above are presented on a nominal basis and have not been adjusted to reflect the time value of money. Accordingly, the amounts above will differ from the Company's balance sheet to the extent that the liability for claims and claim adjustment expenses and the related reinsurance recoverables have been discounted in the balance sheet. See note 1 of the notes to the consolidated financial statements.

(6) Workers' compensation large deductible policies provide third-party coverage in which the Company typically is responsible for paying the entire loss under such policies and then seeks reimbursement from the insured for the deductible amount. "Claims from large deductible policies" represent the estimated future payment for claims and claim related expenses below the deductible amount, net of the estimated recovery of the deductible. The liability and the related deductible receivable for unpaid claims are presented in the consolidated balance sheet as "contractholder payables" and "contractholder receivables," respectively. Most deductibles for such policies are paid directly from the policyholder's escrow, which is periodically replenished by the policyholder. The payment of the loss amounts above the deductible are reported within "Claims and claim adjustment expenses" in the above table. Because the timing of the collection of the deductible (contractholder receivables) occurs shortly after the payment of the deductible to a claimant (contractholder payables), these cash flows offset each other in the table.

The estimated timing of the payment of the contractholder payables and the collection of contractholder receivables (net of allowance for expected credit losses) for workers' compensation policies is presented below:

(in millions)	Total	Less than 1 Year	1-3 Years	3-5 Years	After 5 Years
Contractholder payables/receivables	**$ 3,579**	**$ 1,087**	**$ 1,040**	**$ 463**	**$ 989**

The above table does not include an analysis of liabilities reported for structured settlements for which the Company has purchased annuities and remains contingently liable in the event of default by the company issuing the annuity. The Company is not reasonably likely to incur material future payment obligations under such agreements. In addition, the Company is not currently subject to any minimum funding requirements for its qualified pension plan. Accordingly, future contributions are not included in the foregoing table.

The Company believes that the combination of operating company liquidity, holding company liquidity, its investment portfolio and its capital resources are sufficient to meet its contractual obligations.

Dividend Availability

The Company's principal insurance subsidiaries are domiciled in the State of Connecticut. The insurance holding company laws of Connecticut applicable to the Company's subsidiaries requires notice to, and approval by, the state insurance commissioner for the declaration or payment of any dividend that, together with other distributions made within the preceding twelve months, exceeds the greater of 10% of the insurer's statutory capital and surplus as of the preceding December 31, or the insurer's net income for the twelve-month period ending the preceding December 31, in each case determined in accordance with statutory accounting practices and by state regulation. This declaration or payment is further limited by adjusted unassigned surplus, as determined in accordance with statutory accounting practices. The insurance holding company laws of other states in which the Company's subsidiaries are domiciled generally contain similar, although in some instances somewhat more restrictive, limitations on the payment of dividends. A maximum of $2.55 billion is available by the end of 2023 for such dividends to the holding company, TRV, without prior approval of the Connecticut Insurance Department. The Company may choose to accelerate the timing within 2023 and/or increase the amount of dividends from its insurance subsidiaries in 2023, which could result in certain dividends being subject to approval by the Connecticut Insurance Department.

In addition to the regulatory restrictions on the availability of dividends that can be paid by the Company's U.S. insurance subsidiaries, the maximum amount of dividends that may be paid to the Company's shareholders is limited, to a lesser degree, by certain covenants contained in its line of credit agreement with a syndicate of financial institutions that require the Company to maintain a minimum consolidated net worth as described in note 9 of the notes to the consolidated financial statements.

TRV is not dependent on dividends or other forms of repatriation from its foreign operations to support its liquidity needs. The undistributed earnings of the Company's foreign operations are intended to be permanently reinvested in those operations, and such earnings were not material to the Company's financial position or liquidity at December 31, 2022.

TRV and its two non-insurance holding company subsidiaries received dividends of $2.90 billion and $2.18 billion from their U.S. insurance subsidiaries in 2022 and 2021, respectively.

Pension and Other Postretirement Benefit Plans

The Company sponsors a qualified non-contributory defined benefit pension plan (the qualified domestic pension plan), which covers substantially all U.S. domestic employees and provides benefits primarily under a cash balance formula. In addition, the Company sponsors a nonqualified defined benefit pension plan which covers certain highly-compensated employees, pension plans for employees of its foreign subsidiaries, and a postretirement health and life insurance benefit plan for employees satisfying certain age and service requirements and for certain retirees.

The qualified domestic pension plan is subject to regulations under the Employee Retirement Income Security Act of 1974 as amended (ERISA), which requires plans to meet minimum standards of funding and requires such plans to subscribe to plan termination insurance through the Pension Benefit Guaranty Corporation (PBGC). The Company does not have a minimum funding requirement for the qualified domestic pension plan for 2023 and does not anticipate having a minimum funding requirement in 2024. The Company has significant discretion in making contributions above those necessary to satisfy the minimum funding requirements. In 2022, 2021 and 2020, there was no minimum funding requirement for the qualified domestic pension plan. In 2022, 2021 and 2020, the Company made no voluntary contributions to the qualified domestic pension plan. The qualified domestic pension plan had a funded status of 116% at both December 31, 2022 and 2021. Based on its funded status at December 31, 2022, the Company does not currently anticipate making a voluntary contribution to the qualified domestic pension plan in 2023. In determining future contributions, the Company will consider the performance of the plan's investment portfolio, the effects of interest rates on the projected benefit obligation of the plan and the Company's other capital requirements.

The qualified domestic pension plan assets are managed to maximize long-term total return while maintaining an appropriate level of risk. The Company's overall investment strategy is to achieve a mix of approximately 85% to 90% of investments for long-term growth and 10% to 15% for near-term benefit payments with a diversification of asset types, fund strategies and fund managers. The current target allocations for plan assets are 55% to 65% equity securities and 20% to 40% fixed income securities, with the remainder allocated to short-term securities. For 2023, the Company plans to apply an expected long-term rate of return on plan assets of 7.00%, compared with 6.50% in 2022. The expected rate of return reflects the Company's current expectations with regard to long-term returns in the capital markets, taking into account the pension plan's asset allocation targets, the historical performance and current valuation of U.S. and international equities, and the level of long term interest rate and inflation expectations.

For further discussion of the pension and other postretirement benefit plans, see note 15 of the notes to the consolidated financial statements.

Risk-Based Capital

The NAIC has an RBC requirement for most property and casualty insurance companies, which determines minimum capital requirements and is intended to raise the level of protection for policyholder obligations. The Company's U.S. insurance subsidiaries are subject to these NAIC RBC requirements based on laws that have been adopted by individual states. These requirements subject insurers having policyholders' surplus less than that required by the RBC calculation to varying degrees of regulatory action, depending on the level of capital inadequacy. Each of the Company's U.S. insurance subsidiaries had policyholders' surplus at December 31, 2022 significantly above the level at which any RBC regulatory action would occur. Regulators in the jurisdictions in which the Company's foreign insurance subsidiaries are located require insurance companies to maintain certain levels of capital depending on, among other things, the type and amount of insurance policies written. Each of the Company's foreign insurance subsidiaries had capital significantly above their respective regulatory requirements at December 31, 2022.

Off-Balance Sheet Arrangements

The Company has entered into certain contingent obligations for guarantees related to selling businesses to third parties, certain investments, certain insurance policy obligations of former insurance subsidiaries and various other indemnifications. See note 17 of the notes to the consolidated financial statements. The Company does not believe it is reasonably likely that these arrangements will have a material current or future effect on the Company's financial position, changes in financial position, revenues and expenses, results of operations, liquidity, capital expenditures or capital resources.

CRITICAL ACCOUNTING ESTIMATES

The Company considers its most significant accounting estimates to be those applied to claims and claim adjustment expense reserves and related reinsurance recoverables, and impairments of investments, goodwill and other intangible assets.

Claims and Claim Adjustment Expense Reserves

Gross claims and claim adjustment expense reserves by product line were as follows:

	December 31, 2022			December 31, 2021		
(in millions)	**Case**	**IBNR**	**Total**	**Case**	**IBNR**	**Total**
General liability	**$ 5,465**	**$ 9,220**	**$ 14,685**	$ 5,351	$ 8,863	$ 14,214
Commercial property	**1,200**	**439**	**1,639**	1,220	392	1,612
Commercial multi-peril	**2,624**	**2,759**	**5,383**	2,404	2,573	4,977
Commercial automobile	**2,625**	**2,388**	**5,013**	2,594	2,335	4,929
Workers' compensation	**10,034**	**9,458**	**19,492**	10,152	9,551	19,703
Fidelity and surety	**166**	**496**	**662**	188	436	624
Personal automobile	**2,139**	**2,133**	**4,272**	2,062	1,765	3,827
Personal homeowners and other	**1,095**	**1,913**	**3,008**	1,021	1,395	2,416
International and other	**2,420**	**2,069**	**4,489**	2,525	2,070	4,595
Property-casualty	**27,768**	**30,875**	**58,643**	27,517	29,380	56,897
Accident and health	**6**	**—**	**6**	10	—	10
Claims and claim adjustment expense reserves	**$ 27,774**	**$ 30,875**	**$ 58,649**	$ 27,527	$ 29,380	$ 56,907

The $1.74 billion increase in gross claims and claim adjustment expense reserves since December 31, 2021 primarily reflected the impacts of (i) higher volumes of insured exposures, (ii) loss cost trends for the current accident year and (iii) catastrophe losses in 2022, partially offset by (iv) claim payments made during 2022 and (v) net favorable prior year reserve development.

Asbestos and environmental reserves are included in the General liability, Commercial multi-peril and International and other lines in the foregoing summary table. Asbestos and environmental reserves are discussed separately; see "Asbestos Claims and

Litigation," "Environmental Claims and Litigation" and "Uncertainty Regarding Adequacy of Asbestos and Environmental Reserves" herein.

Claims and claim adjustment expense reserves represent management's estimate of the ultimate liability for unpaid losses and loss adjustment expenses for claims that have been reported and claims that have been incurred but not yet reported (IBNR) as of the balance sheet date. Claims and claim adjustment expense reserves do not represent an exact calculation of liability, but instead represent management estimates, primarily utilizing actuarial expertise and projection methods. These estimates are expectations of what the ultimate settlement and administration of claims will cost upon final resolution in the future, based on the Company's assessment of facts and circumstances then known, review of historical settlement patterns, estimates of trends in claims severity and frequency, expected interpretations of legal theories of liability and other factors. In establishing gross claims and claim adjustment expense reserves, the Company also considers salvage and subrogation. Estimated recoveries from reinsurance are included in "Reinsurance Recoverables" as an asset on the Company's consolidated balance sheet. The claims and claim adjustment expense reserves are reviewed regularly by qualified actuaries employed by the Company.

The process of estimating claims and claim adjustment expense reserves involves a high degree of judgment and is subject to a number of variables. These variables can be affected by both internal and external events, such as changes in claims handling procedures, changes in individuals involved in the reserve estimation process, economic inflation, changes in the tort environment, legal trends and legislative changes, among others. The impact of many of these items on ultimate costs for claims and claim adjustment expenses is difficult to estimate. Estimation difficulties also differ significantly by product line due to differences in claim complexity, the volume of claims, the potential severity of individual claims, the determination of occurrence date for a claim and reporting lags (the time between the occurrence of the policyholder event and when it is actually reported to the insurer). Informed judgment is applied throughout the process, including the application of various individual experiences and expertise to multiple sets of data and analyses. The Company refines its estimates in a regular ongoing process as historical loss experience develops and additional claims are reported and settled. The Company rigorously attempts to consider all significant facts and circumstances known at the time claims and claim adjustment expense reserves are established. Due to the inherent uncertainty underlying these estimates including, but not limited to, the future settlement environment, final resolution of the estimated liability for claims and claim adjustment expenses may be higher or lower than the related claims and claim adjustment expense reserves at the reporting date. Therefore, actual paid losses, as claims are settled in the future, may be materially different than the amount currently recorded-favorable or unfavorable. Because establishment of claims and claim adjustment expense reserves is an inherently uncertain process involving estimates and the application of judgment, currently established claims and claim adjustment expense reserves may change. The Company reflects adjustments to the reserves in the results of operations in the period the estimates are changed.

There are also additional risks which impact the estimation of ultimate costs for catastrophes. For example, the estimation of reserves related to hurricanes, tornadoes, wildfires and other catastrophic events can be affected by the inability of the Company and its insureds to access portions of the impacted areas, the complexity of factors contributing to the losses, the legal and regulatory uncertainties, including the interpretation of policy terms and conditions, and the nature of the information available to establish the reserves. Complex factors include, but are not limited to: determining whether damage was caused by flooding versus wind; evaluating general liability and pollution exposures; estimating additional living expenses; estimating the impact of demand surge, infrastructure disruption, fraud, the effect of mold damage and business interruption costs; and reinsurance collectibility. The timing of a catastrophe, such as at or near the end of a reporting period, can also affect the information available to the Company in estimating reserves for that reporting period. The estimates related to catastrophes are adjusted as actual claims emerge.

A portion of the Company's gross claims and claim adjustment expense reserves (totaling $2.07 billion at December 31, 2022) are for asbestos and environmental claims and related litigation. While the ongoing review of asbestos and environmental claims and associated liabilities considers the inconsistencies of court decisions as to coverage, plaintiffs' expanded theories of liability and the risks inherent in complex litigation and other uncertainties, in the opinion of the Company's management, it is possible that the outcome of the continued uncertainties regarding these claims could result in liability in future periods that differs from current insurance reserves by an amount that could be material to the Company's future operating results. See the preceding discussion of "Asbestos Claims and Litigation" and "Environmental Claims and Litigation."

General Discussion

The process for estimating the liabilities for claims and claim adjustment expenses begins with the collection and analysis of claim data. Data on individual reported claims, both current and historical, including paid amounts and individual claim adjuster estimates, are grouped by common characteristics (components) and evaluated by actuaries in their analyses of ultimate claim liabilities. Such data is occasionally supplemented with external data as available and when appropriate. The process of analyzing reserves for a component is undertaken on a regular basis, generally quarterly, in light of continually updated information.

Multiple estimation methods are available for the analysis of ultimate claim liabilities. Each estimation method has its own set of assumption variables and its own advantages and disadvantages, with no single estimation method being better than the others in all situations and no one set of assumption variables being meaningful for all product line components. The relative strengths and weaknesses of the particular estimation methods when applied to a particular group of claims can also change over time. Therefore, the actual choice of estimation method(s) can change with each evaluation. The estimation method(s) chosen are those that are believed to produce the most reliable indication at that particular evaluation date for the claim liabilities being evaluated.

In most cases, multiple estimation methods will be valid for the particular facts and circumstances of the claim liabilities being evaluated. This will result in a range of reasonable estimates for any particular claim liability. The Company uses such range analyses to back test whether previously established estimates for reserves by reporting segments are reasonable, given available information. Reported values found to be closer to the endpoints of a range of reasonable estimates are subject to further detailed reviews. These reviews may substantiate the validity of management's recorded estimate or lead to a change in the reported estimate.

The exact boundary points of these ranges are more qualitative than quantitative in nature, as no clear line of demarcation exists to determine when the set of underlying assumptions for an estimation method switches from being reasonable to unreasonable. As a result, the Company does not believe that the endpoints of these ranges are or would be comparable across companies. In addition, potential interactions among the different estimation assumptions for different product lines make the aggregation of individual ranges a highly judgmental and inexact process.

Property-casualty insurance policies are either written on a "claims-made" or on an "occurrence" basis. Claims-made policies generally cover, subject to requirements in individual policies, claims reported during the policy period. Policies that are written on an occurrence basis require that the insured demonstrate that a loss occurred in the policy period, even if the insured reports the loss many years later.

Most general liability policies are written on an occurrence basis. These policies are subject to substantial loss development over time as facts and circumstances change in the years following the policy issuance. The occurrence form, which accounts for much of the reserve development in asbestos and environmental exposures, is also used to provide coverage for construction general liability, including construction defect. Occurrence-based forms of insurance for general liability exposures require substantial projection of loss trends, which can be influenced by a number of factors, including future inflation, judicial interpretations and societal litigation trends (e.g., size of jury awards and propensity of individuals to pursue litigation), among others.

A basic premise in most actuarial analyses is that past patterns demonstrated in the data will repeat themselves in the future, absent a material change in the associated risk factors discussed below. To the extent a material change affecting the ultimate claim liability is known, such change is estimated to the extent possible through an analysis of internal company data and, if available and when appropriate, external data. Such a measurement is specific to the facts and circumstances of the particular claim portfolio and the known change being evaluated. Significant structural changes to the available data, product mix or organization can materially impact the reserve estimation process. In addition, the introduction of new products creates a unique risk as historical company data would typically not be available.

Informed judgment is applied throughout the reserving process. This includes the application of various individual experiences and expertise to multiple sets of data and analyses. In addition to actuaries, experts involved with the reserving process also include underwriting and claims personnel and lawyers, as well as other company management. Therefore, management may have to consider varying individual viewpoints as part of its estimation of claims and claim adjustment expense reserves. It is also likely that during periods of significant change, such as a merger, consistent application of informed judgment becomes even more complicated and difficult.

The variables discussed above in this general discussion have different impacts on reserve estimation uncertainty for a given product line, depending on the length of the claim tail, the reporting lag, the impact of individual claims and the complexity of the claim process for a given product line.

Product lines are generally classifiable as either long tail or short tail, based on the average length of time between the event triggering claims under a policy and the final resolution of those claims. Short tail claims are reported and settled quickly, resulting in less estimation variability. The longer the time to final claim resolution, the greater the exposure to estimation risks and hence the greater the estimation uncertainty.

A major component of the claim tail is the reporting lag. The reporting lag, which is the time between the event triggering a claim and the reporting of the claim to the insurer, makes estimating IBNR inherently more uncertain. In addition, the greater the reporting lag, the greater the proportion of IBNR to the total claim liability for the product line. Writing new products with material reporting lags can result in adding several years' worth of IBNR claim exposure before the reporting lag exposure becomes clearly observable, thereby increasing the risk associated with estimating the liabilities for claims and claim adjustment expenses for such products. The most extreme example of claim liabilities with long reporting lags are asbestos claims.

For some lines, the impact of large individual claims can be material to the analysis. These lines are generally referred to as being "low frequency/high severity," while lines without this "large claim" sensitivity are referred to as "high frequency/low severity." Estimates of claim liabilities for low frequency/high severity lines can be sensitive to the impact of a small number of potentially large claims. As a result, the role of judgment is much greater for these reserve estimates. In contrast, for high frequency/low severity lines the impact of individual claims is relatively minor and the range of reasonable reserve estimates is likely narrower and more stable.

Claim complexity can also greatly affect the estimation process by impacting the number of assumptions needed to produce the estimate, the potential stability of the underlying data and claim process, and the ability to gain an understanding of the data. Product lines with greater claim complexity, such as for certain surety and construction exposures, have inherently greater estimation uncertainty.

Actuaries have to exercise a considerable degree of judgment in the evaluation of all these factors in their analysis of reserves. The human element in the application of actuarial judgment is unavoidable when faced with material uncertainty. Different actuaries may choose different assumptions when faced with such uncertainty, based on their individual backgrounds, professional experiences and areas of focus. Hence, the estimates selected by the various actuaries may differ materially from each other.

Lastly, significant structural changes to the available data, product mix or organization can also materially impact the reserve estimation process. Events such as mergers increase the inherent uncertainty of reserve estimates for a period of time, until stable trends re-establish themselves within the new organization.

Risk Factors

The major causes of material uncertainty ("risk factors") generally will vary for each product line, as well as for each separately analyzed component of the product line. In a few cases, such risk factors are explicit assumptions of the estimation method, but in most cases, they are implicit. For example, a method may explicitly assume that a certain percentage of claims will close each year, but will implicitly assume that the legal interpretation of existing contract language will remain unchanged. Actual results will likely vary from expectations for each of these assumptions, causing actual paid losses, as claims are settled in the future, to be different in amount than the reserves being estimated currently.

Some risk factors will affect more than one product line. Examples, some of which have been exacerbated by COVID-19, include changes in claim department practices, changes in the tort environment, changes in settlement patterns, regulatory and legislative actions, court actions, timeliness of claim reporting, state mix of claimants, medical utilization and degree of claimant fraud. The extent of the impact of a risk factor will also vary by components within a product line. Individual risk factors are also subject to interactions with other risk factors within product line components.

The effect of a particular risk factor on estimates of claim liabilities cannot be isolated in most cases. For example, estimates of potential claim settlements may be impacted by the risk associated with potential court rulings, but the final settlement agreement typically does not delineate how much of the settled amount is due to this and other factors.

The evaluation of data is also subject to distortion from extreme events or structural shifts, sometimes in unanticipated ways. For example, the timing of claims payments in one geographic region may be impacted if claim adjusters are temporarily reassigned from that region to help settle catastrophe claims in another region.

While some changes in the claim environment are sudden in nature (such as a new court ruling affecting the interpretation of all contracts in that jurisdiction), others are more evolutionary. Evolutionary changes can occur when multiple factors affect final claim values, with the uncertainty surrounding each factor being resolved separately, in stepwise fashion. The final impact is not known until all steps have occurred.

Sudden changes generally cause a one-time shift in claim liability estimates, although there may be some lag in reliable quantification of their impact. Evolutionary changes generally cause a series of shifts in claim liability estimates, as each component of the evolutionary change becomes evident and estimable.

Actuarial Methods for Analyzing and Estimating Claims and Claim Adjustment Expense Reserves

The principal estimation and analysis methods utilized by the Company's actuaries to evaluate management's existing estimates for prior accident periods are the paid loss development method, the case incurred development method, the Bornhuetter-Ferguson (BF) method, and average value analysis combined with the reported claim development method. The BF method is usually utilized for more recent accident periods, with a transition to other methods as the underlying claim data becomes more voluminous and therefore more credible. These estimation and analysis methods are typically referred to as conventional actuarial methods. (See note 8 of the notes to the consolidated financial statements for an explanation of these methods).

While the Company utilizes these conventional actuarial methods to estimate the claims liability for its various businesses, Company actuaries evaluating a particular component for a product line may select from the full range of methods developed within the casualty actuarial profession. The Company's actuaries are also regularly monitoring developments within the profession for advances in existing techniques or the creation of new techniques that might improve current and future estimates.

Some components of a product line may be susceptible to infrequent large claims or not be subject to conventional methods. In such cases, the Company's actuarial analysis will isolate such components for review. The reserves excluding such large claims are generally analyzed using the conventional methods described above. The reserves associated with large claims are then analyzed utilizing various methods, such as:

- Estimating the number of large claims and their average values based on historical trends from prior accident periods, adjusted for the current environment and supplemented with actual data for the accident year analyzed to the extent available.
- Utilizing individual claim adjuster estimates of the large claims, combined with continual monitoring of the aggregate accuracy of such claim adjuster estimates. (This monitoring may lead to supplemental adjustments to the aggregate of such claim estimates).
- Utilizing historic longer-term average ratios of large claims to small claims, and applying such ratios to the estimated ultimate small claims from conventional analysis.
- Ground-up analysis of the underlying exposure (typically used for asbestos and environmental).

The results of such methodologies are subjected to various reasonability and diagnostic tests, including implied incurred-loss-to-earned-premium ratios, non-zero claim severity trends and paid-to-incurred loss ratios. An actual versus expected analysis is also performed comparing actual loss development to expected development embedded within management's estimate. Additional analyses may be performed based on the results of these diagnostics, including the investigation of other actuarial methods.

The methods described above are generally utilized to evaluate management's estimate for prior accident periods. For the initial estimate of the current accident year, however, the available claim data is typically insufficient to produce a reliable indication. As a result, the initial estimate for an accident year is generally based on an exposure-based method using either the loss ratio projection method or the expected loss method. The loss ratio projection method, which is typically used for guaranteed-cost business, develops an initial estimate for an accident year by multiplying earned premiums for the accident year by a projected loss ratio. The projected loss ratio is determined by analyzing prior period experience, and adjusting for loss cost trends, rate level differences, mix of business changes and other known or observed factors influencing the current accident year relative to prior accident years. The exact number of prior accident years utilized varies by product line component, based on the stability and consistency of the individual accident year estimates. The expected loss method, which is typically used for

loss sensitive business, develops an initial estimate of ultimate claims and claim adjustment expenses for an accident year by analyzing exposures by account.

Management's Estimates

At least once per quarter, members of Company management meet with the Company's actuaries to review the latest claims and claim adjustment expense reserve analyses. Based on these analyses, management determines whether its ultimate claim liability estimates should be changed from the prior period. In doing so, it must evaluate whether the new data provided represents credible actionable information or an anomaly that will have no effect on estimated ultimate claim liability. For example, as described above, payments may have decreased in one geographic region due to fewer claim adjusters being available to process claims. The resulting claim payment patterns would be analyzed to determine whether or not the change in payment pattern represents a change in ultimate claim liability.

This type of assessment requires considerable judgment. It is frequently not possible to determine whether a change in the data is an anomaly until sometime after the event. Even if a change is determined to be permanent, it is not always possible to reliably determine the extent of the change until sometime later. The overall detailed analyses supporting such an effort can take several months to perform as the underlying causes of the trends observed need to be evaluated, which may require the gathering or assembling of data not previously available. It may also include interviews with experts involved with the underlying processes. As a result, there can be a time lag between the emergence of a change and a determination that the change should be reflected in the Company's estimated claim liabilities. The final estimate selected by management in a reporting period is based on these various detailed analyses of past data, adjusted to reflect any new actionable information.

The Audit Committee of the Board of Directors reviews the process by which the Company establishes reserves for the purpose of the Company's financial statements.

Discussion of Product Lines

The following section details reserving considerations and common risk factors by product line. There are many additional risk factors that may impact ultimate claim costs. Each risk factor presented will have a different impact on required reserves. Also, risk factors can have offsetting or compounding effects on required reserves. For example, in workers' compensation, the use of expensive medical procedures that result in medical cost inflation may enable workers to return to work faster, thereby lowering indemnity costs. Thus, in almost all cases, it is impossible to discretely measure the effect of a single risk factor and construct a meaningful sensitivity expectation.

In order to provide information on reasonably possible reserving changes by product line, the historical changes in year-end claims and claim adjustment expense reserves over a one-year period are provided for the U.S. product lines. This information is provided for both the Company and the industry for the nine most recent years, and is based on the most recent publicly available data for the reported line(s) that most closely match the individual product line being discussed. These changes were calculated, net of reinsurance, from statutory annual statement data found in Schedule P of those statements, and represent the reported reserve development on the beginning-of-the-year claim liabilities divided by the beginning claim liabilities, all accident years combined, excluding non-defense related claim adjustment expense. Data presented for the Company includes history for the entire Travelers group (U.S. companies only), as required by the statutory reporting instructions promulgated by state regulatory authorities for Schedule P. Comparable data for non-U.S. companies is not available.

General Liability

General liability is generally considered a long tail line, as it takes a relatively long period of time to finalize and settle claims from a given accident year. The speed of claim reporting and claim settlement is a function of the characteristics of claims, including specific coverage provided, the jurisdiction and specific policy provisions such as self-insured retentions, among others. There are numerous components underlying the general liability product line. Some of these have relatively moderate payment patterns (with most of the claims for a given accident year closed within five to seven years), while others can have extreme lags in both reporting and payment of claims (e.g., a reporting lag of a decade or more for "construction defect" claims).

While the majority of general liability coverages are written on an "occurrence" basis, certain general liability coverages (such as those covering management and professional liability, including cyber coverages) are typically insured on a "claims-made" basis.

General liability reserves are generally analyzed as two components: primary and excess/umbrella, with the primary component generally analyzed separately for bodily injury and property damage. Bodily injury liability payments reimburse the claimant for damages pertaining to physical injury as a result of the policyholder's legal obligation arising from non-intentional acts such as negligence, subject to the insurance policy provisions. In some cases the damages can include future wage loss (which is a function of future earnings power and wage inflation) and future medical treatment costs. Property damage liability payments result from damages to the claimant's private property arising from the policyholder's legal obligation for non-intentional acts. In most cases, property damage losses are a function of costs as of the loss date, or soon thereafter.

In addition, sizable or unique exposures are reviewed separately. These exposures include asbestos, environmental, other mass torts, construction defect and large unique accounts that would otherwise distort the analysis. These unique categories often require a very high degree of judgment and require reserve analyses that do not rely on conventional actuarial methods.

Defense costs are also a part of the insured costs covered by liability policies and can be significant, sometimes greater than the cost of the actual paid claims. For some products this risk is mitigated by policy language such that the insured portion of defense costs is included in the policy limit available to pay the claim. Such "defense within the limits" policies are most common for "claims-made" products. When defense costs are outside of the policy limits, the full amount of the policy limit is available to pay claims and the amounts paid for defense costs have no contractual limit.

This line is typically the largest source of reserve estimate uncertainty in the United States (excluding assumed reinsurance contracts covering the same risk). Major contributors to this reserve estimate uncertainty include the reporting lag (i.e., the length of time between the event triggering coverage and the actual reporting of the claim), the number of parties involved in the underlying tort action, whether the "event" triggering coverage is confined to only one time period or is spread over multiple time periods, the potential dollars involved (in the individual claim actions), whether such claims were reasonably foreseeable and intended to be covered at the time the contracts were written (i.e., coverage dispute potential), and the potential for mass claim actions. Claims with longer reporting lags result in greater estimation uncertainty. This is especially true for alleged claims with a latency feature, particularly where courts have ruled that coverage is spread over multiple policy years, hence involving multiple defendants (and their insurers and reinsurers) and multiple policies (thereby increasing the potential dollars involved and the underlying settlement complexity). Claims with long latencies also increase the potential recognition lag (i.e., the lag between writing a type of policy in a certain market and the recognition that such policies have potential mass tort and/or latent claim exposure).

The amount of reserve estimate uncertainty also varies significantly by component for the general liability product line. The components in this product line with the longest latency, longest reporting lags, largest potential dollars involved and greatest claim settlement complexity are asbestos and environmental. Components that include latency, reporting lag and/or complexity issues, but to a materially lesser extent than asbestos and environmental, include construction defect and other mass tort actions. Many components of general liability are not subject to material latency or claim complexity risks and hence have materially less uncertainty than the previously mentioned components. In general, components with shorter reporting lags, fewer parties involved in settlement negotiations, only one policy potentially triggered per claim, fewer potential settlement dollars, reasonably foreseeable (and stable) potential hazards/claims and no mass tort potential result in much less reserve estimate uncertainty than components without those characteristics.

In addition to the conventional actuarial methods mentioned in the general discussion section, the company utilizes various report year development methods for the construction defect components of this product line. The Construction Defect report year development analysis is supplemented with projected claim counts and average values for IBNR claim counts. For components with greater lags in claim reporting, such as excess and umbrella components of this product line, the Company relies more heavily on the BF method than on the paid and case incurred development methods.

Examples of common risk factors, or perceptions thereof, that could change and, thus, affect the required general liability reserves (beyond those included in the general discussion section) include:

<u>General liability risk factors</u>

- Changes in claim handling philosophies
- Changes in policy provisions or court interpretation of such provisions
- New or expanded theories of liability
- Trends in jury awards
- Changes in the propensity to sue, in general with specificity to particular issues
- Changes in the propensity to litigate rather than settle a claim
- Increases in attorney involvement in, or impact on, claims

- Changes in statutes of limitations
- Changes in the underlying court system
- Distortions from losses resulting from large single accounts or single issues
- Changes in tort law
- Shifts in lawsuit mix between federal and state courts
- Changes in claim adjuster processes or reporting which may cause distortions in the data being analyzed
- The impact of inflation on loss costs
- Changes in settlement patterns

General liability book of business risk factors
- Changes in policy provisions (e.g., deductibles, policy limits, endorsements)
- Changes in underwriting standards
- Product mix (e.g., size of account, industries insured, jurisdiction mix)

Unanticipated changes in risk factors can affect reserves. As an indicator of the causal effect that a change in one or more risk factors could have on reserves for general liability (excluding asbestos and environmental), a 1% increase (decrease) in incremental paid loss development for each future calendar year could result in a 1.6% increase (decrease) in claims and claim adjustment expense reserves.

Historically, the one-year change in the reserve estimate for this product line, excluding estimated asbestos and environmental amounts, over the last nine years has varied from -5% to 6% (averaging -1%) for the Company, and from -3% to 3% (averaging 0%) for the industry overall. The Company's year-to-year changes are driven by, and are based on, observed events during the year. The Company believes that its range of historical outcomes is illustrative of reasonably possible one-year changes in reserve estimates for this product line. General liability reserves (excluding asbestos and environmental) represent approximately 22% of the Company's total claims and claim adjustment expense reserves.

The Company's change in reserve estimate for this product line related to the last nine accident years, which excludes the impacts of increases in asbestos and environmental reserves, the extension of the statute of limitations for childhood sexual molestation claims and increases in reserves in the Company's runoff operations, was 2% for 2022, 1% for 2021 and 3% for 2020. The 2022 change primarily reflected higher than expected loss experience in Business Insurance for accident years 2017 through 2019. The 2021 change primarily reflected higher than expected loss experience in Bond & Specialty Insurance for accident years 2012 and 2017 through 2019 and in Business Insurance for accident years 2018 through 2020. The 2020 change primarily reflected higher than expected loss experience in Business Insurance for both primary and excess coverages for accident years 2015 through 2019 and in Bond & Specialty Insurance for accident years 2015, 2018 and 2019.

Commercial Property

Commercial property is generally considered a short tail line with a simpler and faster claim reporting and adjustment process than liability coverages, and less uncertainty in the reserve setting process (except for more complex business interruption claims). It is generally viewed as a moderate frequency, low to moderate severity line, except for catastrophes and coverage related to large properties. The claim reporting and settlement process for property coverage claim reserves is generally restricted to the insured and the insurer. Overall, the claim liabilities for this line create a low estimation risk, except possibly for catastrophes and business interruption claims.

Commercial property reserves are typically analyzed in two components, one for catastrophic or other large single events, and another for all other events. Examples of common risk factors, or perceptions thereof, that could change and, thus, affect the required property reserves (beyond those included in the general discussion section) include:

Commercial property risk factors
- Physical concentration of policyholders
- Availability and cost of local contractors
- Inflation and materials shortages
- For the more severe catastrophic events, "demand surge" inflation, which refers to significant short-term increases in building material and labor costs due to a sharp increase in demand for those materials and services
- Local building codes
- Amount of time to return property to full usage (for business interruption claims)
- Frequency of claim re-openings on claims previously closed
- Court interpretation of policy provisions (such as occurrence definition, wind versus flooding or communicable disease exclusions)

- Lags in reporting claims (e.g., winter damage to summer homes, hidden damage after an earthquake, hail damage to roofs and/or equipment on roofs)
- Court or legislative changes to the statute of limitations
- Weather/climate variability

Commercial property book of business risk factors

- Policy provisions mix (e.g., deductibles, policy limits, endorsements)
- Changes in underwriting standards

Unanticipated changes in risk factors can affect reserves. As an indicator of the causal effect that a change in one or more risk factors could have on reserves for property, a 1% increase (decrease) in incremental paid loss development for each future calendar year could result in a 1.1% increase (decrease) in claims and claim adjustment expense reserves.

Historically, the one-year change in the reserve estimate for this product line over the last nine years has varied from -21% to -6% (averaging -11%) for the Company, and from -10% to -2% (averaging -6%) for the industry overall. The Company's year-to-year changes are driven by, and are based on, observed events during the year. The Company believes that its range of historical outcomes is illustrative of reasonably possible one-year changes in reserve estimates for this product line. Commercial property reserves represent approximately 3% of the Company's total claims and claim adjustment expense reserves.

Since commercial property is considered a short tail coverage, the one year change for commercial property can be more volatile than that for the longer tail product lines. This is due to the fact that the majority of the reserve for commercial property relates to the most recent accident year, which is subject to the most uncertainty for all product lines. This recent accident year uncertainty is relevant to commercial property because weather-related events that occur in the second half of the year may not be completely resolved until the following year. Reserve estimates associated with catastrophes may take even longer to resolve. The reserve estimates for this product line are also potentially subject to material changes due to uncertainty in measuring ultimate losses for significant catastrophes such as hurricanes, tornadoes, hail storms and wildfires.

The Company's change in reserve estimate for this product line was -8% for 2022, -10% for 2021 and -11% for 2020. The 2022 change primarily reflected better than expected loss experience related to both catastrophe and non-catastrophe losses for accident years 2020 and 2021. The 2021 change primarily reflected better than expected loss experience related to both catastrophe and non-catastrophe losses for accident year 2020. The 2020 change primarily reflected better than expected loss experience related to both catastrophe and non-catastrophe losses for accident year 2019 and the PG&E subrogation recovery for accident years 2017 and 2018.

Commercial Multi-Peril

Commercial multi-peril provides a combination of property and liability coverage typically for small businesses and, therefore, includes both short and long tail coverages. For property coverage, it generally takes a relatively short period of time to close claims, while for the other coverages, generally for the liability coverages, it takes a longer period of time to close claims.

The reserving risk for this line is dominated by the liability coverage portion of this product, except occasionally in the event of catastrophic or other large single loss events. The reserving risk for this line differs from that of the general liability product line and the property product line due to the nature of the customer. Commercial multi-peril is generally sold to small- to mid-sized accounts, while the customer profile for general liability and commercial property includes larger customers.

See "Commercial property risk factors" and "General liability risk factors," discussed above, with regard to reserving risk for commercial multi-peril.

Unanticipated changes in risk factors can affect reserves. As an indicator of the causal effect that a change in one or more risk factors could have on reserves for commercial multi-peril (excluding asbestos and environmental), a 1% increase (decrease) in incremental paid loss development for each future calendar year could result in a 1.3% increase (decrease) in claims and claim adjustment expense reserves.

Historically, the one-year change in the reserve estimate for this product line, excluding estimated asbestos and environmental amounts, over the last nine years has varied from -5% to 4% (averaging 0%) for the Company, and from -3% to 1% (averaging -1%) for the industry overall. The Company's year-to-year changes are driven by, and are based on, observed events during the year. The Company believes that its range of historical outcomes is illustrative of reasonably possible one-year changes in

reserve estimates for this product line. Commercial multi-peril reserves (excluding asbestos and environmental reserves) represent approximately 9% of the Company's total claims and claim adjustment expense reserves.

As discussed above, this line combines general liability and commercial property coverages and it has been impacted in the past by many of the same events as those two lines.

The Company's change in reserve estimate for this product line related to the last nine accident years, which excludes the impacts of increases in asbestos and environmental reserves and increases in reserves in the Company's runoff operations, was -2% for 2022, 0% for 2021 and 0% for 2020. The 2022 change primarily reflected better than expected loss experience for property coverages for accident year 2021. In 2021, higher than expected loss experience for liability coverages for accident years 2017 and 2018 was largely offset by better than expected loss experience for liability coverages for accident years 2012 through 2016. In 2020, higher than expected loss experience for liability coverages for accident year 2019 was largely offset by the PG&E subrogation recovery for accident years 2017 and 2018.

Commercial Automobile

The commercial automobile product line is a mix of property and liability coverages and, therefore, includes both short and long tail coverages. The payments that are made quickly typically pertain to auto physical damage (property) claims and property damage (liability) claims. The payments that take longer to finalize and are more difficult to estimate relate to bodily injury claims. In general, claim reporting lags are generally short, claim complexity is not a major issue, and the line is viewed as high frequency, low to moderate severity. Overall, the claim liabilities for this line create a moderate estimation risk. Recently, the Company has seen more of an increase in the rate of attorney involvement than it had anticipated and a lengthening of the claim development pattern. As a consequence, the Company has experienced a higher level of bodily injury severity than it had anticipated.

Commercial automobile reserves are typically analyzed in four components: bodily injury liability; property damage liability; collision claims; and comprehensive claims. These last two components have minimum reserve risk and fast payouts and, accordingly, separate risk factors are not presented.

The Company utilizes the conventional actuarial methods mentioned in the general discussion above in estimating claim liabilities for this line. This is supplemented with detailed custom analyses where needed.

Examples of common risk factors, or perceptions thereof, that could change and, thus, affect the required commercial automobile reserves (beyond those included in the general discussion section) include:

Bodily injury and property damage liability risk factors

- Trends in jury awards
- Changes in the underlying court system
- Changes in case law
- Litigation trends
- Increases in attorney involvement in, or impact on, claims
- Frequency of claims with payment capped by policy limits
- Change in average severity of accidents, or proportion of severe accidents, including the impact of inflation
- Changes in auto safety technology
- Subrogation opportunities
- Changes in claim handling philosophies
- Frequency of visits to health providers
- Number of medical procedures given during visits to health providers
- Types of health providers used
- Types of medical treatments received
- Changes in cost of medical treatments
- Degree of patient responsiveness to treatment

Commercial automobile book of business risk factors

- Changes in policy provisions (e.g., deductibles, policy limits, endorsements, etc.)
- Changes in mix of insured vehicles (e.g., long haul trucks versus local and smaller vehicles, fleet risks versus non-fleets)
- Changes in underwriting standards

Unanticipated changes in risk factors can affect reserves. As an indicator of the causal effect that a change in one or more risk factors could have on reserves for commercial automobile, a 1% increase (decrease) in incremental paid loss development for each future calendar year could result in a 1.3% increase (decrease) in claims and claim adjustment expense reserves.

Historically, the one-year change in the reserve estimate for this product line over the last nine years has varied from -2% to 11% (averaging 2%) for the Company, and from 2% to 7% (averaging 5%) for the industry overall. The Company's year-to-year changes are driven by, and are based on, observed events during the year. The Company believes that its range of historical outcomes is illustrative of reasonably possible one-year changes in reserve estimates for this product line. Commercial automobile reserves represent approximately 9% of the Company's total claims and claim adjustment expense reserves.

The Company's change in reserve estimate for this product line was 0% for 2022, -2% for 2021 and 4% for 2020. In 2022, higher than expected loss experience for liability coverages for accident years 2017 through 2019 and 2021 was largely offset by better than expected loss experience for physical damage coverages for accident year 2021 and for liability coverages for accident year 2020. The 2021 change primarily reflected better than expected loss experience for liability and physical damage coverages for accident year 2020. The 2020 change primarily reflected higher than expected loss experience for liability coverages for accident year 2019.

Workers' Compensation

Workers' compensation is generally considered a long tail coverage, as it takes a relatively long period of time to finalize claims from a given accident year. While certain payments such as initial medical treatment or temporary wage replacement for the injured worker are made quickly, some other payments are made over the course of several years, such as awards for permanent partial injuries. In addition, some payments can run as long as the injured worker's life, such as permanent disability benefits and on-going medical care. Despite the possibility of long payment tails, the reporting lags are generally short, payment obligations are generally not complex, and most of the liability can be considered high frequency with moderate severity. The largest reserve risk generally comes from the low frequency, high severity claims providing lifetime coverage for medical expense arising from a worker's injury, as such claims are subject to greater inflation risk. Overall, the claim liabilities for this line create a somewhat greater than moderate estimation risk.

Workers' compensation reserves are typically analyzed in three components: indemnity losses, medical losses and claim adjustment expenses.

Examples of common risk factors, or perceptions thereof, that could change and, thus, affect the required workers' compensation reserves (beyond those included in the general discussion section) include:

Indemnity risk factors

- Time required to recover from the injury
- Degree of available transitional jobs
- Degree of legal involvement
- Changes in the interpretations and processes of the administrative bodies that oversee workers' compensation claims
- Future wage inflation for states that index benefits
- Changes in the administrative policies of second injury funds

Medical risk factors

- Changes in the cost of medical treatments (including prescription drugs) and underlying fee schedules ("inflation")
- Availability of medical providers and medical wage impacts
- Frequency of visits to health providers
- Number of medical procedures given during visits to health providers
- Types of health providers used
- Type of medical treatments received
- Use of preferred provider networks and other medical cost containment practices
- Availability of new medical processes and equipment
- Changes in the use of pharmaceutical drugs, including drugs for pain management
- Degree of patient responsiveness to treatment

General workers' compensation risk factors

- Frequency of reopening claims previously closed
- Mortality trends of injured workers with lifetime benefits and medical treatment

- Changes in statutory benefits, including due to presumption laws
- The impact, if any, of potential future changes to government health insurance legislation

Workers' compensation book of business risk factors

- Product mix
- Injury type mix
- Changes in underwriting standards

Unanticipated changes in risk factors can affect reserves. As an indicator of the causal effect that a change in one or more risk factors could have on reserves for workers' compensation, a 1% increase (decrease) in incremental paid loss development for each future calendar year could result in a 1.2% increase (decrease) in claims and claim adjustment expense reserves.

Historically, the one-year change in the reserve estimate for this product line over the last nine years has varied from -4% to 0% (averaging -3%) for the Company, and from -5% to -1% (averaging -3%) for the industry overall. The Company's year-to-year changes are driven by, and are based on, observed events during the year. The Company believes that its range of historical outcomes is illustrative of reasonably possible one-year changes in reserve estimates for this product line. Workers' compensation reserves represent approximately 33% of the Company's total claims and claim adjustment expense reserves.

The Company's change in reserve estimate for this product line was -4% for 2022, -3% for 2021 and -3% for 2020. The 2022 change primarily reflected better than expected loss experience for accident years 2021 and prior. The 2021 change primarily reflected better than expected loss experience for accident years 2020 and prior. The 2020 change primarily reflected better than expected loss experience for accident years 2018 and prior.

Fidelity and Surety

Fidelity is generally considered a short tail coverage. It takes a relatively short period of time to finalize and settle most fidelity claims. The volatility of fidelity reserves is generally related to the type of business of the insured, the size and complexity of the insured's business operations, amount of policy limit and attachment point of coverage. The uncertainty surrounding reserves for small, commercial insureds is typically less than the uncertainty for large commercial or financial institutions. The high frequency, low severity nature of small commercial fidelity losses provides for stability in loss estimates, whereas the low frequency, high severity nature of losses for large insureds results in a wider range of ultimate loss outcomes. Actuarial techniques that rely on a stable pattern of loss development are generally not applicable to low frequency, high severity claims.

Surety has certain components that are generally considered short tail coverages with short reporting lags, although large individual construction and commercial surety contracts can result in a long settlement tail, based on the length and complexity of the construction project(s) or commercial transaction being bonded. The frequency of losses in surety generally has a lagging correlation with economic cycles as the primary cause of surety loss is the inability of an insured to fulfill its contractual obligations. The Company actively seeks to mitigate this exposure to loss through disciplined risk selection, adherence to underwriting standards and ongoing monitoring of contractor progress in significant construction projects. The volatility of surety losses is generally related to the type of business performed by the bonded party, the type of bonded obligation, the amount of limit exposed to loss and the amount of assets available to the surety company to mitigate losses, such as unbilled contract funds, collateral, first and third party indemnity, and other security positions of a bonded party's assets. Certain classes of surety claims are very high severity, low frequency in nature. These can include large construction contractors involved with one or multiple large, complex projects as well as certain large commercial surety exposures. Other claim factors affecting reserve variability of surety include litigation related to amounts owed by the bonded party and due to the surety company (e.g., salvage and subrogation efforts), the results of financial restructuring of a bonded party and the availability and cost of replacement contractors, labor and materials.

Examples of common risk factors, or perceptions thereof, that could change and, thus, affect the required fidelity and surety reserves (beyond those included in the general discussion section) include:

Fidelity risk factors

- Type of business of insured
- Policy limit and attachment points
- Third-party claims
- Coverage litigation
- Complexity of claims
- Growth in insureds' operations

Surety risk factors

- Economic trends, including the general level of construction activity
- Concentration of reserves in a relatively few large claims
- Type of business bonded
- Type of obligation bonded
- Cumulative limits of liability for the bonded party
- Assets available to mitigate loss
- Defective workmanship/latent defects
- Financial strategy of the bonded party
- Changes in statutory obligations
- Geographic spread of business

Fidelity and Surety book of business risk factors

- Changes in policy provisions (e.g., deductibles, limits, endorsements)
- Changes in underwriting standards

Unanticipated changes in risk factors can affect reserves. As an indicator of the causal effect that a change in one or more risk factors could have on reserves for fidelity and surety, a 1% increase (decrease) in incremental paid loss development for each future calendar year could result in a 1.5% increase (decrease) in claims and claim adjustment expense reserves.

Historically, the one-year change in the reserve estimate for this product line over the last nine years has varied from -36% to -10% (averaging -22%) for the Company, and from -18% to 0% (averaging -12%) for the industry overall. The Company's year-to-year changes are driven by, and are based on, observed events during the year. The Company believes that its range of historical outcomes is illustrative of reasonably possible one-year changes in reserve estimates for this product line. Fidelity and surety reserves represent approximately 1% of the Company's total claims and claim adjustment expense reserves.

In general, developments on single large claims (both adverse and favorable) are a primary source of changes in reserve estimates for this product line.

The Company's change in reserve estimate for this product line was -30% for 2022, -27% for 2021 and -12% for 2020. The 2022 change primarily reflected better than expected loss experience in the fidelity and surety product line for accident years 2015 through 2019 and 2021. The 2021 change primarily reflected better than expected loss experience in the fidelity and surety product line for accident years 2015 through 2017 and 2020. The 2020 change primarily reflected better than expected loss experience in the fidelity and surety product line for accident years 2015, 2018 and 2019.

Personal Automobile

Personal automobile includes both short and long tail coverages. The payments that are made quickly typically pertain to auto physical damage (property) claims and property damage (liability) claims. The payments that take longer to finalize and are more difficult to estimate relate to bodily injury claims. Reporting lags are relatively short and the claim settlement process for personal automobile liability generally is the least complex of the liability products. It is generally viewed as a high frequency, low to moderate severity product line. Overall, the claim liabilities for this line create a moderate estimation risk.

Personal automobile reserves are typically analyzed in five components: bodily injury liability, property damage liability, no-fault losses, collision claims and comprehensive claims. These last two components have minimum reserve risk and fast payouts and, accordingly, separate factors are not presented.

Examples of common risk factors, or perceptions thereof, that could change and, thus, affect the required personal automobile reserves (beyond those included in the general reserve discussion section) include:

Bodily injury, property damage liability and no-fault risk factors

- Trends in jury awards
- Changes in the underlying court system and its philosophy
- Changes in case law
- Litigation trends
- Increases in attorney involvement in, or impact on, claims
- Frequency of claims with payment capped by policy limits
- Change in frequency trends, including the impact of changes in driving behavior

- Change in average severity of accidents, or proportion of severe accidents, including the impact of inflation, changes in driving behavior and the involvement of pedestrians
- Changes in auto technology, including safety features
- Subrogation opportunities
- Frequency of visits to health providers
- Number of medical procedures given during visits to health providers
- Types of health providers used
- Types of medical treatments received
- Changes in cost of medical treatments
- Effectiveness of no-fault laws
- Degree of patient responsiveness to treatment
- Changes in claim handling philosophies

Personal automobile book of business risk factors

- Changes in policy provisions (e.g., deductibles, policy limits, endorsements, etc.)
- Changes in underwriting standards
- Changes in the use of permissible data for rating and underwriting

Unanticipated changes in risk factors can affect reserves. As an indicator of the causal effect that a change in one or more risk factors could have on reserves for personal automobile, a 1% increase (decrease) in incremental paid loss development for each future calendar year could result in a 1.1% increase (decrease) in claims and claim adjustment expense reserves.

Historically, the one-year change in the reserve estimate for this product line over the last nine years has varied from -4% to 3% (averaging -1%) for the Company, and from -2% to 2% (averaging 0%) for the industry overall. The Company's year-to-year changes are driven by, and are based on, observed events during the year. The Company believes that its range of historical outcomes is illustrative of reasonably possible one-year changes in reserve estimates for this product line. Personal automobile reserves represent approximately 7% of the Company's total claims and claim adjustment expense reserves.

The Company's change in reserve estimate for this product line was 0% for 2022, -4% for 2021 and -2% for 2020. In 2022, higher than expected loss experience for liability coverages for accident year 2021 was largely offset by better than expected loss experience for physical damage coverages for accident year 2021 and for liability coverages for accident years 2018 through 2020. The 2021 change primarily reflected better than expected loss experience for liability and physical damage coverages for accident years 2017 through 2020. The 2020 change primarily reflected better than expected loss experience for liability and physical damage coverages for accident years 2016 through 2018.

Personal Homeowners and Other

Homeowners is generally considered a short tail coverage. Most payments are related to the property portion of the policy, where the claim reporting and settlement process is generally restricted to the insured and the insurer. Claims on property coverage are typically reported soon after the actual damage occurs, although delays of several months are not unusual. The resulting settlement process is typically fairly short term, although exceptions do exist.

The liability portion of the homeowners policy generates claims which take longer to pay due to the involvement of litigation and negotiation, but with generally small reporting lags. Personal Insurance Other products include personal umbrella policies, among others. See "general liability reserving risk factors," discussed above, for reserving risk factors related to umbrella coverages.

Overall, the line is generally high frequency, low to moderate severity (except for catastrophes), with simple to moderate claim complexity.

Homeowners reserves are typically analyzed in two components: non-catastrophe related losses and catastrophe losses.

Examples of common risk factors, or perceptions thereof, that could change and, thus, affect the required homeowners reserves (beyond those included in the general discussion section) include:

Homeowners and Other risk factors

- Weather/climate variability
- Inflation and materials costs and shortages

- For the more severe catastrophic events, "demand surge" inflation, which refers to significant short-term increases in building material and labor costs due to a sharp increase in demand for those materials and services
- Amount of time to return property to residential use
- Lags in reporting claims (e.g., winter damage to summer homes, hidden damage after an earthquake, hail damage to roofs and/or equipment on roofs)
- Availability and cost of local contractors
- Quality of construction of insured homes
- Local building codes
- Litigation trends
- Trends in jury awards
- Court interpretation of policy provisions (such as occurrence definition, or wind versus flooding)
- Court or legislative changes to the statute of limitations
- Salvage and subrogation opportunities

Homeowners and Other book of business risk factors

- Policy provisions mix (e.g., deductibles, policy limits, endorsements, etc.)
- Degree of concentration of policyholders
- Changes in underwriting standards
- Changes in the use of permissible data for rating and underwriting

Unanticipated changes in risk factors can affect reserves. As an indicator of the causal effect that a change in one or more risk factors could have on reserves for personal homeowners and other, a 1% increase (decrease) in incremental paid loss development for each future calendar year could result in a 1.1% increase (decrease) in claims and claim adjustment expense reserves.

Historically, the one-year change in the reserve estimate for this product line (excluding Personal Insurance Other, which for statutory reporting purposes is included with other lines of business) over the last nine years has varied from -28% to 3% (averaging -8%) for the Company, and from -7% to 1% (averaging -2%) for the industry overall. The Company's year-to-year changes are driven by, and are based on, observed events during the year. The Company believes that its range of historical outcomes is illustrative of reasonably possible one-year changes in reserve estimates for this product line. Personal homeowners and other reserves represent approximately 5% of the Company's total claims and claim adjustment expense reserves.

This line combines both liability and property coverages; however, the majority of the reserves relate to property. While property is considered a short tail coverage, the one year change for property can be more volatile than that for the longer tail product lines. This is due to the fact that the majority of the reserve for property relates to the most recent accident year, which is subject to the most uncertainty for all product lines. This recent accident year uncertainty is relevant to property because weather-related events in the second half of the year may not be completely resolved until the following year. Reserve estimates associated with catastrophes, including wildfires in recent years, may take even longer to resolve.

The Company's change in reserve estimate for this product line (excluding Personal Insurance Other) was -2% for 2022, -9% for 2021 and -28% for 2020. The 2022 change primarily reflected better than expected loss experience for catastrophe and non-catastrophe losses for accident years 2018 through 2020. The 2021 change primarily reflected better than expected loss experience for catastrophe and non-catastrophe losses for accident years 2016 through 2018 and 2020. The 2020 change primarily reflected the PG&E subrogation recovery for accident years 2017 and 2018, partially offset by higher than expected loss experience for catastrophe and non-catastrophe losses for accident year 2019.

International and Other

International and other includes products written by the Company's international operations, as well as all other products not explicitly discussed above. The principal component of "other" claim reserves is assumed reinsurance written on an excess-of-loss basis, which may include reinsurance of non-U.S. exposures, and is runoff business.

International and other claim liabilities result from a mix of coverages, currencies and jurisdictions/countries. The common characteristic is the need to customize the analysis to the individual component, and the inability to rely on data characterizations and reporting requirements in the U.S. statutory reporting framework.

Due to changes in the business mix for this product line over time, incurred claim liabilities for more recent years are generally shorter-tailed (due to both the products and the jurisdictions involved, e.g., Canada, the Republic of Ireland and the United

Kingdom), compared to the older liabilities from runoff operations that are extremely long tail (e.g., U.S. excess liabilities reinsured through the London market, and several underwriting pools in runoff). The speed of claim reporting and claim settlement is a function of the specific coverage provided, the jurisdiction, the distribution system (e.g., underwriting pool versus direct) and the proximity of the insurance sale to the insured hazard (e.g., insured and insurer located in different countries). In particular, liabilities arising from the underwriting pools in runoff may result in significant reporting lags, settlement lags and claim complexity, due to the need to coordinate with other pool members or co-insurers through a broker or lead-insurer for claim settlement purposes.

International reserves are generally analyzed by country and general coverage category (e.g., General Liability in Canada, Commercial Property in the United Kingdom, etc.). The business is also generally split by direct versus assumed reinsurance for a given coverage. Where the underlying insured hazard is outside the United States, the underlying coverages are generally similar to those described under the Homeowners, Personal Automobile, Commercial Automobile, General Liability, Commercial Property and Surety discussions above, taking into account differences in the legal environment and differences in terms and conditions. However, statutory coverage differences exist amongst various jurisdictions. For example, in some jurisdictions there are no aggregate policy limits on certain liability coverages.

Other reserves, primarily assumed reinsurance in runoff, are generally analyzed by program/pool, treaty type, and general coverage category (e.g., General Liability — excess of loss reinsurance). Excess exposure requires the insured to "prove" not only claims under the policy, but also the prior payment of claims reaching up to the excess policy's attachment point.

Examples of common risk factors, or perceptions thereof, that could change and, thus, affect the required International and other reserves (beyond those included in the general discussion section, and in the Personal Automobile, Homeowners, General Liability, Commercial Property, Commercial Automobile and Surety discussions above) include:

International and other risk factors

- Changes in claim handling procedures, including those of the primary carriers
- Changes in policy provisions or court interpretation of such provision
- Economic trends
- New theories of liability
- Trends in jury awards
- Changes in the propensity to sue
- Changes in statutes of limitations
- Changes in the underlying court system
- Distortions from losses resulting from large single accounts or single issues
- Changes in tort law
- Changes in claim adjuster office structure (causing distortions in the data)
- Changes in foreign currency exchange rates

International and other book of business risk factors

- Changes in policy provisions (e.g., deductibles, policy limits, endorsements, "claims-made" language)
- Changes in underwriting standards
- Product mix (e.g., size of account, industries insured, jurisdiction mix)

Unanticipated changes in risk factors can affect reserves. As an indicator of the causal effect that a change in one or more risk factors could have on reserves for International and other (excluding asbestos and environmental), a 1% increase (decrease) in incremental paid loss development for each future calendar year could result in a 1.3% increase (decrease) in claims and claim adjustment expense reserves. International and other reserves (excluding asbestos and environmental) represent approximately 7% of the Company's total claims and claim adjustment expense reserves.

International and other represents a combination of different product lines, some of which are in runoff. Comparative historical information is not available for international product lines as insurers domiciled outside of the United States do not file U.S. statutory reports. Comparative historical information on runoff business is not indicative of reasonably possible one-year changes in the reserve estimate for this mix of runoff business. Accordingly, the Company has not included comparative analyses for International and other.

Reinsurance Recoverables

Amounts recoverable from reinsurers are estimated in a manner consistent with the associated claim liability. 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. In addition, in the ordinary course of business, the Company becomes involved in coverage disputes with its reinsurers. Some of these disputes could result in lawsuits and arbitrations brought by or against the reinsurers to determine the Company's rights and obligations under the various reinsurance agreements. The Company employs dedicated specialists and comprehensive strategies to manage reinsurance collections and disputes.

The Company has entered into a reinsurance contract in connection with catastrophe bonds issued by Long Point Re IV. This contract meets the requirements to be accounted for as reinsurance in accordance with guidance for accounting for reinsurance contracts. The catastrophe bonds are described in more detail in "Item 1-Business-Catastrophe Reinsurance."

Recoverables attributable to structured settlements relate primarily to personal injury claims, of which workers' compensation claims comprise a significant portion, for which the Company has purchased annuities and remains contingently liable in the event of a default by the companies issuing the annuities. Recoverables attributable to mandatory pools and associations relate primarily to workers' compensation service business. These recoverables are supported by the participating insurance companies' obligation to pay a pro rata share based on each company's voluntary market share of written premium in each state in which it is a pool participant. In the event a member of a mandatory pool or association defaults on its share of the pool's or association's obligations, the other members' share of such obligation increases proportionally.

The Company reports its reinsurance recoverables net of an allowance for estimated uncollectible reinsurance. The allowance is based upon the Company's ongoing review of amounts outstanding, length of collection periods, changes in reinsurer credit standing, disputes, applicable coverage defenses and other relevant factors. For structured settlements, the allowance is also based upon the Company's ongoing review of life insurers' creditworthiness and estimated amounts of coverage that would be available from state guaranty funds if a life insurer defaults. A probability-of-default methodology which reflects current and forecasted economic conditions is used to estimate the amount of uncollectible reinsurance due to credit-related factors and the estimate is reported in an allowance for estimated uncollectible reinsurance. The allowance also includes estimated uncollectible amounts related to dispute risk with reinsurers. Amounts deemed to be uncollectible, including amounts due from known insolvent reinsurers, are written off against the allowance. Changes in the allowance, as well as any subsequent collections of amounts previously written off, are reported as part of claims and claim adjustment expenses. 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.

Impairments

Investment Impairments

See note 1 of the notes to the consolidated financial statements for a discussion of investment impairments.

Due to the subjective nature of the Company's analysis and estimates of future cash flows, along with the judgment that must be applied in the analysis, it is possible that the Company could reach a different conclusion whether or not to impair a security if it had access to additional information about the issuer. Additionally, it is possible that the issuer's actual ability to meet contractual obligations may be different than what the Company determined during its analysis, which may lead to a different impairment conclusion in future periods.

Goodwill and Other Intangible Assets Impairments

The Company performs a review, on at least an annual basis, of goodwill held by the reporting units which are the Company's three operating and reportable segments: Business Insurance; Bond & Specialty Insurance; and Personal Insurance. The Company uses a discounted cash flow model to estimate the fair value of its reporting units that incorporates multiple inputs into discounted cash flow calculations, including assumptions that market participants may make in valuing the reporting unit. The discounted cash flow model is an income approach to valuation that is based on a detailed cash flow analysis for deriving a current fair value of reporting units and is representative of the Company's reporting units' current and expected future financial performance. The assumptions used include earnings projections, including projected growth, projected levels of economic capital needed to support the business, and the weighted average cost of capital used for purposes of discounting the projected cash flows. Changes in the estimates of projected earnings, business growth, economic capital, and the weighted average cost of capital will directly impact the estimated fair value of the reporting units and, depending on the directional

change of inputs, may increase the risk of impairment of goodwill. Once the Company estimates the fair value of its reporting units, those estimates are compared to their carrying values. If the carrying values of the reporting units were to exceed their fair value, the amount of the impairment would be calculated, and goodwill adjusted accordingly.

Other indefinite-lived intangible assets held by the Company are also reviewed for impairment on at least an annual basis. The Company uses various methods for estimating the fair value of the intangible assets and relies on inputs such as replacement cost, projected earnings, including projected growth of earnings, and market royalty rates applied to the projected earnings.

See note 1 of the notes to the consolidated financial statements for a discussion of impairments of goodwill and other intangible assets.

OTHER UNCERTAINTIES

For a discussion of other risks and uncertainties that could impact the Company's results of operations or financial position, see note 17 of the notes to the consolidated financial statements and "Item 1A—Risk Factors."

FORWARD-LOOKING STATEMENTS

This report contains, and management may make, certain "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, may be forward-looking statements. Words such as "may," "will," "should," "likely," "probably," "anticipates," "expects," "intends," "plans," "projects," "believes," "views," "estimates" and similar expressions are used to identify these forward-looking statements. These statements include, among other things, the Company's statements about:

- the Company's outlook, the impact of trends on its business, such as the impact of elevated industrywide loss costs in Personal Insurance, and its future results of operations and financial condition (including, among other things, anticipated premium volume, premium rates, renewal premium changes, underwriting margins and underlying underwriting margins, net and core income, investment income and performance, loss costs, return on equity, core return on equity and expected current returns, and combined ratios and underlying combined ratios);
- the impact of legislative or regulatory actions or court decisions;
- share repurchase plans;
- future pension plan contributions;
- the sufficiency of the Company's reserves, including asbestos;
- the impact of emerging claims issues as well as other insurance and non-insurance litigation;
- the cost and availability of reinsurance coverage;
- catastrophe losses and modeling, including statements about probabilities or likelihood of exceedance;
- the impact of investment (including changes in interest rates), economic (including inflation, changes in tax laws, changes in commodity prices and fluctuations in foreign currency exchange rates) and underwriting market conditions;
- the impact of changing climate conditions;
- the impact of COVID-19 and related economic conditions;
- strategic and operational initiatives to improve profitability and competitiveness;
- the Company's competitive advantages and innovation agenda;
- new product offerings;
- the impact of developments in the tort environment, such as increased attorney involvement in insurance claims; and
- the impact of developments in the geopolitical environment.

The Company cautions investors that such statements are subject to risks and uncertainties, many of which are difficult to predict and generally beyond the Company's control, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements.

For a discussion of some of the factors that could cause actual results to differ, see "Item 1A-Risk Factors" and "Item 7-Management's Discussion and Analysis of Financial Condition and Results of Operations."

The Company's forward-looking statements speak only as of the date of this report or as of the date they are made, and the Company undertakes no obligation to update its forward-looking statements.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

MARKET RISK

Market risk is the risk of loss arising from adverse changes in market rates and prices, such as interest rates (inclusive of credit spreads), foreign currency exchange rates and other relevant market rate or price changes. Market risk is directly influenced by the volatility and liquidity in the markets in which the related underlying assets are traded. The following is a discussion of the Company's primary market risk exposures and how those exposures are managed as of December 31, 2022. The Company's market risk sensitive instruments, including derivatives, are primarily entered into for purposes other than trading.

The carrying value of the Company's investment portfolio at December 31, 2022 and 2021 was $80.45 billion and $87.38 billion, respectively, of which 89% was invested in fixed maturity securities at both periods. At December 31, 2022 and 2021, approximately 7.0% and 6.8%, respectively, of the Company's invested assets were denominated in foreign currencies. The Company's exposure to equity price risk is not significant. The Company has no direct commodity risk and is not a party to any credit default swaps.

The primary market risks to the investment portfolio are interest rate risk and credit risk associated with investments in fixed maturity securities. The portfolio duration is primarily managed through cash market transactions and treasury futures transactions. For additional information regarding the Company's investments, see notes 3 and 4 of the notes to the consolidated financial statements as well as the "Investment Portfolio" and "Outlook" sections of "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations."

The primary market risk for all of the Company's debt is interest rate risk at the time of refinancing. The Company monitors the interest rate environment and evaluates refinancing opportunities as maturity dates approach. For additional information regarding the Company's debt, see note 9 of the notes to the consolidated financial statements as well as the "Liquidity and Capital Resources" section of "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations."

The Company's foreign exchange market risk exposure is concentrated in the Company's invested assets, insurance reserves and shareholders' equity denominated in foreign currencies. Cash flows from the Company's foreign operations are the primary source of funds for the purchase of investments denominated in foreign currencies. The Company purchases these investments primarily to fund insurance reserves and other liabilities denominated in the same currency, effectively reducing its foreign currency exchange rate exposure. Invested assets denominated in the Canadian dollar comprised approximately 4.2% of the total invested assets at both December 31, 2022 and 2021. Invested assets denominated in the British Pound Sterling comprised approximately 2.2% and 2.1% of total invested assets at December 31, 2022 and 2021, respectively. Invested assets denominated in other currencies at December 31, 2022 and 2021 were not material.

There were no other significant changes in the Company's primary market risk exposures or in how those exposures were managed for the year ended December 31, 2022 compared to the year ended December 31, 2021. The Company does not currently anticipate significant changes in its primary market risk exposures or in how those exposures are managed in future reporting periods based upon what is known or expected to be in effect in future reporting periods.

SENSITIVITY ANALYSIS

Sensitivity analysis is defined as the measurement of potential loss in future earnings, fair values or cash flows of market sensitive instruments resulting from one or more selected hypothetical changes in interest rates and other market rates or prices over a selected period of time. In the Company's sensitivity analysis model, a hypothetical change in market rates is selected that is expected to reflect reasonably possible near-term changes in those rates. "Near-term" means a period of time going forward up to one year from the date of the consolidated financial statements. Actual results may differ from the hypothetical change in market rates assumed in this disclosure, especially since this sensitivity analysis does not reflect the results of any actions that would be taken by the Company to mitigate such hypothetical losses in fair value.

Interest Rate Risk

In this sensitivity analysis model, the Company uses fair values to measure its potential loss. The sensitivity analysis model includes the following financial instruments entered into for purposes other than trading: fixed maturities, non-redeemable preferred stocks, mortgage loans, short-term securities and debt and derivative financial instruments. The primary market risk to the Company's market sensitive instruments is interest rate risk (inclusive of credit spreads). The sensitivity analysis model uses

various basis point changes in interest rates to measure the hypothetical change in fair value of financial instruments included in the model.

For invested assets with primary exposure to interest rate risk, estimates of portfolio duration and convexity are used to model the loss of fair value that would be expected to result from a parallel increase in interest rates. Durations on invested assets are adjusted for call, put and interest rate reset features. Durations on tax-exempt securities are adjusted for the fact that the yields on such securities do not normally move in lockstep with changes in the U.S. Treasury curve. Fixed maturity portfolio durations are calculated on a market value-weighted basis, including accrued interest, using holdings as of December 31, 2022 and 2021.

For debt, the change in fair value is determined by calculating hypothetical December 31, 2022 and 2021 ending prices based on yields adjusted to reflect a 100 basis point change, comparing such hypothetical ending prices to actual ending prices, and multiplying the difference by the par or securities outstanding.

The sensitivity analysis model used by the Company produces a loss in fair value of market sensitive instruments of approximately $2.68 billion and $2.33 billion based on a 100 basis point increase in interest rates at December 31, 2022 and 2021, respectively.

The loss estimates do not take into account the impact of possible interventions that the Company might reasonably undertake in order to mitigate or avoid losses that would result from emerging interest rate trends. In addition, the loss value only reflects the impact of an interest rate increase on the fair value of the Company's financial instruments.

Foreign Currency Exchange Rate Risk

The Company uses fair values of investment securities to measure its potential loss from foreign denominated investments. A hypothetical 10% reduction in value of foreign denominated investments is used to estimate the impact on the market value of the foreign denominated holdings. The Company's analysis indicates that a hypothetical 10% reduction in the value of foreign denominated investments would be expected to produce a loss in fair value of approximately $563 million and $596 million at December 31, 2022 and 2021, respectively.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
The Travelers Companies, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheet of The Travelers Companies, Inc. and subsidiaries (the Company) as of December 31, 2022 and 2021, the related consolidated statements of income, comprehensive income (loss), changes in shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes and financial statement schedules as listed in the accompanying index to consolidated financial statements and schedules (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 16, 2023 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated 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 consolidated 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 consolidated 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 consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgment. The communication of a critical audit matter 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 matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Evaluation of the estimate of claims and claim adjustment expense reserves

As discussed in Notes 1 and 8 to the consolidated financial statements, the claims and claim adjustment expense reserves represent the Company's estimate of the ultimate liability for unpaid losses and loss adjustment expenses for claims that have been reported and claims that have been incurred but not yet reported as of the balance sheet date. The Company's claims and claim adjustment expense reserves balance at December 31, 2022 was $58.6 billion.

We identified the evaluation of the estimate of claims and claim adjustment expense reserves as a critical audit matter. The process of evaluating the estimate of claims and claim adjustment expense reserves involves significant auditor judgment due to the inherent uncertainty in the ultimate amounts and timing of claim payments, which may be affected by a number of internal and external considerations, such as:

- changes in claims handling procedures
- economic inflation and changes in the tort environment
- legislative changes, among others.

Evaluating the impact of these considerations on the ultimate costs of claims and claim adjustment expenses requires specialized skills and knowledge.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Company's reserving process for claims and claim adjustment expense reserves. This included controls related to the actuarial analyses and the determination of the Company's estimate of the claims and claim adjustment expense reserves. We involved actuarial professionals with specialized skills and knowledge who assisted in:

- assessing the assumptions and methodologies underlying the Company's claims and claim adjustment expense reserve estimate
- evaluating the Company's estimates by performing independent analyses of claims and claim adjustment expense reserves for certain lines of business
- assessing the Company's internally prepared actuarial analyses in comparison to the Company's internal experience and related industry trends for selected other lines of business
- developing an overall range of reserve estimates and assessing the position of the Company's recorded reserve relative to the range.

/s/ KPMG LLP

KPMG LLP

We have served as the Company's auditor since 1994.

New York, New York
February 16, 2023

THE TRAVELERS COMPANIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF INCOME
(in millions, except per share amounts)

For the year ended December 31,	2022	2021	2020
Revenues			
Premiums	**$ 33,763**	$ 30,855	$ 29,044
Net investment income	**2,562**	3,033	2,227
Fee income	**412**	402	429
Net realized investment gains (losses)	**(204)**	171	2
Other revenues	**351**	355	279
Total revenues	**36,884**	34,816	31,981
Claims and expenses			
Claims and claim adjustment expenses	**22,854**	20,298	19,123
Amortization of deferred acquisition costs	**5,515**	5,043	4,773
General and administrative expenses	**4,810**	4,677	4,509
Interest expense	**351**	340	339
Total claims and expenses	**33,530**	30,358	28,744
Income before income taxes	**3,354**	4,458	3,237
Income tax expense	**512**	796	540
Net income	**$ 2,842**	$ 3,662	$ 2,697
Net income per share			
Basic	**$ 11.91**	$ 14.63	$ 10.56
Diluted	**$ 11.77**	$ 14.49	$ 10.52
Weighted average number of common shares outstanding			
Basic	**237.0**	248.5	253.5
Diluted	**239.7**	250.8	254.6

The accompanying notes are an integral part of the consolidated financial statements.

THE TRAVELERS COMPANIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (LOSS)
(in millions)

For the year ended December 31,	2022	2021	2020
Net income	**$ 2,842**	$ 3,662	$ 2,697
Other comprehensive income (loss):			
Changes in net unrealized gains (losses) on investment securities:			
Having no credit losses recognized in the consolidated statement of income	**(9,276)**	(2,115)	2,331
Having credit losses recognized in the consolidated statement of income	**(4)**	—	(9)
Net changes in benefit plan assets and obligations	**(87)**	455	18
Net changes in unrealized foreign currency translation	**(273)**	(11)	12
Other comprehensive income (loss) before income taxes	**(9,640)**	(1,671)	2,352
Income tax expense (benefit)	**(2,002)**	(362)	490
Other comprehensive income (loss), net of taxes	**(7,638)**	(1,309)	1,862
Comprehensive income (loss)	**$ (4,796)**	$ 2,353	$ 4,559

The accompanying notes are an integral part of the consolidated financial statements.

THE TRAVELERS COMPANIES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEET
(in millions)

At December 31,	2022	2021
Assets		
Fixed maturities, available for sale, at fair value (amortized cost $77,380 and $74,751; allowance for expected credit losses of $3 and $3)	**$ 71,160**	$ 77,810
Equity securities, at fair value (cost $747 and $749)	**807**	893
Real estate investments	**952**	979
Short-term securities	**3,470**	3,836
Other investments	**4,065**	3,857
Total investments	**80,454**	87,375
Cash	**799**	761
Investment income accrued	**650**	615
Premiums receivable (net of allowance for expected credit losses of $77 and $107)	**8,922**	8,085
Reinsurance recoverables (net of allowance for estimated uncollectible reinsurance of $132 and $141)	**8,063**	8,452
Ceded unearned premiums	**1,024**	902
Deferred acquisition costs	**2,836**	2,542
Deferred taxes	**1,877**	—
Contractholder receivables (net of allowance for expected credit losses of $17 and $21)	**3,579**	3,890
Goodwill	**3,952**	4,008
Other intangible assets	**287**	306
Other assets	**3,274**	3,530
Total assets	**$ 115,717**	$ 120,466
Liabilities		
Claims and claim adjustment expense reserves	**$ 58,649**	$ 56,907
Unearned premium reserves	**18,240**	16,469
Contractholder payables	**3,596**	3,911
Payables for reinsurance premiums	**419**	384
Deferred taxes	**—**	289
Debt	**7,292**	7,290
Other liabilities	**5,961**	6,329
Total liabilities	**94,157**	91,579
Shareholders' equity		
Common stock (1,750.0 shares authorized; 232.1 and 241.2 shares issued and outstanding)	**24,565**	24,154
Retained earnings	**43,516**	41,555
Accumulated other comprehensive income (loss)	**(6,445)**	1,193
Treasury stock, at cost (553.5 and 541.5 shares)	**(40,076)**	(38,015)
Total shareholders' equity	**21,560**	28,887
Total liabilities and shareholders' equity	**$ 115,717**	$ 120,466

The accompanying notes are an integral part of the consolidated financial statements.

THE TRAVELERS COMPANIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY
(in millions)

For the year ended December 31,	2022	2021	2020
Common stock			
Balance, beginning of year	**$ 24,154**	$ 23,743	$ 23,469
Employee share-based compensation	**227**	247	123
Compensation amortization under share-based plans and other changes	**184**	164	151
Balance, end of year	**24,565**	24,154	23,743
Retained earnings			
Balance, beginning of year	**41,555**	38,771	36,977
Cumulative effect of adoption of updated accounting guidance for credit losses at January 1, 2020	**—**	—	(43)
Net income	**2,842**	3,662	2,697
Dividends	**(880)**	(876)	(864)
Other	**(1)**	(2)	4
Balance, end of year	**43,516**	41,555	38,771
Accumulated other comprehensive income (loss), net of tax			
Balance, beginning of year	**1,193**	2,502	640
Other comprehensive income (loss)	**(7,638)**	(1,309)	1,862
Balance, end of year	**(6,445)**	1,193	2,502
Treasury stock, at cost			
Balance, beginning of year	**(38,015)**	(35,815)	(35,143)
Treasury stock acquired — share repurchase authorization	**(2,000)**	(2,156)	(625)
Net shares acquired related to employee share-based compensation plans	**(61)**	(44)	(47)
Balance, end of year	**(40,076)**	(38,015)	(35,815)
Total shareholders' equity	**$ 21,560**	$ 28,887	$ 29,201
Common shares outstanding			
Balance, beginning of year	**241.2**	252.4	255.5
Treasury stock acquired — share repurchase authorization	**(11.6)**	(13.9)	(4.9)
Net shares issued under employee share-based compensation plans	**2.5**	2.7	1.8
Balance, end of year	**232.1**	241.2	252.4

The accompanying notes are an integral part of the consolidated financial statements.

THE TRAVELERS COMPANIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CASH FLOWS
(in millions)

For the year ended December 31,	2022	2021	2020
Cash flows from operating activities			
Net income	**$ 2,842**	$ 3,662	$ 2,697
Adjustments to reconcile net income to net cash provided by operating activities:			
Net realized investment (gains) losses	**204**	(171)	(2)
Depreciation and amortization	**826**	870	789
Deferred federal income tax expense (benefit)	**(186)**	62	(29)
Amortization of deferred acquisition costs	**5,515**	5,043	4,773
Equity in income from other investments	**(336)**	(993)	(130)
Premiums receivable	**(877)**	(258)	94
Reinsurance recoverables	**344**	(101)	(162)
Deferred acquisition costs	**(5,824)**	(5,227)	(4,854)
Claims and claim adjustment expense reserves	**2,050**	2,388	2,622
Unearned premium reserves	**1,862**	1,249	592
Other	**45**	750	129
Net cash provided by operating activities	**6,465**	7,274	6,519
Cash flows from investing activities			
Proceeds from maturities of fixed maturities	**6,837**	8,852	7,387
Proceeds from sales of investments:			
Fixed maturities	**5,657**	3,165	3,057
Equity securities	**138**	102	116
Real estate investments	**10**	31	—
Other investments	**302**	427	276
Purchases of investments:			
Fixed maturities	**(15,908)**	(18,153)	(14,073)
Equity securities	**(136)**	(407)	(127)
Real estate investments	**(41)**	(28)	(113)
Other investments	**(574)**	(520)	(472)
Net sales (purchases) of short-term securities	**355**	1,671	(566)
Securities transactions in the course of settlement	**21**	(19)	(47)
Acquisitions, net of cash acquired	**(4)**	(38)	—
Other	**(385)**	(279)	(330)
Net cash used in investing activities	**(3,728)**	(5,196)	(4,892)
Cash flows from financing activities			
Treasury stock acquired — share repurchase authorization	**(2,000)**	(2,156)	(625)
Treasury stock acquired — net employee share-based compensation	**(61)**	(44)	(47)
Dividends paid to shareholders	**(875)**	(869)	(861)
Payment of debt	**—**	—	(500)
Issuance of debt	**—**	739	490
Issuance of common stock — employee share options	**267**	293	127
Net cash used in financing activities	**(2,669)**	(2,037)	(1,416)
Effect of exchange rate changes on cash	**(30)**	(1)	16
Net increase in cash	**38**	40	227
Cash at beginning of year	**761**	721	494
Cash at end of year	**$ 799**	$ 761	$ 721
Supplemental disclosure of cash flow information			
Income taxes paid	**$ 817**	$ 707	$ 578
Interest paid	**$ 349**	$ 337	$ 339

The accompanying notes are an integral part of the consolidated financial statements.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The consolidated financial statements include the accounts of The Travelers Companies, Inc. (together with its subsidiaries, the Company). The preparation of the consolidated financial statements in conformity with U.S. generally accepted accounting principles (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 consolidated financial statements and the reported amounts of revenues and claims and expenses during the reporting period. Actual results could differ from those estimates. All material intercompany transactions and balances have been eliminated. Certain reclassifications have been made to the 2021 and 2020 financial statements to conform to the 2022 presentation.

Adoption of Accounting Standards

Financial Instruments - Credit Losses: Measurement of Credit Losses on Financial Instruments

In June 2016, the Financial Accounting Standards Board (FASB) issued updated guidance for the accounting for credit losses for financial instruments. The updated guidance applies a new credit loss model (current expected credit losses or CECL) for determining credit-related impairments for financial instruments measured at amortized cost (including reinsurance recoverables and structured settlements that are recorded as part of reinsurance recoverables) and requires an entity to estimate the credit losses expected over the life of an exposure or pool of exposures. The estimate of expected credit losses should consider historical information, current information, as well as reasonable and supportable forecasts, including estimates of prepayments. The expected credit losses, and subsequent adjustments to such losses, are recorded through an allowance account that is deducted from the amortized cost basis of the financial asset, with the net carrying value of the financial asset presented on the consolidated balance sheet at the amount expected to be collected.

The updated guidance also amends the previous other-than-temporary impairment model for available-for-sale debt securities by requiring the recognition of impairments relating to credit losses through an allowance account and limits the amount of credit loss to the difference between a security's amortized cost basis and its fair value. In addition, the length of time a security has been in an unrealized loss position will no longer impact the determination of whether a credit loss exists.

The Company adopted the updated guidance for the quarter ended March 31, 2020. For available-for-sale debt securities, the updated guidance was applied prospectively. For financial instruments measured at amortized cost, the updated guidance was applied by a cumulative effect adjustment to the opening balance of retained earnings as of January 1, 2020, the beginning of the period of adoption. The adoption of this guidance resulted in the recognition of an after-tax cumulative effect adjustment of $43 million to reflect the impact of recognizing expected credit losses, as compared to incurred credit losses recognized under the previous guidance. This adjustment is primarily associated with structured settlements that are recorded as part of reinsurance recoverables. The cumulative effect adjustment decreased retained earnings as of January 1, 2020 and increased the allowance for estimated uncollectible reinsurance.

Accounting Policies

Investments

Fixed Maturities

Fixed maturities include bonds, notes and redeemable preferred stocks. Fixed maturities, including instruments subject to securities lending agreements, are classified as available for sale and reported at fair value, with unrealized investment gains and losses, net of income taxes, charged or credited directly to other comprehensive income.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Equity Securities

Equity securities, which include public and non-public common and non-redeemable preferred stocks, are reported at fair value with changes in fair value recognized in net realized investment gains (losses).

Real Estate Investments

The Company's real estate investments include warehouses, office buildings and other commercial land and properties that are directly owned. Real estate is recorded on the purchase date at the purchase price, which generally represents fair value, and is supported by internal analysis or external appraisals that use discounted cash flow analyses and other acceptable valuation techniques. Real estate held for investment purposes is subsequently carried at cost less accumulated depreciation.

Buildings are depreciated on a straight-line basis over the shorter of the expected useful life of the building or 39 years. Real estate held for sale is carried at lower of cost or fair value, less estimated costs to sell.

Short-term Securities

Short-term securities have an original maturity of less than one year and are carried at amortized cost, which approximates fair value.

Other Investments

Investments in Private Equity Limited Partnerships, Hedge Funds and Real Estate Partnerships

The Company uses the equity method of accounting for investments in private equity limited partnerships, hedge funds and real estate partnerships. The partnerships and the hedge funds generally report investments on their balance sheet at fair value. The financial statements prepared by the investee are received by the Company on a lag basis, with the lag period generally dependent upon the type of underlying investments. The private equity and real estate partnerships provide financial information quarterly which is generally available to investors, including the Company, within three months following the date of the reporting period. The hedge funds provide financial information monthly, which is generally available to investors within one month following the date of the reporting period. The Company regularly requests financial information from the partnerships prior to the receipt of the partnerships' financial statements and records any material information obtained from these requests in its consolidated financial statements.

Other

Derivatives are also included in other investments. The Company's derivative financial instruments are carried at fair value, with the changes in fair value reflected in the consolidated statement of income in net realized investment gains (losses). For a further discussion of the derivatives used by the Company, see note 3.

Net Investment Income

Investment income from fixed maturities is recognized based on the constant effective yield method which includes an adjustment for estimated principal pre-payments, if any. The effective yield used to determine amortization for fixed maturities subject to prepayment risk (e.g., asset-backed, loan-backed and structured securities) is recalculated and adjusted periodically based upon actual historical and/or projected future cash flows, which are obtained from a widely-accepted securities data provider. The adjustments to the yield for highly rated prepayable fixed maturities are accounted for using the retrospective method. The adjustments to the yield for non-highly rated prepayable fixed maturities are accounted for using the prospective method. Dividends on equity securities (including those with transfer restrictions) are recognized in income when declared. Rental income on real estate is recognized on a straight-line basis over the lease term. See the section titled: Real Estate in note 3 for further discussion. Investments in private equity limited partnerships, hedge funds, real estate partnerships and joint ventures are accounted for using the equity method of accounting, whereby the Company's share of the investee's earnings or losses in the fund is reported in net investment income.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Accrual of income is suspended on non-securitized fixed maturities that are in default, or on which it is likely that future payments will not be made as scheduled. Interest income on investments in default is recognized only when payments are received. Investments included in the consolidated balance sheet that were not income-producing for the preceding 12 months were not material.

Net Realized Investment Gains and Losses

Net realized investment gains and losses include net realized gains (losses) from the sale of investments, credit impairment losses on investment assets, changes in the fair value of equity securities, foreign currency transaction gains and losses and changes in the fair value of derivative financial instruments. Net realized investment gains (losses) on the sale of investments are included as a component of pre-tax revenues based upon specific identification of the investments sold on the trade date.

Investment Impairments

The Company conducts a periodic review to identify and evaluate invested assets that may have credit impairments.

Credit Impairments Related to Fixed Maturity Investments

Some of the factors considered in assessing impairment of fixed maturity investments due to credit-related factors include: (1) the extent to which the fair value has been less than amortized cost; (2) the financial condition, near-term and long-term prospects for the issuer, including the relevant industry conditions and trends, and implications of rating agency actions and offering prices; (3) the likelihood of the recoverability of principal and interest; and (4) whether it is more likely than not that the Company will be required to sell the investment prior to an anticipated recovery in value.

Beginning on January 1, 2020, credit losses are recognized through an allowance account. See note 1 - *Adoption of Accounting Standards - Financial Instruments - Credit Losses: Measurement of Credit Losses on Financial Instruments* for additional information.

For fixed maturity investments 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 the credit loss component of the impairment from the amount related to all other factors and reports the credit loss component in net realized investment gains (losses). The impairment related to all other factors (non-credit factors) is reported in other comprehensive income. The allowance is adjusted for any additional credit losses and subsequent recoveries. Upon recognizing a credit loss, the cost basis is not adjusted.

For fixed maturity investments where the Company records a credit loss, a determination is made as to the cause of the impairment and whether the Company expects a recovery in the value. For fixed maturity investments where the Company expects a recovery in value, the constant effective yield method is utilized, and the investment is amortized to par.

For fixed maturity investments 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 of the impairment is included in net realized investment gains (losses). The new cost basis of the investment is the previous amortized cost basis less the impairment recognized in net realized investment gains (losses). The new cost basis is not adjusted for any subsequent recoveries in fair value.

The Company reports investment income accrued separately from fixed maturity investments, available for sale, and has elected not to measure an allowance for credit losses for investment income accrued. Investment income accrued is written off through net realized investment gains (losses) at the time the issuer of the bond defaults or is expected to default on payments.

Uncollectible available-for-sale debt securities are written-off when the Company determines that no additional payments of principal or interest will be received.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Determination of Credit Loss — Fixed Maturities

The Company determines the credit loss component of fixed maturity investments by utilizing discounted cash flow modeling to determine the present value of the security and comparing the present value with the amortized cost of the security. If the amortized cost is greater than the present value of the expected cash flows, the difference is considered a credit loss and recognized as an impairment loss in net realized investment gains (losses).

For non-structured fixed maturities (U.S. Treasury securities, obligations of U.S. government and government agencies and authorities, obligations of states, municipalities and political subdivisions, debt securities issued by foreign governments and certain corporate debt), the estimate of expected cash flows is determined by projecting a recovery value and a recovery time frame and assessing whether further principal and interest will be received. The determination of recovery value incorporates an issuer valuation assumption utilizing one or a combination of valuation methods as deemed appropriate by the Company. The Company determines the undiscounted recovery value by allocating the estimated value of the issuer to the Company's assessment of the priority of claims. The present value of the cash flows is determined by applying the effective yield of the security at the date of acquisition (or the most recent implied rate used to accrete the security if the implied rate has changed as a result of a previous impairment) and an estimated recovery time frame. Generally, that time frame for securities for which the issuer is in bankruptcy is 12 months. For securities for which the issuer is financially troubled but not in bankruptcy, that time frame is generally 24 months. Included in the present value calculation are expected principal and interest payments; however, for securities for which the issuer is classified as bankrupt or in default, the present value calculation assumes no interest payments and a single recovery amount.

In estimating the recovery value, significant judgment is involved in the development of assumptions relating to a myriad of factors related to the issuer including, but not limited to, revenue, margin and earnings projections, the likely market or liquidation values of assets, potential additional debt to be incurred pre- or post-bankruptcy/restructuring, the ability to shift existing or new debt to different priority layers, the amount of restructuring/bankruptcy expenses, the size and priority of unfunded pension obligations, litigation or other contingent claims, the treatment of intercompany claims and the likely outcome with respect to inter-creditor conflicts.

For structured fixed maturity securities (primarily residential and commercial mortgage-backed securities and asset-backed securities), the Company estimates the present value of the security by projecting future cash flows of the assets underlying the securitization, allocating the flows to the various tranches based on the structure of the securitization and determining the present value of the cash flows using the effective yield of the security at the date of acquisition (or the most recent implied rate used to accrete the security if the implied rate has changed as a result of a previous impairment or changes in expected cash flows). The Company incorporates levels of delinquencies, defaults and severities as well as credit attributes of the remaining assets in the securitization, along with other economic data, to arrive at its estimate of the parameters applied to the assets underlying the securitization.

Real Estate Investments

On at least an annual basis, the Company obtains independent appraisals for substantially all of its real estate investments. In addition, the carrying value of all real estate investments is reviewed for impairment on a quarterly basis or when events or changes in circumstances indicate that the carrying amount may not be recoverable. The review for impairment considers the valuation from the independent appraisal, when applicable, and incorporates an estimate of the undiscounted cash flows expected to result from the use and eventual disposition of the real estate property. An impairment loss is recognized if the expected future undiscounted cash flows are less than the carrying value of the real estate property. The impairment loss is the amount by which the carrying amount exceeds fair value.

Other Investments

The Company reviews its investments in private equity limited partnerships, hedge funds and real estate partnerships for impairment no less frequently than quarterly and monitors the performance throughout the year through discussions with the managers/general partners. If the Company becomes aware of an impairment of a partnership's investments at the balance sheet date prior to receiving the partnership's financial statements, it will recognize an impairment by recording a reduction in the carrying value of the partnership with a corresponding charge to net investment income.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Changes in Intent to Sell Temporarily Impaired Assets

The Company may, from time to time, sell invested assets subsequent to the balance sheet date that it did not intend to sell at the balance sheet date. Conversely, the Company may not sell invested assets that it asserted that it intended to sell at the balance sheet date. Such changes in intent are due to events occurring subsequent to the balance sheet date. The types of events that may result in a change in intent include, but are not limited to, significant changes in the economic facts and circumstances related to the invested asset (e.g., a downgrade or upgrade from a rating agency), significant unforeseen changes in liquidity needs, or changes in tax laws or the regulatory environment.

Securities Lending

The Company has, from time to time, engaged in securities lending activities from which it generates net investment income by lending certain of its investments to other institutions for short periods of time. Borrowers of these securities provide collateral equal to at least 102% of the market value of the loaned securities plus accrued interest. This collateral is held by a third-party custodian, and the Company has the right to access the collateral only in the event that the institution borrowing the Company's securities is in default under the lending agreement (i.e., the Company is not permitted to re-pledge or sell any such collateral). Therefore, the Company does not recognize the receipt of the collateral held by the third-party custodian or the obligation to return the collateral. The loaned securities remain a recorded asset of the Company. The Company accepts only cash as collateral for securities on loan and restricts the manner in which that cash is invested.

Reinsurance Recoverables

Amounts recoverable from reinsurers are estimated in a manner consistent with the associated claim liability. Included in reinsurance recoverables are amounts related to certain structured settlements. The Company reports its reinsurance recoverables net of an allowance for amounts that are estimated to be uncollectible. The allowance is based upon the Company's ongoing review of amounts outstanding, length of collection periods, changes in reinsurer credit standing, disputes, applicable coverage defenses and other relevant factors. For structured settlements, the allowance is also based upon the Company's ongoing review of life insurers' creditworthiness and estimated amounts of coverage that would be available from state guaranty funds if a life insurer defaults. A probability-of-default methodology which reflects current and forecasted economic conditions is used to estimate the amount of uncollectible reinsurance due to credit-related factors and the estimate is reported in an allowance for estimated uncollectible reinsurance. The allowance also includes estimated uncollectible amounts related to dispute risk with reinsurers. Amounts deemed to be uncollectible, including amounts due from known insolvent reinsurers, are written off against the allowance. Changes in the allowance, as well as any subsequent collections of amounts previously written off, are reported as part of claims and claim adjustment expenses. 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.

Deferred Acquisition Costs

Incremental direct costs of acquired, new and renewal insurance contracts, consisting of commissions (other than contingent commissions) and premium-related taxes, are capitalized and charged to expense pro rata over the contract periods in which the related premiums are earned. Deferred acquisition costs are reviewed to determine if they are recoverable from future income and, if not, are charged to expense. Future investment income attributable to related premiums is taken into account in measuring the recoverability of the carrying value of this asset. All other acquisition expenses are charged to operations as incurred.

Contractholder Receivables and Payables

Under certain workers' compensation insurance contracts with deductible features, the Company is obligated to pay the claimant for the full amount of the claim. The Company is subsequently reimbursed by the policyholder for the deductible amount. These amounts are included on a gross basis in the consolidated balance sheet in both contractholder payables and contractholder receivables. Contractholder receivables are reported net of an allowance for expected credit losses. The allowance is based upon the Company's ongoing review of amounts outstanding, changes in policyholder credit standing, and

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

other relevant factors. A probability-of-default methodology, which reflects current and forecasted economic conditions, is used to estimate the allowance for expected credit losses.

Goodwill and Other Intangible Assets

The Company performs a review, on at least an annual basis, of goodwill held by the reporting units which are the Company's three operating and reportable segments: Business Insurance; Bond & Specialty Insurance; and Personal Insurance. The Company estimates the fair value of its reporting units and compares it to their carrying value, including goodwill. If the carrying values of the reporting units were to exceed their fair value, the amount of the impairment would be calculated and goodwill adjusted accordingly.

The Company uses a discounted cash flow model to estimate the fair value of its reporting units. The discounted cash flow model is an income approach to valuation that is based on a detailed cash flow analysis for deriving a current fair value of reporting units and is representative of the Company's reporting units' current and expected future financial performance. The discount rate assumptions reflect the Company's assessment of the risks inherent in the projected future cash flows and the Company's weighted-average cost of capital, and are compared against available market data for reasonableness.

Other indefinite-lived intangible assets held by the Company are also reviewed for impairment on at least an annual basis. 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 are deemed to have a finite useful life are amortized over their useful lives. The carrying amount of intangible assets with a finite useful life is regularly reviewed 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.

As a result of the reviews performed for the years ended December 31, 2022, 2021 and 2020, the Company determined that the estimated fair value substantially exceeded the respective carrying value of its reporting units for those years and that goodwill was not impaired. The Company also determined during its reviews for each year that its other indefinite-lived intangible assets and finite-lived intangible assets were not impaired.

Internal-Use Software

In the ordinary course of business, the Company develops and purchases software as well as enters into arrangements to utilize software as a service under cloud computing arrangements. These software costs and any costs related to the implementation and set-up of the cloud computing arrangements are capitalized and reported within other assets in the consolidated balance sheet.

Claims and Claim Adjustment Expense Reserves

Claims and claim adjustment expense reserves represent management's estimate of the ultimate liability for unpaid losses and loss adjustment expenses for claims that have been reported and claims that have been incurred but not yet reported (IBNR) as of the balance sheet date. The reserves are adjusted regularly based upon experience. Included in the claims and claim adjustment expense reserves in the consolidated balance sheet are reserves for long-term disability and annuity claim payments, primarily arising from workers' compensation insurance and workers' compensation excess insurance policies, that are discounted to the present value of estimated future payments.

The Company performs a continuing review of its claims and claim adjustment expense reserves, including its reserving techniques and the impact of reinsurance. The reserves are also reviewed regularly by qualified actuaries employed by the Company. Since the reserves are based on estimates, the ultimate liability may be more or less than such reserves. The effects of changes in such estimated reserves are included in the results of operations in the period in which the estimates are changed. Such changes in estimates could occur in a future period and may be material to the Company's results of operations and financial position in such period.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Other Liabilities

Included in other liabilities in the consolidated balance sheet is the Company's estimate of its liability for guaranty fund and other insurance-related assessments. The liability for expected state guaranty fund and other premium-based assessments is recognized as the Company writes or becomes obligated to write or renew the premiums on which the assessments are expected to be based. The liability for loss-based assessments is recognized as the related losses are incurred. At December 31, 2022 and 2021, the Company had a liability of $177 million and $176 million, respectively, for guaranty fund and other insurance-related assessments and related recoverables of $17 million and $8 million, respectively. The liability for such assessments and the related recoverables are not discounted for the time value of money. The 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.

Also included in other liabilities is an accrual for policyholder dividends. Certain insurance contracts, primarily workers' compensation, are participating whereby dividends are paid to policyholders in accordance with contract provisions. Net written premiums for participating dividend policies were approximately 1% of total net written premiums for each of the years ended December 31, 2022, 2021 and 2020. Policyholder dividends are accrued against earnings using best available estimates of amounts to be paid. The liability accrued for policyholder dividends totaled $69 million at both December 31, 2022 and 2021.

Treasury Stock

The cost of common stock repurchased by the Company is reported as treasury stock and represents authorized and unissued shares of the Company under the Minnesota Business Corporation Act.

Statutory Accounting Practices

The Company's U.S. insurance subsidiaries, domiciled principally in the State of Connecticut, are required to prepare statutory financial statements in accordance with the accounting practices prescribed or permitted by the insurance departments of the states of domicile. Prescribed statutory accounting practices are those practices that are incorporated directly or by reference in state laws, regulations, and general administrative rules applicable to all insurance enterprises domiciled in a particular state. The State of Connecticut requires insurers domiciled in Connecticut to prepare their statutory financial statements in accordance with National Association of Insurance Commissioners' (NAIC) statutory accounting practices.

Permitted statutory accounting practices are those practices that differ either from state-prescribed statutory accounting practices or NAIC statutory accounting practices.

The Company does not apply any statutory accounting practices that would be considered a prescribed or permitted statutory accounting practice that differs from NAIC statutory accounting practices.

The Company's non-U.S. insurance subsidiaries file financial statements prepared in accordance with the regulatory reporting requirements of their respective local jurisdiction.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Premiums and Unearned Premium Reserves

Premiums are recognized as revenues over the period of the contract in proportion to the amount of insurance protection provided, which is generally pro rata over the policy period. Unearned premium reserves represent the unexpired portion of policy premiums. Accrued retrospective premiums are included in premium balances receivable. Premium balances receivable are reported net of an allowance for expected credit losses. The allowance is based upon the Company's ongoing review of amounts outstanding, historical loss data, including delinquencies and write-offs, current and forecasted economic conditions and other relevant factors. Credit risk is partially mitigated by the Company's ability to cancel the policy if the policyholder does not pay the premium. However, the impact of extended payment terms and non-cancellation concessions granted to customers as a result of COVID-19 and related economic conditions is also considered in the Company's evaluation of the allowance.

Ceded premiums are charged to income over the applicable term of the various reinsurance contracts with third party reinsurers. Prepaid reinsurance premiums represent the unexpired portion of premiums ceded to reinsurers and are reported as part of other assets.

Fee Income

Fee income includes revenues from risk and claims management services provided to the Company's insureds and third-party non-insureds, as well as policy issuance and claims management services to workers' compensation residual market pools. Fee income is earned over the policy period for the services provided to the Company's insureds, and either over the contract period or as the Company completes its service obligations for the services provided to third-party non-insureds.

Other Revenues

Other revenues include revenues from premium installment charges, which are recognized as collected, gains and losses on dispositions of assets and redemption of debt, and other miscellaneous revenues, including gains recognized as a result of settlements of reinsurance disputes and claim-related legal matters.

Other revenues also include revenues from noninsurance subsidiaries (other than fee income) for insurance-related services and on-line insurance brokerage services and is recognized as the service is provided to the customer.

Income Taxes

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 law. 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.

Foreign Currency

The Company assigns functional currencies to its foreign operations, which are generally the currencies of the local operating environment. Foreign currency amounts are remeasured to the functional currency, and the resulting foreign exchange gains or losses are reported in net realized investment gains (losses). Functional currency amounts are then translated into U.S. dollars. The foreign currency remeasurement and translation are calculated using current exchange rates for items reported in the balance sheet and average exchange rates for items recorded in earnings. The change in unrealized foreign currency translation gain or loss during the year, net of tax, is a component of other comprehensive income.

Foreign currency gains and losses related to the changes in fair value of available-for-sale fixed maturities are reported in other comprehensive income. All other foreign currency transaction gains and losses are reported in earnings.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Share-Based Compensation

The Company has an employee stock incentive compensation plan that permits grants of nonqualified stock options, incentive stock options, stock appreciation rights, restricted stock, deferred stock, stock units, performance awards and other share-based or share-denominated awards with respect to the Company's common stock.

Compensation cost is measured based on the grant-date fair value of an award, utilizing the assumptions discussed in note 14. Compensation cost is recognized for financial reporting purposes over the period in which the employee is required to provide service in exchange for the award (generally the vesting period). In connection with certain share-based awards, participants are entitled to receive dividends during the vesting period, either in cash or dividend equivalent shares, commensurate with the dividends paid to common shareholders. Dividends and dividend equivalent shares on awards that are expected to vest are recorded in retained earnings. Dividends paid on awards that are not expected to vest as part of the Company's forfeiture estimate are recorded as compensation expense.

Nature of Operations

Business Insurance

Business Insurance offers a broad array of property and casualty insurance products and services to its customers, primarily in the United States, as well as in Canada, the United Kingdom, the Republic of Ireland and throughout other parts of the world, including as a corporate member of Lloyd's. Business Insurance is organized as follows:

Domestic

- *Select Accounts* provides small businesses with property and casualty insurance products and services, including commercial multi-peril, workers' compensation, commercial automobile, general liability and commercial property.

- *Middle Market* provides mid-sized businesses with property and casualty insurance products and services, including workers' compensation, general liability, commercial multi-peril, commercial automobile and commercial property, as well as risk management, claims handling and other services. Middle Market generally provides these products to mid-sized businesses through *Commercial Accounts,* as well as to targeted industries through *Construction*, *Technology*, *Public Sector Services* and *Oil & Gas,* and additionally, provides mono-line umbrella and excess coverage insurance through *Excess Casualty*. Middle Market also provides insurance for goods in transit and movable objects, as well as builders' risk insurance, through *Inland Marine*; insurance for the marine transportation industry and related services, as well as other businesses involved in international trade, through *Ocean Marine;* and comprehensive breakdown for equipment, including property and business interruption, through *Boiler & Machinery*.

- *National Accounts* provides large companies with casualty insurance products and services, including workers' compensation, commercial automobile and general liability, generally utilizing loss-sensitive products, on both a bundled and unbundled basis, as well as risk management, claims administration and other insurance-related services. National Accounts also includes the Company's commercial residual market business, which primarily offers workers' compensation claims, policy management and other administrative services related to the involuntary market.

- *National Property and Other* provides traditional and customized commercial property insurance programs to large and mid-sized customers through *National Property*. National Property and Other also provides insurance coverage for the commercial trucking industry through *Northland Transportation* and serves small- to medium-sized agricultural businesses, including farms, ranches and other agricultural-related operations through *Agribusiness*. National Property and Other also includes commercial property and general liability policies for small, difficult to place specialty classes of commercial business primarily on an excess and surplus lines basis through *Northfield,* and also offers tailored property and casualty insurance programs on an admitted basis for customers with common risk characteristics or coverage requirements through *National Programs*.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

International

- *International*, through its operations in Canada, the United Kingdom and the Republic of Ireland, provides property and casualty insurance and risk management services to several customer groups, including, among others, those in the technology, manufacturing and public services industry sectors. International also provides insurance for both the foreign exposures of United States organizations and the United States exposures of foreign organizations through *Global Services*. At its Lloyd's syndicate (Syndicate 5000), for which the Company provides 100% of the capital, International underwrites five principal businesses — marine, energy, property, aviation and special risks.

Business Insurance also includes Simply Business, a leading provider of small business insurance policies primarily in the United Kingdom, and Business Insurance Other, which primarily comprises the Company's asbestos and environmental liabilities, and the assumed reinsurance and certain other runoff operations.

Bond & Specialty Insurance

Bond & Specialty Insurance offers surety, fidelity, management liability, professional liability, and other property and casualty coverages and related risk management services to its customers, primarily in the United States, and certain surety and specialty insurance products in Canada, the United Kingdom, the Republic of Ireland and Brazil (through a joint venture, as described below), in each case utilizing various degrees of financially-based underwriting approaches. The range of coverages includes performance, payment and commercial surety bonds for construction and general commercial enterprises; management liability coverages including directors' and officers' liability, employment practices liability, fidelity liability, fiduciary liability and cyber risk for public corporations, private companies, not-for-profit organizations and financial institutions; professional liability coverage for a variety of professionals including, among others, lawyers and design professionals; in the United States only, property, workers' compensation, auto and general liability for financial institutions; and transactional liability coverages to public and private companies.

Bond & Specialty Insurance's surety business in Brazil and Colombia is conducted through Junto Holding Brasil S.A. (Junto) and Junto Holding Latam S.A. in Brazil. The Company owns 49.5% of both Junto, a market leader in surety coverages in Brazil, and Junto Holding Latam S.A., which owns a majority interest in JMalucelli Travelers Seguros S.A., a Colombian surety provider. These joint venture investments are accounted for using the equity method and are included in "other investments" on the consolidated balance sheet.

Personal Insurance

Personal Insurance offers a broad range of property and casualty insurance products and services covering individuals' personal risks, primarily in the United States, as well as in Canada. Personal Insurance's primary products of automobile and homeowners insurance are complemented by a broad suite of related coverages.

Automobile policies provide coverage for liability to others for both bodily injury and property damage, uninsured motorist protection, and for physical damage to an insured's own vehicle from collision, fire, flood, hail and theft. In addition, many states require policies to provide first-party personal injury protection, frequently referred to as no-fault coverage.

Homeowners and Other policies provide protection against losses to dwellings and contents from a variety of perils (excluding flooding) as well as coverage for personal liability. The Company writes homeowners insurance for dwellings, condominiums and tenants, and rental properties. The Company also writes coverage for boats and yachts, valuable personal items such as jewelry, umbrella liability, and weddings and special events.

2. SEGMENT INFORMATION

The accounting policies used to prepare the segment reporting data for the Company's three reportable business segments are the same as those described in the Summary of Significant Accounting Policies in note 1.

Except as described below for certain legal entities, the Company allocates its invested assets and the related net investment income to its reportable business segments. Pre-tax net investment income is allocated based upon an investable funds concept, which takes into account liabilities (net of non-invested assets) and appropriate capital considerations for each segment. For investable funds, a benchmark investment yield is developed that reflects the estimated duration of the loss reserves' future cash flows, the interest rate environment at the time the losses were incurred and A+ rated corporate debt instrument yields. For capital, a benchmark investment yield is developed that reflects the average yield on the total investment portfolio. The benchmark investment yields are applied to each segment's investable funds and capital, respectively, to produce a total notional investment income by segment. The Company's actual net investment income is allocated to each segment in proportion to the respective segment's notional investment income to total notional investment income. There are certain legal entities within the Company that are dedicated to specific reportable business segments. The invested assets and related net investment income from these legal entities are reported in the applicable business segment and are not allocated among the other business segments.

The cost of the Company's catastrophe treaty program is included in the Company's ceded premiums and is allocated among reportable business segments based on an estimate of actual market reinsurance pricing using expected losses calculated by the Company's catastrophe model, adjusted for any experience adjustments.

The following tables summarize the components of the Company's revenues, income (loss), net written premiums and total assets by reportable business segments.

2. SEGMENT INFORMATION (Continued)

(for the year ended December 31, in millions)	Business Insurance	Bond & Specialty Insurance	Personal Insurance	Total Reportable Segments
2022				
Premiums	**$ 17,095**	**$ 3,418**	**$ 13,250**	**$ 33,763**
Net investment income	**1,864**	**258**	**440**	**2,562**
Fee income	**382**	**—**	**30**	**412**
Other revenues	**248**	**20**	**83**	**351**
Total segment revenues [1]	**$ 19,589**	**$ 3,696**	**$ 13,803**	**$ 37,088**
Amortization and depreciation	**$ 3,344**	**$ 697**	**$ 2,293**	**$ 6,334**
Income tax expense (benefit)	**536**	**195**	**(90)**	**641**
Segment income (loss) [1]	**2,531**	**908**	**(140)**	**3,299**
2021				
Premiums	$ 15,734	$ 3,138	$ 11,983	$ 30,855
Net investment income	2,265	247	521	3,033
Fee income	375	—	27	402
Other revenues	235	23	97	355
Total segment revenues [1]	$ 18,609	$ 3,408	$ 12,628	$ 34,645
Amortization and depreciation	$ 3,180	$ 643	$ 2,084	$ 5,907
Income tax expense	499	165	179	843
Segment income [1]	2,385	668	760	3,813
2020				
Premiums	$ 15,294	$ 2,823	$ 10,927	$ 29,044
Net investment income	1,633	213	381	2,227
Fee income	405	—	24	429
Other revenues	176	27	76	279
Total segment revenues [1]	$ 17,508	$ 3,063	$ 11,408	$ 31,979
Amortization and depreciation	$ 3,069	$ 579	$ 1,908	$ 5,556
Income tax expense	213	107	308	628
Segment income [1]	1,309	473	1,195	2,977

(1) Segment revenues for reportable business segments exclude net realized investment gains (losses) and revenues included in "interest expense and other." Segment income (loss) for reportable business segments excludes the after-tax impact of net realized investment gains (losses) and income (loss) from "interest expense and other."

2. SEGMENT INFORMATION (Continued)

Net written premiums by market were as follows:

(for the year ended December 31, in millions)	2022	2021	2020
Business Insurance:			
Domestic:			
Select Accounts	**$ 3,099**	$ 2,833	$ 2,821
Middle Market	**9,923**	8,933	8,511
National Accounts	**1,085**	987	996
National Property and Other	**2,467**	2,265	2,086
Total Domestic	**16,574**	15,018	14,414
International	**1,061**	1,074	1,017
Total Business Insurance	**17,635**	16,092	15,431
Bond & Specialty Insurance:			
Domestic:			
Management Liability	**2,112**	1,983	1,769
Surety	**1,081**	888	845
Total Domestic	**3,193**	2,871	2,614
International	**539**	505	337
Total Bond & Specialty Insurance	**3,732**	3,376	2,951
Personal Insurance:			
Domestic:			
Automobile	**6,482**	5,827	5,369
Homeowners and Other	**6,916**	5,980	5,329
Total Domestic	**13,398**	11,807	10,698
International	**649**	684	652
Total Personal Insurance	**14,047**	12,491	11,350
Total consolidated net written premiums	**$ 35,414**	$ 31,959	$ 29,732

2. SEGMENT INFORMATION (Continued)

Business Segment Reconciliations

(for the year ended December 31, in millions)	2022	2021	2020
Revenue reconciliation			
Earned premiums			
Business Insurance:			
Domestic:			
Workers' compensation	**$ 3,425**	$ 3,227	$ 3,378
Commercial automobile	**2,976**	2,855	2,761
Commercial property	**2,611**	2,275	2,087
General liability	**2,875**	2,576	2,401
Commercial multi-peril	**4,109**	3,667	3,552
Other	**76**	65	54
Total Domestic	**16,072**	14,665	14,233
International	**1,023**	1,069	1,061
Total Business Insurance	**17,095**	15,734	15,294
Bond & Specialty Insurance:			
Domestic:			
Fidelity and surety	**1,173**	1,091	1,075
General liability	**1,556**	1,415	1,219
Other	**222**	220	237
Total Domestic	**2,951**	2,726	2,531
International	**467**	412	292
Total Bond & Specialty Insurance	**3,418**	3,138	2,823
Personal Insurance:			
Domestic			
Automobile	**6,170**	5,687	5,280
Homeowners and Other	**6,426**	5,608	4,988
Total Domestic	**12,596**	11,295	10,268
International	**654**	688	659
Total Personal Insurance	**13,250**	11,983	10,927
Total earned premiums	**33,763**	30,855	29,044
Net investment income	**2,562**	3,033	2,227
Fee income	**412**	402	429
Other revenues	**351**	355	279
Total segment revenues	**37,088**	34,645	31,979
Net realized investment gains (losses)	**(204)**	171	2
Total revenues	**$ 36,884**	$ 34,816	$ 31,981
Income reconciliation, net of tax			
Total segment income	**$ 3,299**	$ 3,813	$ 2,977
Interest Expense and Other [1]	**(301)**	(291)	(291)
Core income	**2,998**	3,522	2,686
Net realized investment gains (losses)	**(156)**	132	11
Impact of changes in tax laws and/or tax rates [2]	**—**	8	—
Net income	**$ 2,842**	$ 3,662	$ 2,697

(1) The primary component of Interest Expense and Other was after-tax interest expense of $277 million, $269 million and $268 million in 2022, 2021 and 2020, respectively.

(2) Impact is recognized in the accounting period in which the change is enacted.

2. SEGMENT INFORMATION (Continued)

(at December 31, in millions)	2022	2021
Asset reconciliation:		
Business Insurance	**$ 86,522**	$ 90,353
Bond & Specialty Insurance	**10,119**	10,146
Personal Insurance	**18,275**	18,983
Total assets for reportable segments	**114,916**	119,482
Other assets [1]	**801**	984
Total consolidated assets	**$ 115,717**	$ 120,466

(1) The primary components of other assets at both December 31, 2022 and 2021, were the over-funded benefit plan assets related to the Company's qualified domestic pension plan and other intangible assets.

Enterprise-Wide Disclosures

The Company does not have revenue from transactions with a single customer amounting to 10 percent or more of its revenues.

The following table presents revenues of the Company's operations based on location:

(for the year ended December 31, in millions)	2022	2021	2020
U.S.	**$ 34,822**	$ 32,596	$ 30,123
Non-U.S.:			
Canada	**1,300**	1,351	1,278
Other Non-U.S.	**762**	869	580
Total Non-U.S.	**2,062**	2,220	1,858
Total revenues	**$ 36,884**	$ 34,816	$ 31,981

3. INVESTMENTS

Fixed Maturities

The amortized cost and fair value of investments in fixed maturities classified as available for sale were as follows:

(at December 31, 2022, in millions)	Amortized Cost	Allowance for Expected Credit Losses	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury securities and obligations of U.S. government and government agencies and authorities	**$ 5,798**	**$ —**	**$ 3**	**$ 363**	**$ 5,438**
Obligations of U.S. states, municipalities and political subdivisions:					
Local general obligation	**19,615**	**—**	**33**	**1,825**	**17,823**
Revenue	**11,076**	**—**	**29**	**907**	**10,198**
State general obligation	**1,104**	**—**	**3**	**88**	**1,019**
Pre-refunded	**2,323**	**—**	**17**	**1**	**2,339**
Total obligations of U.S. states, municipalities and political subdivisions	**34,118**	**—**	**82**	**2,821**	**31,379**
Debt securities issued by foreign governments	**1,049**	**—**	**—**	**55**	**994**
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities	**2,178**	**—**	**13**	**200**	**1,991**
Corporate and all other bonds	**34,237**	**3**	**37**	**2,913**	**31,358**
Total	**$ 77,380**	**$ 3**	**$ 135**	**$ 6,352**	**$ 71,160**

(at December 31, 2021, in millions)	Amortized Cost	Allowance for Expected Credit Losses	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury securities and obligations of U.S. government and government agencies and authorities	$ 3,574	$ —	$ 20	$ 32	$ 3,562
Obligations of U.S. states, municipalities and political subdivisions:					
Local general obligation	18,668	—	1,045	46	19,667
Revenue	11,274	—	693	27	11,940
State general obligation	1,158	—	67	2	1,223
Pre-refunded	3,825	—	207	—	4,032
Total obligations of U.S. states, municipalities and political subdivisions	34,925	—	2,012	75	36,862
Debt securities issued by foreign governments	1,041	—	7	7	1,041
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities	1,754	—	68	5	1,817
Corporate and all other bonds	33,457	3	1,249	175	34,528
Total	$ 74,751	$ 3	$ 3,356	$ 294	$ 77,810

3. INVESTMENTS (Continued)

The amortized cost and fair value of fixed maturities by contractual maturity follow. Actual maturities will differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

(at December 31, 2022, in millions)	Amortized Cost	Fair Value
Due in one year or less	$ 4,973	$ 4,941
Due after 1 year through 5 years	20,438	19,641
Due after 5 years through 10 years	24,982	22,224
Due after 10 years	24,809	22,363
	75,202	69,169
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities	2,178	1,991
Total	$ 77,380	$ 71,160

Pre-refunded bonds of $2.34 billion and $4.03 billion at December 31, 2022 and 2021, respectively, were bonds for which U.S. states or municipalities have established irrevocable trusts that are almost exclusively comprised of U.S. Treasury securities and obligations of U.S. government and government agencies and authorities. These trusts were created to fund the payment of principal and interest due under the bonds.

The Company's fixed maturity investment portfolio at December 31, 2022 and 2021 included $1.99 billion and $1.82 billion, respectively, of residential mortgage-backed securities, which include pass-through securities and collateralized mortgage obligations (CMOs). Included in the totals at December 31, 2022 and 2021 were $922 million and $846 million, respectively, of GNMA, FNMA, FHLMC (excluding FHA project loans) and Canadian government guaranteed residential mortgage-backed pass-through securities classified as available for sale. Also included in those totals were residential CMOs classified as available for sale with a fair value of $1.07 billion and $971 million at December 31, 2022 and 2021, respectively. Approximately 40% and 47% of the Company's CMO holdings at December 31, 2022 and 2021, respectively, were guaranteed by or fully collateralized by securities issued by GNMA, FNMA or FHLMC. The weighted average credit rating of the $647 million and $511 million of non-guaranteed CMO holdings at December 31, 2022 and 2021, respectively, was "Aaa/Aa1" at both December 31, 2022 and 2021. The weighted average credit rating of all of the above securities was "Aaa/Aa1" at both December 31, 2022 and 2021.

At December 31, 2022 and 2021, the Company held commercial mortgage-backed securities (CMBS, including FHA project loans) of $1.14 billion and $1.30 billion, respectively, which are included in "Corporate and all other bonds" in the tables above. At December 31, 2022 and 2021, approximately $131 million and $207 million of these securities, respectively, or the loans backing such securities, contained guarantees by the U.S. government or a government-sponsored enterprise. The weighted average credit rating of the $1.01 billion and $1.09 billion of non-guaranteed securities at December 31, 2022 and 2021, respectively, was "Aaa" at both dates. The CMBS portfolio is supported by loans that are diversified across economic sectors and geographical areas. The weighted average credit rating of the CMBS portfolio was "Aaa" at both December 31, 2022 and 2021.

At December 31, 2022 and 2021, the Company had $445 million and $253 million, respectively, of securities on loan as part of a tri-party lending agreement.

Proceeds from the sales of fixed maturities classified as available for sale were $5.66 billion, $3.17 billion and $3.06 billion in 2022, 2021 and 2020, respectively. Gross gains of $27 million, $74 million and $70 million and gross losses of $99 million, $5 million and $3 million were realized on those sales in 2022, 2021 and 2020, respectively.

At December 31, 2022 and 2021, the Company's insurance subsidiaries had $3.94 billion and $4.32 billion, respectively, of securities on deposit at financial institutions in certain states pursuant to the respective states' insurance regulatory requirements. Funds deposited with third parties to be used as collateral to secure various liabilities on behalf of insureds, cedants and other creditors had a fair value of $53 million and $58 million at December 31, 2022 and 2021, respectively. In addition, the Company utilizes Lloyd's trust deposits, whereby owned securities with a fair value of approximately $28 million and $33 million held by a wholly-owned subsidiary at December 31, 2022 and 2021, respectively, and $58 million and $34

3. INVESTMENTS (Continued)

million held by TRV at December 31, 2022 and 2021, respectively, were pledged into Lloyd's trust accounts to provide a portion of the capital needed to support the Company's obligations at Lloyd's.

Equity Securities

The cost and fair value of investments in equity securities were as follows:

(at December 31, 2022, in millions)	Cost	Gross Gains	Gross Losses	Fair Value
Common stock	**$ 706**	**$ 89**	**$ 32**	**$ 763**
Non-redeemable preferred stock	**41**	**3**	**—**	**44**
Total	**$ 747**	**$ 92**	**$ 32**	**$ 807**

(at December 31, 2021, in millions)	Cost	Gross Gains	Gross Losses	Fair Value
Common stock	$ 694	$ 137	$ 4	$ 827
Non-redeemable preferred stock	55	11	—	66
Total	$ 749	$ 148	$ 4	$ 893

The Company recognized $(61) million and $78 million of net gains (losses) on equity securities still held as of December 31, 2022 and 2021, respectively.

Real Estate

The Company's real estate investments include warehouses, office buildings and other commercial land and properties that are directly owned. The Company negotiates commercial leases with individual tenants through unrelated, licensed real estate brokers. Negotiated terms and conditions include, among others, rental rates, length of lease period and improvements to the premises to be provided by the landlord.

Proceeds from the sales of real estate investments were $10 million in 2022, $31 million in 2021 and $0 million in 2020. Gains of $4 million and $8 million were realized on those sales in 2022 and 2021, respectively. Net realized investment gains (losses) in 2022 also included $12 million of impairment charges related to real estate. Accumulated depreciation on real estate held for investment purposes was $519 million and $497 million at December 31, 2022 and 2021, respectively.

Future minimum rental income on operating leases relating to the Company's real estate properties is expected to be $116 million, $103 million, $78 million, $59 million and $45 million for 2023, 2024, 2025, 2026 and 2027, respectively, and $63 million for 2028 and thereafter.

Short-term Securities

The Company's short-term securities consist of Aaa-rated registered money market funds, U.S. Treasury securities, high-quality commercial paper (primarily A1/P1) and high-quality corporate securities purchased within a year to their maturity with a combined average of 41 days to maturity at December 31, 2022. The amortized cost of these securities, which totaled $3.47 billion and $3.84 billion at December 31, 2022 and 2021, respectively, approximated their fair value.

Other Investments

Included in other investments are private equity, hedge fund and real estate partnerships that are accounted for under the equity method of accounting and typically report their financial statement information to the Company one month to three months following the end of the reporting period. Accordingly, net investment income from these other investments is generally reflected in the Company's financial statements on a quarter lag basis.

3. INVESTMENTS (Continued)

Variable Interest Entities

Entities which do not have sufficient equity at risk to allow the entity to finance its activities without additional financial support or in which the equity investors, as a group, do not have the characteristic of a controlling financial interest are referred to as variable interest entities (VIE). A VIE is consolidated by the variable interest holder that is determined to have the controlling financial interest (primary beneficiary) as a result of having both the power to direct the activities of a VIE that most significantly impact the VIE's economic performance and the obligation to absorb losses or right to receive benefits from the VIE that could potentially be significant to the VIE. The Company determines whether it is the primary beneficiary of an entity subject to consolidation based on a qualitative assessment of the VIE's capital structure, contractual terms, nature of the VIE's operations and purpose and the Company's relative exposure to the related risks of the VIE on the date it becomes initially involved in the VIE. The Company reassesses its VIE determination with respect to an entity on an ongoing basis.

The Company is a passive investor in limited partner equity interests issued by third party VIEs. These include certain of the Company's investments in private equity limited partnerships, hedge funds and real estate partnerships where the Company is not related to the general partner. These investments are generally accounted for under the equity method and reported in the Company's consolidated balance sheet as other investments unless the Company is deemed the primary beneficiary. These equity interests generally cannot be redeemed. Distributions from these investments are received by the Company as a result of liquidation of the underlying investments of the funds and/or as income distribution. The Company's maximum exposure to loss with respect to these investments is limited to the investment carrying amounts reported in the Company's consolidated balance sheet and any unfunded commitment. The Company considers an investment in a VIE in which it has a 20% or greater equity interest as a significant VIE. Neither the Company's carrying amounts nor the unfunded commitments related to these significant VIE's are material individually or in the aggregate.

Unrealized Investment Losses

The following tables summarize, for all fixed maturities classified as available for sale in an unrealized loss position at December 31, 2022 and 2021, the aggregate fair value and gross unrealized loss by the length of time those securities have been continuously in an unrealized loss position. The fair value amounts reported in the tables are estimates that are prepared using the process described in note 4. The Company also relies upon estimates of several factors in its review and evaluation of individual investments, using the process described in note 1, in determining whether a credit loss impairment exists.

	Less than 12 months		12 months or longer		Total	
(at December 31, 2022, in millions)	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
Fixed maturities						
U.S. Treasury securities and obligations of U.S. government and government agencies and authorities	$ 2,835	$ 100	$ 1,679	$ 263	$ 4,514	$ 363
Obligations of U.S. states, municipalities and political subdivisions	19,251	1,975	3,134	846	22,385	2,821
Debt securities issued by foreign governments	604	22	367	33	971	55
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities	1,414	128	316	72	1,730	200
Corporate and all other bonds	24,080	1,635	6,096	1,278	30,176	2,913
Total	$ 48,184	$ 3,860	$ 11,592	$ 2,492	$ 59,776	$ 6,352

3. INVESTMENTS (Continued)

(at December 31, 2021, in millions)	Less than 12 months		12 months or longer		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
Fixed maturities						
U.S. Treasury securities and obligations of U.S. government and government agencies and authorities	$ 2,438	$ 32	$ 5	$ —	$ 2,443	$ 32
Obligations of U.S. states, municipalities and political subdivisions	3,873	69	153	6	4,026	75
Debt securities issued by foreign governments	452	7	7	—	459	7
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities	426	5	1	—	427	5
Corporate and all other bonds	7,306	153	436	22	7,742	175
Total	$ 14,495	$ 266	$ 602	$ 28	$ 15,097	$ 294

The following table summarizes, for all fixed maturities reported at fair value for which fair value was less than 80% of amortized cost at December 31, 2022, the gross unrealized investment loss by length of time those securities have continuously been in an unrealized loss position of greater than 20% of amortized cost:

(at December 31, 2022, in millions)	Period For Which Fair Value is Less Than 80% of Amortized Cost				
	3 months or less	Greater than 3 months, 6 months or less	Greater than 6 months, 12 months or less	Greater than 12 months	Total
Fixed maturities					
U.S. Treasury securities and obligations of U.S. government and government agencies and authorities	**$ —**	**$ —**	**$ —**	**$ —**	**$ —**
Obligations of U.S. states, municipalities and political subdivisions	**81**	**776**	**643**	**—**	**1,500**
Debt securities issued by foreign governments	**1**	**—**	**—**	**—**	**1**
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities	**4**	**48**	**—**	**—**	**52**
Corporate and all other bonds	**89**	**526**	**8**	**—**	**623**
Total	**$ 175**	**$ 1,350**	**$ 651**	**$ —**	**$ 2,176**

At December 31, 2021, the Company had no fixed maturity investments reported at fair value for which fair value was less than 80% of amortized cost. Recent increases in interest rates resulted in the gross unrealized investment losses above; however, since the Company generally holds its high-quality fixed maturity investments to maturity, the net unrealized loss is considered temporary in nature and is not expected to result in significant realized losses.

3. INVESTMENTS (Continued)

Impairment Charges

Credit impairment charges included in net realized investment gains (losses) in the consolidated statement of income were as follows:

(for the year ended December 31, in millions)	2022	2021	2020
Fixed maturities			
U.S. Treasury securities and obligations of U.S. government and government agencies and authorities	**$ 12**	$ —	$ —
Obligations of U.S. states, municipalities and political subdivisions	**14**	—	—
Debt securities issued by foreign governments	**—**	—	—
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities	**—**	—	—
Corporate and all other bonds	**—**	2	15
Total fixed maturities	**$ 26**	$ 2	$ 15

The following table presents changes in the allowance for expected credit losses on fixed maturities classified as available for sale for the category of Corporate and All Other Bonds (no other categories of fixed maturities currently have an allowance for expected credit losses):

	Fixed Maturities	
	Corporate and All Other Bonds	
(in millions)	At and For the Twelve Months Ended December 31, 2022	At and For the Twelve Months Ended December 31, 2021
Balance, beginning of period	**$ 3**	$ 2
Additions for expected credit losses on securities where no credit losses were previously recognized	**—**	1
Additions for expected credit losses on securities where credit losses were previously recognized	**1**	1
Reductions due to sales/defaults of credit-impaired securities	**(1)**	(1)
Reductions for impairments of securities which the Company intends to sell or more likely than not will be required to sell	**—**	—
Balance, end of period	**$ 3**	$ 3

Total net impairment charges, including credit impairments, reported in net realized investment gains (losses) in the consolidated statement of income, were $38 million, $2 million and $55 million for the years ended December 31, 2022, 2021 and 2020, respectively. Net realized investment gains (losses) in 2022 included $12 million of realized losses related to real estate. Net realized investment gains (losses) in 2020 included $40 million of realized losses related to the other-than-temporary impairment of the carrying value of an equity method investment included in other investments. Credit losses related to the fixed maturity portfolio for 2022 and 2021 represented less than 1% of the fixed maturity portfolio on a pre-tax basis and less than 1% of shareholders' equity on an after-tax basis at both December 31, 2022 and 2021.

Concentrations and Credit Quality

Concentrations of credit risk arise from exposure to counterparties that are engaged in similar activities and have similar economic characteristics that could cause their ability to meet contractual obligations to be similarly affected by changes in economic or other conditions. The Company seeks to mitigate credit risk by actively monitoring the creditworthiness of counterparties, obtaining collateral as deemed appropriate and applying controls that include credit approvals, limits of credit exposure and other monitoring procedures.

3. INVESTMENTS (Continued)

At December 31, 2022 and 2021, other than U.S. Treasury securities and obligations of U.S. government and government agencies and authorities, the Company was not exposed to any concentration of credit risk of a single issuer greater than 5% of the Company's shareholders' equity.

Included in fixed maturities are below investment grade securities totaling $930 million and $1.11 billion at December 31, 2022 and 2021, respectively. The Company defines its below investment grade securities as those securities rated below investment grade by external rating agencies, or the equivalent by the Company when a public rating does not exist. Such securities include below investment grade bonds that are publicly traded and certain other privately issued bonds that are classified as below investment grade loans.

Net Investment Income

(for the year ended December 31, in millions)	2022	2021	2020
Gross investment income			
Fixed maturities	**$ 2,113**	$ 1,989	$ 2,011
Equity securities	**17**	19	15
Short-term securities	**73**	7	44
Real estate investments	**66**	59	48
Other investments	**336**	999	146
Gross investment income	**2,605**	3,073	2,264
Investment expenses	**43**	40	37
Net investment income	**$ 2,562**	$ 3,033	$ 2,227

Changes in net unrealized gains (losses) on investment securities that are included as a separate component of other comprehensive income (loss) were as follows:

(at and for the year ended December 31, in millions)	2022	2021	2020
Changes in net unrealized investment gains (losses)			
Fixed maturities	**$ (9,279)**	$ (2,113)	$ 2,322
Other investments	**(1)**	(2)	—
Change in net pre-tax unrealized gains (losses) on investment securities	**(9,280)**	(2,115)	2,322
Related tax expense (benefit)	**(1,967)**	(456)	494
Change in net unrealized gains (losses) on investment securities	**(7,313)**	(1,659)	1,828
Balance, beginning of year	**2,415**	4,074	2,246
Balance, end of year	**$ (4,898)**	$ 2,415	$ 4,074

Derivative Financial Instruments

From time to time, the Company enters into certain derivative financial instruments that are reported on the balance sheet at fair value. The change in fair value of these investments is reported in net realized investment gains and losses.

The Company has a put/call option that was entered into in connection with a business acquisition that allows the Company to acquire the remaining shares of the acquired company at a future date. Net realized investment gains and losses related to this put/call option in 2022, 2021 and 2020 were not significant.

4. FAIR VALUE MEASUREMENTS

The Company's estimates of fair value for financial assets and financial liabilities are based on the framework established in the fair value accounting guidance. The framework is based on the inputs used in valuation, gives the highest priority to quoted prices in active markets and requires that observable inputs be used in the valuations when available. The disclosure of fair value estimates in the fair value accounting guidance hierarchy is based on whether the significant inputs into the valuation are observable. In determining the level of the hierarchy in which the estimate is disclosed, the highest priority is given to unadjusted quoted prices in active markets and the lowest priority to unobservable inputs that reflect the Company's significant market assumptions. The level in the fair value hierarchy within which the fair value measurement is reported is based on the lowest level input that is significant to the measurement in its entirety. The three levels of the hierarchy are as follows:

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

- Level 2 - Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in inactive markets; or valuations based on models where the significant inputs are observable (e.g., interest rates, yield curves, prepayment speeds, default rates, loss severities, etc.) or can be corroborated by observable market data.

- Level 3 - Valuations based on models where significant inputs are not observable. The unobservable inputs reflect the Company's own assumptions about the inputs that market participants would use.

Valuation of Investments Reported at Fair Value in Financial Statements

The fair value of a financial instrument is the estimated amount at which the instrument could be exchanged in an orderly transaction between knowledgeable, unrelated, willing parties, i.e., not in a forced transaction. The estimated fair value of a financial instrument may differ from the amount that could be realized if the security was sold in an immediate sale, e.g., a forced transaction. Additionally, the valuation of investments is more subjective when markets are less liquid due to the lack of market based inputs, which may increase the potential that the estimated fair value of an investment is not reflective of the price at which an actual transaction would occur.

For investments that have quoted market prices in active markets, the Company uses the unadjusted quoted market prices as fair value and includes these prices in the amounts disclosed in Level 1 of the hierarchy. The Company receives the quoted market prices from third party, nationally recognized pricing services. When quoted market prices are unavailable, the Company utilizes these pricing services to determine an estimate of fair value. The fair value estimates provided from these pricing services are included in the amount disclosed in Level 2 of the hierarchy. If quoted market prices and an estimate from a pricing service are unavailable, the Company produces an estimate of fair value based on internally developed valuation techniques, which, depending on the level of observable market inputs, will render the fair value estimate as Level 2 or Level 3. The Company bases all of its estimates of fair value for assets on the bid price as it represents what a third-party market participant would be willing to pay in an arm's length transaction.

Fixed Maturities

The Company utilized a pricing service to estimate fair value measurements for approximately 99% of its fixed maturities at both December 31, 2022 and 2021. The pricing service utilizes market quotations for fixed maturity securities that have quoted prices in active markets. Since fixed maturities other than U.S. Treasury securities generally do not trade on a daily basis, the pricing service prepares estimates of fair value measurements for these securities using its proprietary pricing applications, which include available relevant market information, benchmark curves, benchmarking of like securities, sector groupings and matrix pricing. Additionally, the pricing service uses an Option Adjusted Spread model to develop prepayment and interest rate scenarios.

The pricing service evaluates each asset class based on relevant market information, relevant credit information, perceived market movements and sector news. The market inputs utilized in the pricing evaluation, listed in the approximate order of priority, include: benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark

4. FAIR VALUE MEASUREMENTS (Continued)

securities, bids, offers, reference data, and industry and economic events. The extent of the use of each market input depends on the asset class and the market conditions. Depending on the security, the priority of the use of inputs may change or some market inputs may not be relevant. For some securities, additional inputs may be necessary.

The pricing service utilized by the Company has indicated that it will only produce an estimate of fair value if there is objectively verifiable information to produce a valuation. If the pricing service discontinues pricing an investment, the Company would be required to produce an estimate of fair value using some of the same methodologies as the pricing service but would have to make assumptions for any market-based inputs that were unavailable due to market conditions. The Company reviews the estimates of fair value provided by the pricing service and compares the estimates to the Company's knowledge of the market to determine if the estimates obtained are representative of the prices in the market. In addition, the Company has periodic discussions with the pricing service to discuss and understand any changes in process and their responsiveness to changes occurring in the markets. The Company also monitors all monthly price changes and further evaluates any securities whose value changed more than 10% from the prior month. The Company has implemented various other processes including randomly selecting purchased or sold securities and comparing execution prices to the estimates from the pricing service as well as reviewing securities whose valuation did not change from their previous valuation (stale price review). The Company also uses a second independent pricing service to further test the primary pricing service's valuation of the Company's fixed maturity portfolio. These processes have not highlighted any significant issues with the fair value estimates received from the primary pricing service.

The fair value estimates of most fixed maturity investments are based on observable market information rather than market quotes. Accordingly, the estimates of fair value for such fixed maturities, other than U.S. Treasury securities, provided by the pricing service are included in the amount disclosed in Level 2 of the hierarchy. The estimated fair value of U.S. Treasury securities is included in the amount disclosed in Level 1 as the estimates are based on unadjusted market prices.

The Company also holds certain fixed maturity investments which are not priced by the pricing service and, accordingly, estimates the fair value of such fixed maturities using an internal matrix that is based on market information regarding interest rates, credit spreads and liquidity. The underlying source data for calculating the matrix of credit spreads relative to the U.S. Treasury curve are observable market-based indices that relate to corporate and high-yield fixed maturity investments. The Company includes the fair value estimates of these corporate bonds in Level 2, since all significant inputs are market observable.

While the vast majority of the Company's fixed maturities are included in Level 2, the Company holds a number of municipal bonds and corporate bonds which are not valued by the pricing service and estimates the fair value of these bonds using either another internal pricing matrix, a present value income approach, or a broker quote (collectively, the other methodologies). The other methodologies include some unobservable inputs that are significant to the valuation. Due to the limited amount of observable market information available in the estimation of fair value, the Company includes the fair value estimates for bonds that are valued using the other methodologies in Level 3.

Equity Securities — Common Stock and Non-Redeemable Preferred Stock

For public common stock and non-redeemable preferred stocks, the Company receives prices from pricing services that are based on observable market transactions and includes these estimates in the amount disclosed in Level 1. When current market quotes in active markets are unavailable for certain non-redeemable preferred stocks held by the Company, the Company receives an estimate of fair value from the pricing services. The services utilize similar methodologies to price the non-redeemable preferred stocks as they do for the fixed maturities. The Company includes the fair value estimate for these non-redeemable preferred stocks in the amount disclosed in Level 2.

For certain investments in non-public common and preferred equity securities, the fair value estimate is determined either internally or by an external fund manager based on the impact of recent observable transactions related to the investment, recent filings, operating results, balance sheet stability, growth and other business and market sector fundamentals. Due to the significant unobservable inputs in these valuations, the Company included the fair value estimate of $371 million and $343 million for these investments at December 31, 2022 and 2021, respectively, in the amounts disclosed in Level 3.

4. FAIR VALUE MEASUREMENTS (Continued)

Other Investments

The Company holds investments in various publicly-traded securities which are reported in other investments. These investments include mutual funds and other small holdings. The $15 million and $18 million fair value of these investments at December 31, 2022 and 2021, respectively, was disclosed in Level 1.

Other Liabilities

The Company has a put/call option that was entered into in connection with a business acquisition that allows the Company to acquire the remaining shares of the acquired company at a future date. The fair value of the put/call at December 31, 2022 and 2021 was $2 million and $3 million, respectively, and was determined using an internal model and is based on the acquired company's financial performance, adjusted for a risk margin and discounted to present value. The Company includes the fair value estimate of the put/call in Level 3.

Fair Value Hierarchy

The following tables present the level within the fair value hierarchy at which the Company's financial assets and financial liabilities are measured on a recurring basis.

(at December 31, 2022, in millions)	Total	Level 1	Level 2	Level 3
Invested assets:				
Fixed maturities				
U.S. Treasury securities and obligations of U.S. government and government agencies and authorities	**$ 5,438**	**$ 5,438**	**$ —**	**$ —**
Obligations of U.S. states, municipalities and political subdivisions	**31,379**	**—**	**31,379**	**—**
Debt securities issued by foreign governments	**994**	**—**	**994**	**—**
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities	**1,991**	**—**	**1,991**	**—**
Corporate and all other bonds	**31,358**	**—**	**31,055**	**303**
Total fixed maturities	**71,160**	**5,438**	**65,419**	**303**
Equity securities				
Common stock	**763**	**418**	**—**	**345**
Non-redeemable preferred stock	**44**	**15**	**3**	**26**
Total equity securities	**807**	**433**	**3**	**371**
Other investments	**16**	**15**	**—**	**1**
Total	**$ 71,983**	**$ 5,886**	**$ 65,422**	**$ 675**
Other liabilities	**$ 2**	**$ —**	**$ —**	**$ 2**

4. FAIR VALUE MEASUREMENTS (Continued)

(at December 31, 2021, in millions)	Total	Level 1	Level 2	Level 3
Invested assets:				
Fixed maturities				
U.S. Treasury securities and obligations of U.S. government and government agencies and authorities	$ 3,562	$ 3,562	$ —	$ —
Obligations of U.S. states, municipalities and political subdivisions	36,862	—	36,858	4
Debt securities issued by foreign governments	1,041	—	1,041	—
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities	1,817	—	1,762	55
Corporate and all other bonds	34,528	—	34,339	189
Total fixed maturities	77,810	3,562	74,000	248
Equity securities				
Common stock	827	509	—	318
Non-redeemable preferred stock	66	21	20	25
Total equity securities	893	530	20	343
Other investments	23	18	—	5
Total	$ 78,726	$ 4,110	$ 74,020	$ 596
Other liabilities	$ 3	$ —	$ —	$ 3

The following tables present the changes in the Level 3 fair value category for the years ended December 31, 2022 and 2021.

(in millions)	Fixed Maturities	Equity Securities	Other Investments	Total
Balance at December 31, 2021	**$ 248**	**$ 343**	**$ 5**	**$ 596**
Total realized and unrealized investment gains (losses):				
Reported in net realized investment gains (losses) [1]	**1**	**33**	**2**	**36**
Reported in increases in other comprehensive income (loss)	**(13)**	**—**	**—**	**(13)**
Purchases, sales and settlements/maturities:				
Purchases	**226**	**7**	**—**	**233**
Sales	**—**	**—**	**(1)**	**(1)**
Settlements/maturities	**(55)**	**—**	**(2)**	**(57)**
Gross transfers into Level 3	**—**	**3**	**—**	**3**
Gross transfers out of Level 3	**(104)**	**(15)**	**(3)**	**(122)**
Balance at December 31, 2022	**$ 303**	**$ 371**	**$ 1**	**$ 675**
Amount of total realized investment gains (losses) for the period included in the consolidated statement of income attributable to changes in the fair value of assets still held at the reporting date	**$ —**	**$ 33**	**$ 1**	**$ 34**

(1) Includes impairments on investments held at the end of the period as well as amortization on fixed maturities.

The Company also includes in Level 3 the put/call option entered into in connection with a business acquisition that is reported in other liabilities and had a fair value of $2 million at December 31, 2022.

4. FAIR VALUE MEASUREMENTS (Continued)

(in millions)	Fixed Maturities	Equity Securities	Other Investments	Total
Balance at December 31, 2020	$ 166	$ 31	$ 4	$ 201
Total realized and unrealized investment gains (losses):				
Reported in net realized investment gains (losses) [1]	(1)	5	1	5
Reported in increases in other comprehensive income (loss)	(3)	—	—	(3)
Purchases, sales and settlements/maturities:				
Purchases	227	307	—	534
Sales	—	—	—	—
Settlements/maturities	(48)	—	—	(48)
Gross transfers into Level 3	—	—	—	—
Gross transfers out of Level 3	(93)	—	—	(93)
Balance at December 31, 2021	$ 248	$ 343	$ 5	$ 596
Amount of total realized investment gains (losses) for the period included in the consolidated statement of income attributable to changes in the fair value of assets still held at the reporting date	$ —	$ 5	$ 1	$ 6

(1) Includes impairments on investments held at the end of the period as well as amortization on fixed maturities.

The Company also includes in Level 3 the put/call option entered into in connection with a business acquisition that is reported in other liabilities and had a fair value of $3 million at December 31, 2021.

Financial Instruments Disclosed, But Not Carried, At Fair Value

The following tables present the carrying value and fair value of the Company's financial assets and financial liabilities disclosed, but not carried, at fair value, and the level within the fair value hierarchy at which such assets and liabilities are categorized.

(at December 31, 2022, in millions)	Carrying Value	Fair Value	Level 1	Level 2	Level 3
Financial assets:					
Short-term securities	**$ 3,470**	**$ 3,470**	**$ 871**	**$ 2,546**	**$ 53**
Financial liabilities:					
Debt	**$ 7,192**	**$ 6,509**	**$ —**	**$ 6,509**	**$ —**
Commercial paper	**100**	**100**	**—**	**100**	**—**

(at December 31, 2021, in millions)	Carrying Value	Fair Value	Level 1	Level 2	Level 3
Financial assets:					
Short-term securities	$ 3,836	$ 3,836	$ 1,163	$ 2,615	$ 58
Financial liabilities:					
Debt	$ 7,190	$ 9,085	$ —	$ 9,085	$ —
Commercial paper	100	100	—	100	—

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

5. ALLOWANCE FOR EXPECTED CREDIT LOSSES

Premiums Receivable

The following table presents the balances of premiums receivable, net of the allowance for expected credit losses, at December 31, 2022 and 2021, and the changes in the allowance for expected credit losses for the twelve months ended December 31, 2022 and 2021.

	At and For the Twelve Months Ended December 31, 2022		At and For the Twelve Months Ended December 31, 2021	
(in millions)	Premiums Receivable, Net of Allowance for Expected Credit Losses	Allowance for Expected Credit Losses	Premiums Receivable, Net of Allowance for Expected Credit Losses	Allowance for Expected Credit Losses
Balance, beginning of period	**$ 8,085**	**$ 107**	$ 7,829	$ 105
Current period change for expected credit losses		**54**		65
Write-offs of uncollectible premiums receivable		**84**		63
Balance, end of period	**$ 8,922**	**$ 77**	$ 8,085	$ 107

Reinsurance Recoverables

The following table presents the balances of reinsurance recoverables, net of the allowance for estimated uncollectible reinsurance, at December 31, 2022 and 2021, and the changes in the allowance for estimated uncollectible reinsurance for the twelve months ended December 31, 2022 and 2021.

	At and For the Twelve Months Ended December 31, 2022		At and For the Twelve Months Ended December 31, 2021	
(in millions)	Reinsurance Recoverables, Net of Allowance for Estimated Uncollectible Reinsurance	Allowance for Estimated Uncollectible Reinsurance	Reinsurance Recoverables, Net of Allowance for Estimated Uncollectible Reinsurance	Allowance for Estimated Uncollectible Reinsurance
Balance, beginning of period	**$ 8,452**	**$ 141**	$ 8,350	$ 146
Current period change for estimated uncollectible reinsurance		**(9)**		(5)
Write-offs of uncollectible reinsurance recoverables		**—**		—
Balance, end of period	**$ 8,063**	**$ 132**	$ 8,452	$ 141

Of the total reinsurance recoverables at December 31, 2022, $5.72 billion, or 87%, were rated by A.M. Best Company, after deducting mandatory pools and associations and before allowances for estimated uncollectible reinsurance. The Company utilizes updated A.M. Best credit ratings on a quarterly basis when determining the allowance. Of the total rated by A.M. Best Company, 94% were rated A- or better. The remaining 13% of reinsurance recoverables were comprised of the following: 6% related to captive insurance companies, 1% related to the Company's participation in voluntary pools, and 6% were balances from other companies not rated by A.M. Best Company. Certain of the Company's reinsurance recoverables are collateralized by letters of credit, funds held or trust agreements.

5. ALLOWANCE FOR EXPECTED CREDIT LOSSES (Continued)

Contractholder Receivables

The following table presents the balances of contractholder receivables, net of the allowance for expected credit losses, at December 31, 2022 and 2021, and the changes in the allowance for expected credit losses for the twelve months ended December 31, 2022 and 2021.

	At and For the Twelve Months Ended December 31, 2022		At and For the Twelve Months Ended December 31, 2021	
(in millions)	Contractholder Receivables, Net of Allowance for Expected Credit Losses	Allowance for Expected Credit Losses	Contractholder Receivables, Net of Allowance for Expected Credit Losses	Allowance for Expected Credit Losses
Balance, beginning of period	**$ 3,890**	**$ 21**	$ 4,242	$ 19
Current period change for expected credit losses		**(3)**		2
Write-offs of uncollectible contractholder receivables		**1**		—
Balance, end of period	**$ 3,579**	**$ 17**	$ 3,890	$ 21

6. REINSURANCE

The Company's consolidated financial statements reflect the effects of assumed and ceded reinsurance transactions. Assumed reinsurance refers to the acceptance of certain insurance risks that other insurance companies have underwritten. Ceded reinsurance involves transferring certain insurance risks (along with the related written and earned premiums) the Company has underwritten to other insurance companies who agree to share these risks. The primary purpose of ceded reinsurance is to protect the Company, at a cost, from losses in excess of the amount it is prepared to accept and to protect the Company's capital. Reinsurance is placed on both a quota-share and excess-of-loss basis. Ceded reinsurance arrangements do not discharge the Company as the primary insurer, except for instances where the primary policy or policies have been novated, such as in certain structured settlement agreements.

The Company utilizes a corporate catastrophe excess-of-loss reinsurance treaty with unaffiliated reinsurers to manage its exposure to losses resulting from catastrophes and to protect its capital. In addition to the coverage provided under this treaty, the Company also utilizes a reinsurance agreement entered into in connection with catastrophe bonds issued by Long Point Re IV to protect against certain weather-related and earthquake losses in the Northeastern United States, a Northeast property catastrophe excess-of-loss reinsurance treaty to protect against losses resulting from weather-related and earthquake catastrophes in the Northeastern United States and an underlying property aggregate catastrophe excess-of-loss reinsurance treaty to protect against the accumulation of certain property losses in North America. The Company also utilizes excess-of-loss treaties to protect against earthquake losses up to a certain threshold in Business Insurance (for certain markets) and for Personal Insurance, and several reinsurance treaties specific to its international operations.

The Company monitors the financial condition of its reinsurers under voluntary reinsurance arrangements to evaluate the collectability of amounts due from reinsurers and as a basis for determining the reinsurers with which the Company conducts ongoing business. In addition, in the ordinary course of business, the Company may become involved in coverage disputes with its reinsurers. Some of these disputes could result in lawsuits and arbitrations brought by or against the reinsurers to determine the Company's rights and obligations under the various reinsurance agreements. The Company employs dedicated specialists and strategies to manage reinsurance collections and disputes.

Included in reinsurance recoverables are amounts related to involuntary reinsurance arrangements. The Company is required to participate in various involuntary reinsurance arrangements through assumed reinsurance, principally with regard to residual market mechanisms in workers' compensation and automobile insurance, as well as homeowners' insurance in certain coastal areas. In addition, the Company provides services for several of these involuntary arrangements (mandatory pools and associations) under which it writes such residual market business directly, then cedes 100% of this business to the mandatory

6. REINSURANCE (Continued)

pool. Such participations and servicing arrangements are arranged to mitigate credit risk to the Company, as any ceded balances are jointly backed by all the pool members.

Also included in reinsurance recoverables are amounts related to certain structured settlements. Structured settlements are annuities purchased from various life insurance companies to settle certain personal physical injury claims, of which workers' compensation claims comprise a significant portion. In cases where the Company did not receive a release from the claimant, the structured settlement is included in reinsurance recoverables and the related claim cost is included in the liability for claims and claim adjustment expense reserves, as the Company retains the contingent liability to the claimant. If it is expected that the life insurance company is not able to pay, the Company would recognize an impairment of the related reinsurance recoverable if, and to the extent, the purchased annuities are not covered by state guaranty associations. In the event that the life insurance company fails to make the required annuity payments, the Company would be required to make such payments.

The following is a summary of reinsurance financial data reflected in the consolidated statement of income:

(for the year ended December 31, in millions)	2022	2021	2020
Written premiums			
Direct	**$ 36,648**	$ 33,180	$ 30,762
Assumed	**1,228**	1,064	1,001
Ceded	**(2,462)**	(2,285)	(2,031)
Total net written premiums	**$ 35,414**	$ 31,959	$ 29,732
Earned premiums			
Direct	**$ 34,948**	$ 31,977	$ 29,978
Assumed	**1,145**	1,032	1,010
Ceded	**(2,330)**	(2,154)	(1,944)
Total net earned premiums	**$ 33,763**	$ 30,855	$ 29,044
Percentage of assumed earned premiums to net earned premiums	**3.4 %**	3.3 %	3.5 %
Ceded claims and claim adjustment expenses incurred	**$ 1,187**	$ 1,184	$ 1,030

Ceded premiums include the premiums paid for coverage provided by the Company's catastrophe bonds.

Reinsurance recoverables include amounts recoverable on both paid and unpaid claims and claim adjustment expenses and were as follows:

(at December 31, in millions)	2022	2021
Gross reinsurance recoverables on paid and unpaid claims and claim adjustment expenses	**$ 3,792**	$ 3,931
Gross structured settlements	**2,802**	2,900
Mandatory pools and associations	**1,601**	1,762
Gross reinsurance recoverables	**8,195**	8,593
Allowance for estimated uncollectible reinsurance	**(132)**	(141)
Net reinsurance recoverables	**$ 8,063**	$ 8,452

Terrorism Risk Insurance Program

The Terrorism Risk Insurance Program is a Federal program administered by the Department of the Treasury authorized through December 31, 2027 that provides for a system of shared public and private compensation for certain insured losses resulting from certified acts of terrorism.

In order 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, in

6. REINSURANCE (Continued)

consultation with the Secretary of Homeland Security and the Attorney General of the United States. The annual aggregate industry loss minimum under the program is $200 million. The program excludes from participation the following types of insurance: Federal crop insurance, private mortgage insurance, financial guaranty insurance, medical malpractice insurance, health or life insurance, flood insurance, reinsurance, 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 program. All commercial property and casualty insurers licensed in the United States are generally required to participate in the program. Under the program, a participating insurer, in exchange for making terrorism insurance available, is entitled to be reimbursed by the Federal Government for 80% of subject losses, after an insurer deductible, subject to an annual cap.

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 $3.15 billion for 2023. The annual cap limits the amount of aggregate subject losses for all participating insurers to $100 billion. Once subject losses have reached the $100 billion aggregate during a program year, participating insurers will not be liable under the program for additional covered terrorism losses for that program year. There have been no terrorism-related losses that have triggered program coverage since the program was established. Given that the law establishing the program remains untested, there is substantial uncertainty as to how it will be applied if an act of terrorism is certified under the program. In addition, application of the program to a specific event will depend upon whether the government has designated such event as a covered event. It is also possible that future legislative action could change or eliminate the program. 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 involving nuclear, biological, chemical or radiological events, could be material to the Company's operating results, financial position and/or liquidity in future periods. In addition, the Company may not have sufficient resources to respond to claims arising from a high frequency of high severity natural catastrophes and/or of man-made catastrophic events involving conventional means. While the Company seeks to manage its exposure to man-made catastrophic events involving conventional means, the Company may not have sufficient resources to respond to claims arising out of one or more man-made catastrophic events involving nuclear, biological, chemical or radiological means.

7. GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill

The following table presents the carrying amount of the Company's goodwill by segment. Each reportable segment includes goodwill associated with the Company's international business which is subject to the impact of changes in foreign currency exchange rates.

(at December 31, in millions)	2022	2021
Business Insurance	**$ 2,565**	$ 2,610
Bond & Specialty Insurance	**550**	550
Personal Insurance	**811**	822
Other	**26**	26
Total	**$ 3,952**	$ 4,008

7. GOODWILL AND OTHER INTANGIBLE ASSETS (Continued)

Other Intangible Assets

The following tables present a summary of the Company's other intangible assets by major asset class:

(at December 31, 2022, in millions)	Gross Carrying Amount	Accumulated Amortization	Net
Subject to amortization			
Customer-related	**$ 96**	**$ 48**	**$ 48**
Contract-based [1]	**204**	**191**	**13**
Total subject to amortization	**300**	**239**	**61**
Not subject to amortization	**226**	**—**	**226**
Total	**$ 526**	**$ 239**	**$ 287**

(at December 31, 2021, in millions)	Gross Carrying Amount	Accumulated Amortization	Net
Subject to amortization			
Customer-related	$ 104	$ 41	$ 63
Contract-based [1]	205	188	17
Total subject to amortization	309	229	80
Not subject to amortization	226	—	226
Total	$ 535	$ 229	$ 306

(1) Contract-based intangible assets subject to amortization are comprised of fair value adjustments on claims and claim adjustment expense reserves, reinsurance recoverables and other contract-related intangible assets. Fair value adjustments recorded in connection with insurance acquisitions were based on management's estimate of nominal claims and claim adjustment expense reserves and reinsurance recoverables. The method used calculated a risk adjustment to a risk-free discounted reserve that would, if reserves ran off as expected, produce results that yielded the assumed cost-of-capital on the capital supporting the loss reserves. The fair value adjustments are reported as other intangible assets on the consolidated balance sheet, and the amounts measured in accordance with the acquirer's accounting policies for insurance contracts have been reported as part of the claims and claim adjustment expense reserves and reinsurance recoverables. The intangible assets are being recognized into income over the expected payment pattern. Because the time value of money and the risk adjustment (cost of capital) components of the intangible assets run off at different rates, the amount recognized in income may be a net benefit in some periods and a net expense in other periods.

Amortization expense of intangible assets was $13 million, $14 million and $14 million for the years ended December 31, 2022, 2021 and 2020, respectively. Amortization expense for all intangible assets subject to amortization is estimated to be $12 million in 2023, $12 million in 2024, $11 million in 2025, $11 million in 2026 and $8 million in 2027. Amortization expense for intangible assets arising from insurance contracts acquired in a business combination is estimated to be $3 million in 2023, $2 million in 2024, $2 million in 2025, $1 million in 2026 and $1 million in 2027.

8. INSURANCE CLAIM RESERVES

Claims and claim adjustment expense reserves were as follows:

(at December 31, in millions)	2022	2021
Property-casualty	**$ 58,643**	$ 56,897
Accident and health	**6**	10
Total	**$ 58,649**	$ 56,907

The following table presents a reconciliation of beginning and ending property casualty reserve balances for claims and claim adjustment expenses:

(at and for the year ended December 31, in millions)	2022	2021	2020
Claims and claim adjustment expense reserves at beginning of year	**$ 56,897**	$ 54,510	$ 51,836
Less reinsurance recoverables on unpaid losses	**8,209**	8,153	8,035
Cumulative effect of adoption of updated accounting guidance for credit losses at January 1, 2020	**—**	—	53
Net reserves at beginning of year	**48,688**	46,357	43,854
Estimated claims and claim adjustment expenses for claims arising in the current year	**23,308**	20,698	19,285
Estimated decrease in claims and claim adjustment expenses for claims arising in prior years	**(537)**	(484)	(267)
Total increases	**22,771**	20,214	19,018
Claims and claim adjustment expense payments for claims arising in:			
Current year	**9,406**	8,401	7,497
Prior years	**10,945**	9,470	9,092
Total payments	**20,351**	17,871	16,589
Unrealized foreign exchange loss (gain)	**(255)**	(12)	74
Net reserves at end of year	**50,853**	48,688	46,357
Plus reinsurance recoverables on unpaid losses	**7,790**	8,209	8,153
Claims and claim adjustment expense reserves at end of year	**$ 58,643**	$ 56,897	$ 54,510

Gross claims and claim adjustment expense reserves at December 31, 2022 increased by $1.75 billion over December 31, 2021, primarily reflecting the impacts of (i) higher volumes of insured exposures, (ii) loss cost trends for the current accident year and (iii) catastrophe losses in 2022, partially offset by (iv) claim payments made during 2022 and (v) net favorable prior year reserve development. Gross claims and claim adjustment expense reserves at December 31, 2021 increased by $2.39 billion over December 31, 2020, primarily reflecting the impacts of (i) higher volumes of insured exposures, (ii) catastrophe losses in 2021, (iii) loss cost trends for the current accident year and (iv) reduced claim settlement activity largely due to continued disruptions in the judicial system related to COVID-19, partially offset by (v) claim payments made during 2021.

Reinsurance recoverables on unpaid losses at December 31, 2022 decreased by $419 million from December 31, 2021, primarily reflecting cash collections and decreases in mandatory pools and associations and structured settlements. Reinsurance recoverables on unpaid losses at December 31, 2021 increased by $56 million over December 31, 2020, primarily reflecting the impacts of catastrophe losses in 2021, partially offset by a lower level of structured settlements and recoverables from mandatory pools and associations.

PG&E Corporation and Pacific Gas and Electric Company (together, PG&E) emerged from bankruptcy on July 1, 2020, the date the Debtors' and Shareholder Proponents' Joint Chapter 11 Plan of Reorganization Dated June 19, 2020 (the Plan) became effective. In accordance with the terms of the Plan, PG&E funded a trust from which the Company and other subrogation claimants have received, and/or will receive, recoveries related to the 2017 and 2018 California wildfires. In 2020, the Company recognized a subrogation benefit related to these claims of $403 million.

8. INSURANCE CLAIM RESERVES (Continued)

Included in the claims and claim adjustment expense reserves are reserves for long-term disability and annuity claim payments, primarily arising from workers' compensation insurance and workers' compensation excess insurance policies, that are discounted to the present value of the estimated future payments. The discount rates used were a range of 3.5% to 5.0% at both December 31, 2022 and 2021. Total reserves net of the discount were $2.72 billion and $2.74 billion, and the related amount of discount was $1.12 billion and $1.15 billion, at December 31, 2022 and 2021, respectively. Accretion of the discount is reported as part of "claims and claim adjustment expenses" in the consolidated statement of income and was $46 million, $48 million and $49 million for the years ended December 31, 2022, 2021 and 2020.

Prior Year Reserve Development

The following disclosures regarding reserve development are on a "net of reinsurance" basis.

2022

In 2022, estimated claims and claim adjustment expenses incurred included $537 million of net favorable development for claims arising in prior years, including $649 million of net favorable prior year reserve development and $46 million of accretion of discount that impacted the Company's results of operations.

Business Insurance. Net favorable prior year reserve development in 2022 totaled $381 million, primarily driven by the following:

- *Workers' compensation* - better than expected loss experience in domestic operations for multiple accident years;
- *Commercial property* - better than expected loss experience in domestic operations for recent accident years; and
- *Commercial multi-peril (excluding asbestos and environmental)* - better than expected loss experience in domestic operations for recent accident years;

Partially offset by:

- *Asbestos reserves* - an addition of $212 million, primarily in the domestic operations' general liability product line;
- *General liability (excluding asbestos and environmental)* - higher than expected loss experience in the segment's domestic operations for excess coverages for multiple accident years, as well as an increase to general liability reserves in the Company's run-off operations; and
- *Environmental reserves* - an addition primarily in the domestic operations' general liability product line.

Bond & Specialty Insurance. Net favorable prior year reserve development in 2022 totaled $222 million, primarily driven by better than expected loss experience in the domestic operations' fidelity and surety product lines for recent accident years.

Personal Insurance. Net favorable prior year reserve development in 2022 totaled $46 million.

2021

In 2021, estimated claims and claim adjustment expenses incurred included $484 million of net favorable development for claims arising in prior years, including $538 million of net favorable prior year reserve development and $48 million of accretion of discount that impacted the Company's results of operations.

Business Insurance. Net favorable prior year reserve development in 2021 totaled $173 million, primarily driven by the following:

- *Workers' compensation* - better than expected loss experience in the segment's domestic operations for multiple accident years;

8. INSURANCE CLAIM RESERVES (Continued)

- *Commercial property* - better than expected loss experience in the segment's domestic operations for recent accident years;
- *International* - better than expected loss experience for recent accident years; and
- *Commercial automobile* - better than expected loss experience in the segment's domestic operations for recent accident years;

Partially offset by:

- *Asbestos reserves* - an addition of $225 million, primarily in the segment's domestic general liability product line;
- *Other reserves* - an addition related to run-off operations; and
- *Environmental reserves* - an addition primarily in the segment's domestic general liability product line.

Bond & Specialty Insurance. Net favorable prior year reserve development in 2021 totaled $105 million, primarily driven by better than expected loss experience in the segment's domestic operations in the fidelity and surety product lines for multiple accident years, partially offset by higher than expected loss experience in the general liability product line for management liability coverages for multiple accident years.

Personal Insurance. Net favorable prior year reserve development in 2021 totaled $260 million, primarily driven by better than expected loss experience in the segment's domestic operations in both the homeowners and other and automobile product lines for recent accident years.

2020

In 2020, estimated claims and claim adjustment expenses incurred included $267 million of net favorable development for claims arising in prior years, including $351 million of net favorable prior year reserve development and $49 million of accretion of discount that impacted the Company's results of operations.

Business Insurance. Net unfavorable prior year reserve development in 2020 totaled $91 million, primarily driven by the following:

- *Asbestos reserves* - an addition of $295 million, primarily in the segment's domestic general liability product line;
- *General liability (excluding asbestos and environmental)* - higher than expected loss experience in the segment's domestic operations for primary and excess coverages for recent accident years, as well as an increase to general liability reserves in the Company's run-off operations related to policies issued more than 20 years ago;
- *Commercial automobile* - higher than expected loss experience in the segment's domestic operations for recent accident years; and
- *Commercial multi-peril (excluding PG&E subrogation recoveries and asbestos and environmental)* - higher than expected loss experience in the segment's domestic operations for recent accident years;

Partially offset by:

- *Workers' compensation* - better than expected loss experience in the segment's domestic operations for multiple accident years;
- *Commercial property (excluding PG&E subrogation recoveries)* - better than expected loss experience in the segment's domestic operations for multiple accident years; and

8. INSURANCE CLAIM RESERVES (Continued)

- *PG&E subrogation recoveries* - $81 million of recoveries described above.

Bond & Specialty Insurance. Net unfavorable prior year reserve development in 2020 totaled $1 million, as higher than expected loss experience in the domestic general liability product line for management liability coverages for recent accident years was largely offset by better than expected loss experience in the surety product line for multiple accident years.

Personal Insurance. Net favorable prior year reserve development in 2020 totaled $443 million, primarily driven by $322 million of PG&E subrogation recoveries described above and better than expected loss experience in the segment's domestic operations in the automobile product line for recent accident years.

Claims Development

The following is a summary of claims and claim adjustment expense reserves, including certain components, for the Company's major product lines by reporting segment at December 31, 2022.

(at December 31, 2022, in millions)	Net Undiscounted Claims and Claim Adjustment Expense Reserves	Discount (Net of Reinsurance)	Subtotal: Net Claims and Claim Adjustment Expense Reserves	Reinsurance Recoverables on Unpaid Losses (4)	Claims and Claim Adjustment Expense Reserves
Business Insurance					
General liability	$ 9,269	$ (135)	$ 9,134	$ 949	$ 10,083
Commercial property	1,109	—	1,109	459	1,568
Commercial multi-peril	4,819	—	4,819	219	5,038
Commercial automobile	3,856	—	3,856	291	4,147
Workers' compensation (1)	16,473	(934)	15,539	629	16,168
Bond & Specialty Insurance					
General liability	2,388	—	2,388	204	2,592
Fidelity and surety	564	—	564	6	570
Personal Insurance					
Automobile	3,654	—	3,654	390	4,044
Homeowners (excluding Other)	2,327	—	2,327	108	2,435
International - Canada	708	—	708	20	728
Subtotal — claims and allocated claim adjustment expenses for the products presented in the development tables below	45,167	(1,069)	44,098	3,275	47,373
Other insurance contracts (2)	4,187	(4)	4,183	1,786	5,969
Unallocated loss adjustment expense reserves	2,481	—	2,481	14	2,495
Structured settlements (3)	—	—	—	2,758	2,758
Other	91	—	91	(43)	48
Total property-casualty	51,926	(1,073)	50,853	7,790	58,643
Accident and health	—	—	—	6	6
Total	$ 51,926	$ (1,073)	$ 50,853	$ 7,796	$ 58,649

(1) Net discount amount includes discount of $51 million on reinsurance recoverables for long-term disability and annuity claim payments.

(2) Primarily includes residual market, international (other than operations in Canada within the Personal Insurance segment) and runoff assumed reinsurance business.

8. INSURANCE CLAIM RESERVES (Continued)

(3) Includes structured settlements in cases where the Company did not receive a release from the claimant.

(4) Total reinsurance recoverables (on paid and unpaid losses) at December 31, 2022 were $8.06 billion.

The claim development tables that follow present, by accident year, incurred and cumulative paid claims and allocated claim adjustment expense on a historical basis. This claim development information is presented on an undiscounted, net of reinsurance basis for ten years, or the number of years for which claims incurred typically remain outstanding if less than ten years. The claim development tables also provide the historical average annual percentage payout of incurred claims by age, net of reinsurance, as supplementary information (identified as unaudited in the tables below). The historical average annual percentage payout for incurred claims is subject to variability due to the impact of both large claim activity and subrogation recoveries, among other items.

8. INSURANCE CLAIM RESERVES (Continued)

Business Insurance

General Liability

(dollars in millions)

Accident Year	For the Years Ended December 31, 2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	IBNR Reserves Dec 31, 2022	Cumulative Number of Reported Claims
	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited											
2013	$ 965	$ 975	$ 958	$ 940	$ 927	$ 933	$ 975	$ 975	$ 963	$ 963	$ 67	22,807
2014		976	989	983	948	956	1,013	988	979	971	86	22,619
2015			998	956	923	967	1,057	1,087	1,072	1,082	78	21,778
2016				1,075	1,058	1,087	1,187	1,204	1,179	1,185	143	20,662
2017					1,133	1,143	1,196	1,234	1,226	1,243	171	19,450
2018						1,253	1,312	1,344	1,395	1,477	294	19,508
2019							1,447	1,486	1,498	1,567	452	18,691
2020								1,467	1,493	1,470	719	13,622
2021									1,591	1,589	1,058	12,974
2022										1,696	1,452	11,568
									Total	$13,243		

Accident Year	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited									
2013	$ 35	$ 175	$ 363	$ 498	$ 639	$ 745	$ 816	$ 836	$ 853	$ 868
2014		37	163	321	515	640	750	805	832	849
2015			36	137	336	558	740	828	875	927
2016				35	191	421	649	758	858	951
2017					40	180	378	552	724	914
2018						42	202	441	709	939
2019							51	233	482	816
2020								61	244	458
2021									67	231
2022										81
									Total	$7,034

Liability for Claims And Allocated Claim Adjustment Expenses, Net of Reinsurance		
	2013 - 2022	Before 2013
Total net liability	$ 6,209	$ 3,060
		$ 9,269

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance Unaudited 1	2	3	4	5	6	7	8	9	10
	3.6 %	11.8 %	17.0 %	18.2 %	13.8 %	10.9 %	6.3 %	3.2 %	1.8 %	1.6 %

8. INSURANCE CLAIM RESERVES (Continued)

Commercial Property

(dollars in millions)

	For the Years Ended December 31,						
	2018	2019	2020	2021	2022		
	Incurred Claims and Allocated Claims Adjustment Expenses, Net of Reinsurance						
	Unaudited						
Accident Year						IBNR Reserves December 31, 2022	Cumulative Number of Reported Claims
2018	$ 1,093	$ 1,079	$ 1,070	$ 1,068	$ 1,051	$ 14	25,094
2019		1,069	1,034	1,031	1,039	3	25,427
2020			1,107	1,025	1,005	38	25,638
2021				1,236	1,190	2	25,436
2022					1,309	227	23,549
				Total	$ 5,594		

	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						
	Unaudited						
Accident Year						Liability for Claims And Allocated Claim Adjustment Expenses, Net of Reinsurance	
2018	$ 561	$ 928	$ 981	$ 1,005	$ 1,009		
2019		610	957	1,001	1,012		
2020			580	857	907		
2021				645	1,068	2018 - 2022	Before 2018
2022					624		
				Total	$ 4,620	$ 974	$ 135
						Total net liability	$ 1,109

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance				
	Unaudited				
Years	1	2	3	4	5
	54.3 %	32.8 %	4.7 %	1.7 %	0.4 %

8. INSURANCE CLAIM RESERVES (Continued)

Commercial Multi-Peril

(dollars in millions)

Accident Year	For the Years Ended December 31, 2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	IBNR Reserves December 31, 2022	Cumulative Number of Reported Claims
	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited											
2013	$1,615	$1,623	$1,620	$1,609	$1,591	$1,600	$1,599	$1,598	$1,593	$ 1,591	$ 19	84,057
2014		1,663	1,627	1,625	1,617	1,626	1,627	1,627	1,622	1,619	23	78,513
2015			1,568	1,625	1,593	1,597	1,606	1,593	1,584	1,571	32	72,237
2016				1,662	1,623	1,598	1,590	1,601	1,587	1,579	42	69,487
2017					1,872	1,928	1,956	1,919	1,935	1,943	80	72,491
2018						1,976	2,114	2,092	2,112	2,121	108	76,526
2019							2,017	2,087	2,089	2,103	182	67,315
2020								2,142	2,141	2,126	424	69,470
2021									2,164	2,097	521	55,421
2022										2,502	1,036	42,299
									Total	$19,252		

Accident Year	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited									
2013	$ 644	$ 987	$1,167	$1,304	$1,410	$1,475	$1,516	$1,532	$1,544	$ 1,556
2014		628	956	1,154	1,328	1,448	1,512	1,544	1,560	1,577
2015			595	970	1,144	1,310	1,409	1,452	1,489	1,512
2016				585	950	1,133	1,278	1,373	1,437	1,477
2017					716	1,199	1,388	1,531	1,674	1,763
2018						792	1,302	1,500	1,669	1,815
2019							707	1,187	1,423	1,628
2020								791	1,180	1,373
2021									744	1,206
2022										817
									Total	$14,724

Liability for Claims And Allocated Claim Adjustment Expenses, Net of Reinsurance		
	2013 - 2022	Before 2013
	$ 4,528	$ 291
Total net liability		$ 4,819

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance Unaudited 1	2	3	4	5	6	7	8	9	10
	36.7 %	22.3 %	10.7 %	9.2 %	6.8 %	3.9 %	2.3 %	1.2 %	0.9 %	0.7 %

8. INSURANCE CLAIM RESERVES (Continued)

Commercial Automobile

(dollars in millions)

Accident Year	For the Years Ended December 31, 2018	2019	2020	2021	2022	IBNR Reserves December 31, 2022	Cumulative Number of Reported Claims
	Incurred Claims and Allocated Claims Adjustment Expenses, Net of Reinsurance Unaudited						
2018	$ 1,645	$ 1,742	$ 1,745	$ 1,761	$ 1,781	$ 63	204,942
2019		1,835	1,951	1,976	1,992	149	207,185
2020			1,788	1,677	1,621	364	142,649
2021				1,741	1,757	561	147,563
2022					1,939	989	141,652
				Total	$ 9,090		

Accident Year	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited					Liability for Claims And Allocated Claim Adjustment Expenses, Net of Reinsurance	
						2018 - 2022	Before 2018
2018	$ 515	$ 848	$ 1,159	$ 1,404	$ 1,594		
2019		539	934	1,269	1,577		
2020			437	696	958		
2021				453	800		
2022					540		
				Total	$ 5,469	$ 3,621	$ 235
					Total net liability		$ 3,856

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance Unaudited				
	1	2	3	4	5
	27.3 %	18.6 %	16.8 %	14.6 %	10.7 %

8. INSURANCE CLAIM RESERVES (Continued)

Workers' Compensation

(dollars in millions)

Accident Year	For the Years Ended December 31, 2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	IBNR Reserves December 31, 2022	Cumulative Number of Reported Claims
	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited											
2013	$2,553	$2,545	$2,540	$2,506	$2,463	$2,423	$2,354	$2,321	$2,304	$ 2,273	$ 309	135,317
2014		2,554	2,553	2,547	2,476	2,430	2,393	2,352	2,336	2,277	352	131,630
2015			2,644	2,585	2,505	2,441	2,372	2,279	2,220	2,155	398	131,175
2016				2,768	2,690	2,569	2,473	2,372	2,300	2,235	379	131,848
2017					2,779	2,681	2,584	2,483	2,439	2,342	501	125,747
2018						2,744	2,687	2,599	2,503	2,416	625	123,572
2019							2,680	2,714	2,699	2,632	724	120,190
2020								2,559	2,530	2,433	908	96,477
2021									2,356	2,349	1,006	94,430
2022										2,293	1,415	92,937
									Total	$23,405		

Accident Year	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited										
2013	$ 458	$ 954	$1,237	$1,413	$1,525	$1,604	$1,659	$1,700	$1,729	$ 1,756	
2014		455	944	1,224	1,399	1,505	1,581	1,634	1,672	1,703	
2015			430	893	1,154	1,310	1,411	1,470	1,520	1,547	
2016				421	873	1,118	1,272	1,367	1,433	1,486	Liability for Claims
2017					433	890	1,154	1,314	1,418	1,490	And Allocated Claim
2018						440	919	1,169	1,330	1,440	Adjustment Expenses,
2019							466	951	1,229	1,402	Net of Reinsurance
2020								389	794	1,017	
2021									427	848	2013 - 2022 / Before 2013
2022										388	
									Total	$ 13,077	$ 10,328 / $ 6,145
										Total net liability	$ 16,473

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance Unaudited 1	2	3	4	5	6	7	8	9	10
	18.4 %	19.7 %	11.1 %	7.1 %	4.6 %	3.1 %	2.4 %	1.6 %	1.3 %	1.2 %

8. INSURANCE CLAIM RESERVES (Continued)

Bond & Specialty Insurance

General Liability

(dollars in millions)

Accident Year	For the Years Ended December 31, 2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	IBNR Reserves December 31, 2022	Cumulative Number of Reported Claims
	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited											
2013	$ 510	$ 565	$ 606	$ 630	$ 654	$ 607	$ 586	$ 575	$ 564	$ 561	$ (8)	4,471
2014		549	571	563	518	473	452	450	449	451	14	4,379
2015			528	524	486	437	395	414	413	414	23	4,229
2016				512	511	504	520	514	510	511	19	4,407
2017					534	517	526	493	524	554	49	4,606
2018						530	548	585	595	605	49	4,850
2019							588	653	665	670	146	5,408
2020								772	753	741	265	5,329
2021									812	756	404	5,272
2022										803	616	3,462
									Total	$ 6,066		

Accident Year	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited									
2013	$ 34	$ 154	$ 252	$ 352	$ 400	$ 434	$ 451	$ 462	$ 482	$ 551
2014		38	150	239	312	367	407	418	426	431
2015			38	141	234	310	338	348	381	383
2016				30	141	233	313	378	446	463
2017					38	155	262	340	404	450
2018						49	182	290	383	458
2019							51	189	323	410
2020								52	210	333
2021									78	210
2022										69
									Total	$ 3,758

Liability for Claims And Allocated Claim Adjustment Expenses, Net of Reinsurance		
	2013 - 2022	Before 2013
Total net liability	$ 2,308	$ 80
	$ 2,388	

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance Unaudited 1	2	3	4	5	6	7	8	9	10
	7.8 %	21.7 %	19.0 %	15.8 %	10.8 %	7.7 %	4.2 %	1.5 %	2.3 %	12.3 %

8. INSURANCE CLAIM RESERVES (Continued)

Fidelity and Surety

(dollars in millions)

Accident Year	For the Years Ended December 31, 2018	2019	2020	2021	2022	IBNR Reserves December 31, 2022	Cumulative Number of Reported Claims
	Incurred Claims and Allocated Claims Adjustment Expenses, Net of Reinsurance Unaudited						
2018	$ 220	$ 235	$ 220	$ 220	$ 216	$ (7)	914
2019		203	193	200	185	18	888
2020			274	203	219	95	787
2021				284	172	117	576
2022					310	244	526
				Total	$ 1,102		

Accident Year	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited					Liability for Claims And Allocated Claim Adjustment Expenses, Net of Reinsurance	
						2018 - 2022	Before 2018
2018	$ 64	$ 171	$ 202	$ 206	$ 214		
2019		49	121	147	154		
2020			50	79	110		
2021				25	50		
2022					36		
				Total	$ 564	$ 538	$ 26
					Total net liability		$ 564

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance Unaudited				
	1	2	3	4	5
	21.0 %	29.1 %	14.1 %	2.9 %	3.7 %

8. INSURANCE CLAIM RESERVES (Continued)

Personal Insurance

Automobile

(dollars in millions)

	For the Years Ended December 31,						
	2018	2019	2020	2021	2022		
	Incurred Claims and Allocated Claims Adjustment Expenses, Net of Reinsurance						
Accident Year	Unaudited					IBNR Reserves December 31, 2022	Cumulative Number of Reported Claims
2018	$ 3,281	$ 3,269	$ 3,233	$ 3,220	$ 3,223	$ 22	1,051,593
2019		3,362	3,361	3,333	3,339	64	1,033,458
2020			2,829	2,764	2,729	150	810,317
2021				3,716	3,770	426	997,397
2022					4,755	1,334	1,015,497
				Total	$ 17,816		

	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						
Accident Year	Unaudited					Liability for Claims And Allocated Claim Adjustment Expenses, Net of Reinsurance	
						2018 - 2022	Before 2018
2018	$ 1,889	$ 2,582	$ 2,880	$ 3,040	$ 3,144		
2019		1,933	2,650	2,958	3,159		
2020			1,571	2,126	2,411		
2021				2,062	2,981		
2022					2,683		
				Total	$ 14,378	$ 3,438	$ 216
						Total net liability	$ 3,654

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance				
	Unaudited				
Years	1	2	3	4	5
	57.0 %	21.9 %	9.6 %	5.5 %	3.2 %

8. INSURANCE CLAIM RESERVES (Continued)

Homeowners (excluding Other)

(dollars in millions)

Accident Year	For the Years Ended December 31, 2018	2019	2020	2021	2022	IBNR Reserves December 31, 2022	Cumulative Number of Reported Claims
	Incurred Claims and Allocated Claims Adjustment Expenses, Net of Reinsurance Unaudited						
2018	$ 2,610	$ 2,574	$ 2,381	$ 2,325	$ 2,321	$ 24	187,375
2019		2,297	2,344	2,343	2,341	12	181,434
2020			3,019	2,967	2,909	68	220,946
2021				3,463	3,486	148	231,949
2022					4,277	1,339	191,981
				Total	$ 15,334		

Accident Year	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited					Liability for Claims And Allocated Claim Adjustment Expenses, Net of Reinsurance	
						2018 - 2022	Before 2018
2018	$ 1,657	$ 2,298	$ 2,255	$ 2,239	$ 2,253		
2019		1,613	2,179	2,269	2,300		
2020			2,019	2,673	2,755		
2021				2,334	3,235		
2022					2,537		
				Total	$ 13,080	$ 2,254	$ 73
					Total net liability		$ 2,327

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance Unaudited 1	2	3	4	5
	67.2 %	25.0 %	1.6 %	0.3 %	0.6 %

8. INSURANCE CLAIM RESERVES (Continued)

International - Canada

(dollars in millions)

Accident Year	For the Years Ended December 31, Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited										IBNR Reserves December 31, 2022	Cumulative Number of Reported Claims
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
2013	$ 464	$ 458	$ 449	$ 438	$ 425	$ 424	$ 414	$ 410	$ 407	$ 410	$ (4)	54,237
2014		410	425	426	415	408	405	405	402	410	(3)	52,294
2015			345	345	345	341	343	342	337	337	(4)	45,217
2016				346	392	392	401	401	400	401	(3)	45,765
2017					331	365	386	386	386	389	(4)	46,822
2018						421	442	444	448	451	7	50,601
2019							426	421	441	444	22	48,212
2020								332	320	306	46	30,208
2021									334	322	66	28,114
2022										371	104	30,724
									Total	$3,841		

Accident Year	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2013	$ 186	$ 260	$ 291	$ 322	$ 353	$ 371	$ 387	$ 395	$ 402	$ 403
2014		181	254	289	317	347	368	383	398	401
2015			155	216	243	270	294	308	321	328
2016				202	271	296	329	352	369	381
2017					174	246	284	307	332	352
2018						210	292	326	363	394
2019							207	277	311	348
2020								138	186	209
2021									123	180
2022										162
									Total	$3,158

Liability for Claims And Allocated Claim Adjustment Expenses, Net of Reinsurance		
	2013 - 2022	Before 2013
	$ 683	$ 25
Total net liability		$ 708

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance Unaudited									
	1	2	3	4	5	6	7	8	9	10
	45.0 %	17.5 %	7.8 %	7.6 %	6.8 %	4.6 %	3.7 %	2.4 %	1.2 %	0.4 %

The incurred and paid amounts have been translated from the local currency to U.S. dollars using the December 31, 2022 spot rate for all years presented in the table above in order to isolate changes in foreign exchange rates from loss development.

8. INSURANCE CLAIM RESERVES (Continued)

Methodology for Estimating Incurred But Not Reported (IBNR) Reserves

Claims and claim adjustment expense reserves represent management's estimate of the ultimate liability for unpaid losses and loss adjustment expenses for claims that have been reported and claims that have been incurred but not yet reported (IBNR) as of the balance sheet date. Claims and claim adjustment expense reserves do not represent an exact calculation of the liability, but instead represent management estimates, primarily utilizing actuarial expertise and projection methods that develop estimates for the ultimate cost of claims and claim adjustment expenses. Because the establishment of claims and claim adjustment expense reserves is an inherently uncertain process involving estimates and judgment, currently estimated claims and claim adjustment expense reserves may change. The Company reflects changes to the reserves in the results of operations in the period the estimates are changed.

Cumulative amounts paid and case reserves held as of the balance sheet date are subtracted from the estimate of the ultimate cost of claims and claim adjustment expenses to derive incurred but not reported (IBNR) reserves. Accordingly, IBNR reserves include the cost of unreported claims, development on known claims and re-opened claims. This approach to estimating IBNR reserves has been in place for many years, with no material changes in methodology in the past year.

Detailed claim data is typically insufficient to produce a reliable indication of the initial estimate for ultimate claims and claim adjustment expenses for an accident year. As a result, the initial estimate for an accident year is generally based on an exposure-based method using either the loss ratio projection or the expected loss method. The loss ratio projection method, which is typically used for guaranteed-cost business, develops an initial estimate of ultimate claims and claim adjustment expenses for an accident year by multiplying earned premium for the accident year by a projected loss ratio. The projected loss ratio is determined by analyzing prior period experience, and adjusting for loss cost trends, rate level differences, mix of business changes and other known or observed factors influencing the accident year relative to prior accident years. The expected loss method, which is typically used for loss sensitive business, develops an initial estimate of ultimate claims and claim adjustment expenses for an accident year by analyzing exposures by account.

For prior accident years, the following estimation and analysis methods are principally used by the Company's actuaries to estimate the ultimate cost of claims and claim adjustment expenses. These estimation and analysis methods are typically referred to as conventional actuarial methods.

- The paid loss development method assumes that the future change (positive or negative) in cumulative paid losses for a given cohort of claims will occur in a stable, predictable pattern from year-to-year, consistent with the pattern observed in past cohorts.
- The case incurred development method is the same as the paid loss development method but is based on cumulative case-incurred losses rather than paid losses.
- The Bornhuetter-Ferguson method uses an initial estimate of ultimate losses for a given product line reserve component, typically expressed as a ratio to earned premium. The method assumes that the ratio of additional claim activity to earned premium for that component is relatively stable and predictable over time and that actual claim activity to date is not a credible predictor of further activity for that component. The method is used most often for more recent accident years where claim data is sparse and/or volatile, with a transition to other methods as the underlying claim data becomes more voluminous and therefore more credible.
- The average value analysis combined with the reported claim development method assumes that average claim values are stable and predictable over time for a particular cohort of claims. It is typically limited to analysis at more granular levels, such as coverage or hazard/peril, where a more homogeneous subset of claims produce a more stable and fairly predictable average value. The reported claim development method is the same as the paid loss development method but uses changes in cumulative claim counts to produce estimates of ultimate claim counts rather than ultimate dollars. The resulting estimate of ultimate claim counts by cohort is multiplied by an average value per claim from an average value analysis to obtain estimated ultimate claims and claim adjustment expenses.

While these are the principal methods utilized, the Company's actuaries have available to them the full range of actuarial methods developed by the casualty actuarial profession. The Company's actuaries are also regularly monitoring developments within the profession for advances in existing techniques or the creation of new techniques that might improve current and future estimates. Most actuarial methods assume that past patterns demonstrated in the data will repeat themselves in the

8. INSURANCE CLAIM RESERVES (Continued)

future. For certain reserve components where this assumption may not hold, such as asbestos and environmental reserves, conventional actuarial methods are not utilized by the Company.

Methodology for Determining Cumulative Number of Reported Claims

A claim file is created when the Company is notified of an actual demand for payment, notified of an event that may lead to a demand for payment or when it is determined that a demand for payment could possibly lead to a future demand for payment on another coverage on the same policy or on another policy. Claim files are generally created for a policy at the claimant by coverage level, depending on the particular facts and circumstances of the underlying event.

For Business Insurance and for Personal Insurance, claim file information is summarized such that the Company generally recognizes one count for each policy claim event by internal regulatory line of business, regardless of the number of claimants or coverages involved. The claims counts are then accumulated and reported by product line. While the methodology is generally consistent within each segment for the product lines displayed, there are some minor differences between and within segments. For Bond & Specialty Insurance, the Company generally recognizes one count per coverage per policy claim event and one count per bond per surety claim event.

For purposes of the claims development tables above, claims reported for direct business are counted even if they eventually close with no loss payment, except in the case of (i) deductible business, where the claim is not counted until the case incurred claim estimate is above the deductible and (ii) International-Canada reported claim counts where claims closed with no loss payment are not counted. Note that claims with zero claim dollars may still generate some level of claim adjustment expenses. Claim counts for assumed business are included only to the extent such counts are available. The Company generally does not receive claim count information for which the underlying claim activity is handled by others, including pools and associations. The Company does not generate claim counts for ceded business. The methods used to summarize claim counts have not changed significantly over the time periods reported in the tables above.

The Company cautions against using the summarized claim count information provided in this disclosure in attempting to project ultimate loss payouts by product line. The Company generally finds claim count data to be useful only on a more granular basis than the aggregated basis disclosed in the claim development tables above, as the risks, average values and other dynamics of the claim process can vary materially by the cause of loss and coverage within product line. For example, in Personal Automobile, the introduction of roadside assistance coverage resulted in a significant increase in claim counts with a low average claim cost. For this reason the Company varies its approach to, and in many cases the level of aggregation for, counting claims for internal analysis purposes depending on the particular granular analysis performed.

Asbestos and Environmental Reserves

At December 31, 2022 and 2021, the Company's claims and claim adjustment expense reserves included $1.68 billion and $1.66 billion, respectively, for asbestos and environmental-related claims, net of reinsurance.

It is difficult to estimate the reserves for asbestos and environmental-related claims due to the vagaries of court coverage decisions, plaintiffs' expanded theories of liability, the risks inherent in complex litigation and other uncertainties, including, without limitation, those which are set forth below.

Asbestos Reserves. Because each policyholder presents different liability and coverage issues, the Company generally reviews the exposure presented by each policyholder with open claims at least annually. Among the factors the Company may consider in the course of this review are: available insurance coverage, including the role of any umbrella or excess insurance the Company has issued to the policyholder; limits and deductibles; an analysis of the policyholder's potential liability; the jurisdictions involved; past and anticipated future claim activity and loss development on pending claims; past settlement values of similar claims; allocated claim adjustment expense; the potential role of other insurance; the role, if any, of non-asbestos claims or potential non-asbestos claims in any resolution process; and 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.

8. INSURANCE CLAIM RESERVES (Continued)

In the third quarter of 2022, the Company completed its annual in-depth asbestos claim review, including a review of policyholders with open claims and litigation cases for potential product and "non-product" liability. The number of policyholders with open asbestos claims and net asbestos payments were relatively flat compared to 2021. Payments on behalf of these policyholders continue to be influenced by an increase in severity for certain policyholders and a high level of litigation activity in a limited number of jurisdictions where individuals alleging serious asbestos-related injury, primarily mesothelioma, continue to target defendants who were not traditionally primary targets of asbestos litigation.

The Company's quarterly asbestos reserve reviews include an analysis of exposure and claim payment patterns by policyholder, as well as recent settlements, policyholder bankruptcies, judicial rulings and legislative actions. The Company also analyzes developing payment patterns among policyholders and the assumed reinsurance component of reserves, as well as projected reinsurance billings and recoveries. In addition, the Company reviews its historical gross and net loss and expense paid experience, year-by-year, to assess any emerging trends, fluctuations, or characteristics suggested by the aggregate paid activity. Conventional actuarial methods are not utilized to establish asbestos reserves, and the Company's evaluations have not resulted in a reliable method to determine a meaningful average asbestos defense or indemnity payment.

The completion of these reviews and analyses in 2022, 2021 and 2020 resulted in $212 million, $225 million and $295 million increases, respectively, to the Company's net asbestos reserves. In each year, the reserve increases were primarily driven by increases in the Company's estimate of projected settlement and defense costs related to a broad number of policyholders. The increase in the estimate of projected settlement and defense costs primarily resulted from payment trends that continue to be higher than previously anticipated due to the continued high level of mesothelioma claim filings and the impact of the current litigation environment surrounding those claims discussed above. Over the past decade, the property and casualty insurance industry, including the Company, has experienced net unfavorable prior year reserve development with regard to asbestos reserves, but the Company believes that over that period there has been a reduction in the volatility associated with the Company's overall asbestos exposure as the overall asbestos environment has evolved from one dominated by exposure to significant litigation risks, particularly coverage disputes relating to policyholders in bankruptcy who were asserting that their claims were not subject to the aggregate limits contained in their policies, to an environment primarily driven by a frequency of litigation related to individuals with mesothelioma. The Company's overall view of the current underlying asbestos environment is essentially unchanged from recent periods, and there remains a high degree of uncertainty with respect to future exposure to asbestos claims.

Net asbestos paid loss and loss expenses in 2022, 2021 and 2020 were $245 million, $221 million and $237 million, respectively. Approximately 2%, 9% and 1% of total net paid losses in 2022, 2021 and 2020, respectively, related to policyholders with whom the Company entered into settlement agreements that limit those policyholders' ability to present future claims to the Company.

Environmental Reserves. In establishing environmental reserves, the Company evaluates the exposure presented by each policyholder and the anticipated cost of resolution, if any. These claims are mainly brought pursuant to various state or federal statutes that require a liable party to undertake or pay for environmental remediation. Liability under these statutes may be joint and several with other responsible parties. In the course of its analysis, the Company generally considers the probable liability, available coverage and relevant judicial interpretations. In addition, the Company considers the many variables presented, such as: the nature of the alleged activities of the policyholder at each site; the number of sites; the total number of potentially responsible parties at each site; the nature of the alleged environmental harm and the corresponding remedy at each site; the nature of government enforcement activities at each site; the ownership and general use of each site; the overall nature of the insurance relationship between the Company and the policyholder, including the role of any umbrella or excess insurance the Company has issued to the policyholder; the involvement of other insurers; the potential for other available coverage, including the number of years of coverage; the role, if any, of non-environmental claims or potential non-environmental claims in any resolution process; and the applicable law in each jurisdiction. The evaluation of the exposure presented by a policyholder can change as information concerning that policyholder and the many variables presented is developed. Conventional actuarial methods are not used to estimate these reserves.

Over the past several years, the Company has experienced generally favorable trends in the number of new policyholders tendering environmental claims for the first time and in the number of pending declaratory judgment actions relating to environmental matters. These policyholders continue to present smaller exposures, are involved in fewer hazardous waste sites and are lower tier defendants than policyholders presenting such claims in the past. Further, in many instances, clean-up costs

8. INSURANCE CLAIM RESERVES (Continued)

have been reduced because regulatory agencies are willing to accept risk-based site analyses and more efficient clean-up technologies. However, the degree to which those favorable trends have continued has been less than anticipated. In addition, reserve development on existing environmental claims as well as the costs associated with coverage litigation on environmental matters has been greater than anticipated, driven by claims and legal developments in a limited number of jurisdictions. As a result of these factors, in 2022, 2021 and 2020, the Company increased its net environmental reserves by $132 million, $89 million and $54 million, respectively.

Asbestos and Environmental Reserves. As a result of the processes and procedures discussed above, management believes that the reserves carried for asbestos and environmental claims are appropriately established based upon known facts, current law and management's judgment. However, the uncertainties surrounding the final resolution of these claims continue, and it is difficult to determine the ultimate exposure for asbestos and environmental claims and related litigation. As a result, these reserves are subject to revision as new information becomes available and as claims develop. Changes in the legal, regulatory and legislative environment may impact the future resolution of asbestos and environmental claims and result in adverse loss reserve development. The emergence of a greater number of asbestos or environmental claims beyond that which is anticipated may result in adverse loss reserve development. Changes in applicable legislation and future court and regulatory decisions and interpretations, including the outcome of legal challenges to legislative and/or judicial reforms establishing medical criteria for the pursuit of asbestos claims, could affect the settlement of asbestos and environmental claims. It is also difficult to predict the ultimate outcome of complex coverage disputes until settlement negotiations near completion and significant legal questions are resolved or, failing settlement, until the dispute is adjudicated. This is particularly the case with policyholders in bankruptcy where negotiations often involve a large number of claimants and other parties and require court approval to be effective. As part of its continuing analysis of asbestos and environmental reserves, the Company continues to study the implications of these and other developments.

Because of the uncertainties set forth above, additional liabilities may arise for amounts in excess of the Company's current reserves. In addition, the Company's estimate of claims and claim adjustment expenses may change. These additional liabilities or increases in estimates, or a range of either, cannot now be reasonably estimated and could result in income statement charges that could be material to the Company's operating results in future periods.

Catastrophe Exposure

The Company has geographic exposure to catastrophe losses, which include hurricanes, tornadoes and other windstorms, earthquakes, hail, wildfires, severe winter weather, floods, tsunamis, volcanic eruptions, solar flares and other naturally-occurring events. Catastrophes can also result from terrorist attacks and other intentionally destructive acts including those involving cyber events, nuclear, biological, chemical and radiological events, civil unrest, explosions and destruction of infrastructure. The incidence and severity of catastrophes are inherently unpredictable. The extent of losses from a catastrophe is a function of both the total amount of insured exposure in the area affected by the event and the severity of the event. Most catastrophes are restricted to small geographic areas; however, hurricanes, earthquakes, wildfires and cyber attacks may produce significant damage in larger areas, especially those that are heavily populated. The Company generally seeks to mitigate its exposure to catastrophes through individual risk selection and the purchase of catastrophe reinsurance.

There are also risks which impact the estimation of ultimate costs for catastrophes. For example, the estimation of reserves related to hurricanes can be affected by the inability of the Company and its insureds to access portions of the impacted areas, the complexity of factors contributing to the losses, the legal and regulatory uncertainties and the nature of the information available to establish the reserves. Complex factors include, but are not limited to: determining whether damage was caused by flooding versus wind; evaluating general liability and pollution exposures; estimating additional living expenses; the impact of demand surge; the potential impact of changing climate conditions, including higher frequency and severity of weather-related events; infrastructure disruption; fraud; the effect of mold damage and business income interruption costs; and reinsurance collectibility. The timing of a catastrophe's occurrence, such as at or near the end of a reporting period, can also affect the information available to the Company in estimating reserves for that reporting period. The estimates related to catastrophes are adjusted as actual claims emerge.

9. DEBT

Debt outstanding was as follows:

(at December 31, in millions)	2022	2021
Short-term:		
Commercial paper	**$ 100**	$ 100
Total short-term debt	**100**	100
Long-term:		
7.75% Senior notes due April 15, 2026	**200**	200
7.625% Junior subordinated debentures due December 15, 2027	**125**	125
6.375% Senior notes due March 15, 2033	**500**	500
6.75% Senior notes due June 20, 2036	**400**	400
6.25% Senior notes due June 15, 2037	**800**	800
5.35% Senior notes due November 1, 2040	**750**	750
4.60% Senior notes due August 1, 2043	**500**	500
4.30% Senior notes due August 25, 2045	**400**	400
8.50% Junior subordinated debentures due December 15, 2045	**56**	56
3.75% Senior notes due May 15, 2046	**500**	500
8.312% Junior subordinated debentures due July 1, 2046	**73**	73
4.00% Senior notes due May 30, 2047	**700**	700
4.05% Senior notes due March 7, 2048	**500**	500
4.10% Senior notes due March 4, 2049	**500**	500
2.55% Senior notes due April 27, 2050	**500**	500
3.05% Senior notes due June 8, 2051	**750**	750
Total long-term debt	**7,254**	7,254
Total debt principal	**7,354**	7,354
Unamortized fair value adjustment	**38**	39
Unamortized debt issuance costs	**(100)**	(103)
Total debt	**$ 7,292**	$ 7,290

2021 Debt Issuance. On June 8, 2021, the Company issued $750 million aggregate principal amount of 3.05% senior notes that will mature on June 8, 2051. The net proceeds of the issuance, after the deduction of the underwriting discount and expenses payable by the Company, totaled approximately $739 million. Interest on the senior notes is payable semi-annually in arrears on June 8 and December 8. Prior to December 8, 2050, the senior notes may be redeemed, in whole or in part, at the Company's option, at any time or from time to time, at a redemption price equal to the greater of (a) 100% of the principal amount of any senior notes to be redeemed or (b) the sum of the present values of the remaining scheduled payments of principal and interest to but excluding December 8, 2050 on any senior notes to be redeemed (exclusive of interest accrued to the date of redemption) discounted to the date of redemption on a semi-annual basis (assuming a 360-day year consisting of twelve 30-day months) at the then current Treasury rate (as defined in the senior notes), plus 15 basis points. On or after December 8, 2050, the senior notes may be redeemed, in whole or in part, at the Company's option, at any time or from time to time, at a redemption price equal to 100% of the principal amount of any senior notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date.

2020 Debt Issuance. On April 27, 2020, the Company issued $500 million aggregate principal amount of 2.55% senior notes that will mature on April 27, 2050. The net proceeds of the issuance, after the deduction of the underwriting discount and expenses payable by the Company, totaled approximately $490 million. Interest on the senior notes is payable semi-annually in arrears on April 27 and October 27. Prior to October 27, 2049, the senior notes may be redeemed, in whole or in part, at the Company's option, at any time or from time to time, at a redemption price equal to the greater of (a) 100% of the principal

9. DEBT (Continued)

amount of any senior notes to be redeemed or (b) the sum of the present values of the remaining scheduled payments of principal and interest to but excluding October 27, 2049 on any senior notes to be redeemed (exclusive of interest accrued to the date of redemption) discounted to the date of redemption on a semi-annual basis (assuming a 360-day year consisting of twelve 30-day months) at the then current Treasury rate (as defined in the senior notes), plus 25 basis points. On or after October 27, 2049, the senior notes may be redeemed, in whole or in part, at the Company's option, at any time or from time to time, at a redemption price equal to 100% of the principal amount of any senior notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date.

2020 Debt Repayment. On November 1, 2020, the Company's $500 million, 3.90% notes matured and were fully paid.

Description of Debt

Commercial Paper—The Company maintains an $800 million commercial paper program. Interest rates on commercial paper issued in 2022 ranged from 0.10% to 4.29%, and in 2021 ranged from 0.09% to 0.12%.

Senior Notes—The Company's various senior debt issues are unsecured obligations that rank equally with one another. Interest payments are made semi-annually. The Company generally may redeem some or all of the notes prior to maturity in accordance with terms unique to each debt instrument.

Junior Subordinated Debentures—The Company's three junior subordinated debenture instruments are all similar in nature to each other. Three separate business trusts issued preferred securities to investors and used the proceeds to purchase the Company's junior subordinated debentures. Interest on each of the instruments is paid semi-annually.

The Company's consolidated balance sheet includes the debt instruments acquired in a business acquisition, which were recorded at fair value as of the acquisition date. The resulting fair value adjustment is being amortized over the remaining life of the respective debt instruments using the effective-interest method. The amortization of the fair value adjustment reduced interest expense by $1 million and $2 million for the years ended December 31, 2022 and 2021, respectively.

The following table presents merger-related unamortized fair value adjustments and the related effective interest rate:

(in millions)	Issue Rate	Maturity Date	Unamortized Fair Value Purchase Adjustment at December 31, 2022	Unamortized Fair Value Purchase Adjustment at December 31, 2021	Effective Interest Rate to Maturity
Junior subordinated debentures	7.625 %	Dec. 2027	**$ 7**	$ 8	6.147 %
	8.500 %	Dec. 2045	**14**	14	6.362 %
	8.312 %	Jul. 2046	**17**	17	6.362 %
Total			**$ 38**	$ 39	

The Travelers Companies, Inc. fully and unconditionally guarantees the payment of all principal, premiums, if any, and interest on certain debt obligations of its subsidiaries Travelers Property Casualty Corp. (TPC) and Travelers Insurance Group Holdings Inc. (TIGHI). The guarantees pertain to the $200 million 7.75% notes due 2026 and the $500 million 6.375% notes due 2033.

Maturities—Other than commercial paper, the amount of debt obligations that become due in each of the next five years is as follows: 2023, $0; 2024, $0; 2025, $0; 2026, $200 million; and 2027, $125 million.

Credit Agreement

On June 15, 2022, the Company entered into to a five-year, $1.0 billion revolving credit agreement with a syndicate of financial institutions, replacing its five-year, $1.0 billion credit agreement that was due to expire on June 4, 2023. Pursuant to the credit agreement covenants, the Company must maintain a minimum consolidated net worth, defined as shareholders' equity determined in accordance with GAAP (excluding accumulated other comprehensive income (loss)) plus (a) trust preferred securities (not to exceed 15% of total capital) and (b) mandatorily convertible securities (combined with trust preferred securities, not to exceed 25% of total capital), less goodwill and other intangible assets. That threshold is fixed during the term

9. DEBT (Continued)

of the credit agreement at an amount equal to $13.9 billion (57.5% of the Company's net worth at March 31, 2022). In addition, the credit agreement contains other customary restrictive covenants as well as certain customary events of default, including with respect to a change in control, which would occur upon the acquisition of 35% or more of the Company's voting stock or certain changes in the composition of the Company's Board of Directors. At December 31, 2022, the Company was in compliance with these covenants. Generally, the cost of borrowing under this agreement will range from the Secured Overnight Financing Rate (SOFR) plus 85 basis points (including a credit spread adjustment) to SOFR plus 147.5 basis points (including a credit spread adjustment), depending on the Company's credit ratings. At December 31, 2022, that cost would have been SOFR plus 110 basis points (including a credit spread adjustment), had there been any amounts outstanding under the credit agreement.

The Company has uncollateralized letters of credit with an aggregate limit of $302 million at December 31, 2022, including $260 million that provides a portion of the capital needed to support the Company's obligations at Lloyd's.

Shelf Registration

The Company has a shelf registration statement filed with the Securities and Exchange Commission that expires on June 8, 2025 which permits it to issue securities from time to time at prices and on other terms to be determined at the time of offering.

10. SHAREHOLDERS' EQUITY AND DIVIDEND AVAILABILITY

Authorized Shares

The number of authorized shares of the Company is 1.755 billion, consisting of five million shares of preferred stock, 1.745 billion shares of voting common stock and five million undesignated shares. The Company's Articles of Incorporation authorize the Board of Directors to establish, from the undesignated shares, one or more classes and series of shares, and to further designate the type of shares and terms thereof.

Preferred Stock

The Company's Articles of Incorporation provide authority to issue up to five million shares of preferred stock.

Common Stock

The Company is governed by the Minnesota Business Corporation Act. All authorized shares of voting common stock have no par value. Shares of common stock reacquired are considered authorized and unissued shares.

Treasury Stock

The Company's Board of Directors has approved common share repurchase authorizations under which repurchases may be made from time to time in the open market, pursuant to pre-set trading plans meeting the requirements of Rule 10b5-1 under the Securities Exchange Act of 1934, in private transactions or otherwise. The authorizations do not have a stated expiration date. The timing and actual number of shares to be repurchased in the future will depend on a variety of factors, including the Company's financial position, earnings, share price, catastrophe losses, maintaining capital levels appropriate for the Company's business operations, changes in levels of written premiums, funding of the Company's qualified pension plan, capital requirements of the Company's operating subsidiaries, legal requirements, regulatory constraints, other investment opportunities (including mergers and acquisitions and related financings), market conditions, changes in tax laws (including the Inflation Reduction Act) and other factors. In April 2021, the Board of Directors approved a share repurchase authorization that added an additional $5.0 billion of repurchase capacity. During 2022, the Company repurchased 11.6 million shares under its share repurchase authorization, for a total of $2.00 billion. The average cost per share repurchased was $172.82. At December 31, 2022, the Company had $2.00 billion of capacity remaining under its share repurchase authorization.

The Company's Amended and Restated 2004 Stock Incentive Plan and the Amended and Restated 2014 Stock Incentive Plan provide settlement alternatives to employees in which the Company retains shares to cover payroll withholding taxes in connection with the vesting of restricted stock unit awards and performance share awards, and shares used by employees to

10. SHAREHOLDERS' EQUITY AND DIVIDEND AVAILABILITY (Continued)

cover the price of certain stock options that were exercised. During the years ended December 31, 2022 and 2021, the Company acquired $61 million and $44 million, respectively, of its common stock under these plans.

Common shares acquired are reported as treasury stock in the consolidated balance sheet.

Dividend Availability

The Company's U.S. insurance subsidiaries, domiciled principally in the State of Connecticut, are subject to various regulatory restrictions that limit the maximum amount of dividends available to be paid by each insurance subsidiary to its respective parent company without prior approval of insurance regulatory authorities. A maximum of $2.55 billion is available by the end of 2023 for such dividends to the holding company, TRV, without prior approval of the Connecticut Insurance Department. The Company may choose to accelerate the timing within 2023 and/or increase the amount of dividends from its insurance subsidiaries in 2023, which could result in certain dividends being subject to approval by the Connecticut Insurance Department.

In addition to the regulatory restrictions on the availability of dividends that can be paid by the Company's U.S. insurance subsidiaries, the maximum amount of dividends that may be paid to the Company's shareholders is limited, to a lesser degree, by certain covenants contained in its line of credit agreement with a syndicate of financial institutions that require the Company to maintain a minimum consolidated net worth as described in note 9.

TRV is not dependent on dividends or other forms of repatriation from its foreign operations to support its liquidity needs. The undistributed earnings of the Company's foreign operations are intended to be permanently reinvested in those operations, and such earnings were not material to the Company's financial position or liquidity at December 31, 2022.

TRV and its two non-insurance holding company subsidiaries received dividends of $2.90 billion, $2.18 billion and $2.00 billion from their U.S. insurance subsidiaries in 2022, 2021 and 2020, respectively.

For the years ended December 31, 2022, 2021 and 2020, TRV declared cash dividends per common share of $3.67, $3.49 and $3.37, respectively, and paid cash dividends of $875 million, $869 million and $861 million, respectively.

Statutory Net Income and Statutory Capital and Surplus

Statutory net income of the Company's domestic and international insurance subsidiaries was $2.62 billion, $3.41 billion and $2.98 billion for the years ended December 31, 2022, 2021 and 2020, respectively. Statutory capital and surplus of the Company's domestic and international insurance subsidiaries was $23.68 billion and $23.91 billion at December 31, 2022 and 2021, respectively.

11. OTHER COMPREHENSIVE INCOME (LOSS) AND ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

The following table presents the changes in the Company's accumulated other comprehensive income (loss) (AOCI) for the years ended December 31, 2022, 2021 and 2020.

	Changes in Net Unrealized Gains (Losses) on Investment Securities				
(in millions)	Having No Credit Losses Recognized in the Consolidated Statement of Income	Having Credit Losses Recognized in the Consolidated Statement of Income	Net Benefit Plan Assets and Obligations Recognized in Shareholders' Equity	Net Unrealized Foreign Currency Translation	Total Accumulated Other Comprehensive Income (Loss)
Balance, December 31, 2019	**$ 2,057**	**$ 189**	**$ (846)**	**$ (760)**	**$ 640**
Other comprehensive income (loss) (OCI) before reclassifications, net of tax	1,876	(7)	(53)	21	1,837
Amounts reclassified from AOCI, net of tax	(41)	—	67	(1)	25
Net OCI, current period	1,835	(7)	14	20	1,862
Balance, December 31, 2020	**3,892**	**182**	**(832)**	**(740)**	**2,502**
OCI before reclassifications, net of tax	(1,606)	—	278	(9)	(1,337)
Amounts reclassified from AOCI, net of tax	(53)	—	81	—	28
Net OCI, current period	(1,659)	—	359	(9)	(1,309)
Balance, December 31, 2021	**2,233**	**182**	**(473)**	**(749)**	**1,193**
OCI before reclassifications, net of tax	**(7,387)**	**(3)**	**(102)**	**(256)**	**(7,748)**
Amounts reclassified from AOCI, net of tax	**77**	**—**	**33**	**—**	**110**
Net OCI, current period	**(7,310)**	**(3)**	**(69)**	**(256)**	**(7,638)**
Balance, December 31, 2022	**$ (5,077)**	**$ 179**	**$ (542)**	**$ (1,005)**	**$ (6,445)**

11. OTHER COMPREHENSIVE INCOME (LOSS) AND ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS) (Continued)

The following table presents the pre-tax components of the Company's other comprehensive income (loss) and the related income tax expense (benefit).

(for the year ended December 31, in millions)	2022	2021	2020
Changes in net unrealized gains (losses) on investment securities:			
Having no credit losses recognized in the consolidated statement of income	**$ (9,276)**	$ (2,115)	$ 2,331
Income tax expense (benefit)	**(1,966)**	(456)	496
Net of taxes	**(7,310)**	(1,659)	1,835
Having credit losses recognized in the consolidated statement of income	**(4)**	—	(9)
Income tax benefit	**(1)**	—	(2)
Net of taxes	**(3)**	—	(7)
Net changes in benefit plan assets and obligations	**(87)**	455	18
Income tax expense (benefit)	**(18)**	96	4
Net of taxes	**(69)**	359	14
Net changes in unrealized foreign currency translation	**(273)**	(11)	12
Income tax benefit	**(17)**	(2)	(8)
Net of taxes	**(256)**	(9)	20
Total other comprehensive income (loss)	**(9,640)**	(1,671)	2,352
Income tax expense (benefit)	**(2,002)**	(362)	490
Total other comprehensive income (loss), net of taxes	**$ (7,638)**	$ (1,309)	$ 1,862

11. OTHER COMPREHENSIVE INCOME (LOSS) AND ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS) (Continued)

The following table presents the pre-tax and related income tax (expense) benefit components of the amounts reclassified from the Company's AOCI to the Company's consolidated statement of income.

(for the year ended December 31, in millions)	2022	2021	2020
Reclassification adjustments related to unrealized gains (losses) on investment securities:			
Having no credit losses recognized in the consolidated statement of income [1]	**$ 98**	$ (67)	$ (52)
Income tax (expense) benefit [2]	**21**	(14)	(11)
Net of taxes	**77**	(53)	(41)
Having credit losses recognized in the consolidated statement of income [1]	**—**	—	—
Income tax benefit [2]	**—**	—	—
Net of taxes	**—**	—	—
Reclassification adjustment related to benefit plan assets and obligations:			
Claims and claim adjustment expenses [3]	**17**	41	35
General and administrative expenses [3]	**24**	61	50
Total	**41**	102	85
Income tax benefit [2]	**8**	21	18
Net of taxes	**33**	81	67
Reclassification adjustment related to foreign currency translation [1]	**—**	—	(1)
Income tax benefit [2]	**—**	—	—
Net of taxes	**—**	—	(1)
Total reclassifications	**139**	35	32
Total income tax benefit	**29**	7	7
Total reclassifications, net of taxes	**$ 110**	$ 28	$ 25

(1) (Increases) decreases net realized investment gains (losses) on the consolidated statement of income.

(2) (Increases) decreases income tax expense on the consolidated statement of income.

(3) Increases (decreases) expenses on the consolidated statement of income.

12. EARNINGS PER SHARE

Basic earnings per share was computed by dividing net income available to common shareholders by the weighted average number of common shares outstanding during the period. The computation of diluted earnings per share reflected the effect of potentially dilutive securities and excludes the effect of any anti-dilutive shares.

Potentially dilutive securities include restricted stock units, deferred stock units, stock options and performance share awards related to the employee share-based incentive compensation programs. The restricted stock units and deferred stock units contain non-forfeitable rights to dividends and are included as participating securities in the calculation of basic and diluted earnings per share using the two-class method. Stock option and performance share awards are included in the calculation of diluted earnings per share using the treasury stock method.

12. EARNINGS PER SHARE (Continued)

The following is a reconciliation of the income and share data used in the basic and diluted earnings per share computations:

(for the year ended December 31, in millions, except per share amounts)	2022	2021	2020
Basic and Diluted			
Net income, as reported	**$ 2,842**	$ 3,662	$ 2,697
Participating securities — allocated income	**(20)**	(27)	(19)
Net income available to common shareholders — basic and diluted	**$ 2,822**	$ 3,635	$ 2,678
Common Shares			
Basic			
Weighted average shares outstanding	**237.0**	248.5	253.5
Diluted			
Weighted average shares outstanding	**237.0**	248.5	253.5
Weighted average effects of dilutive securities:			
Stock options and performance shares	**2.7**	2.3	1.1
Total	**239.7**	250.8	254.6
Net income Per Common Share			
Basic	**$ 11.91**	$ 14.63	$ 10.56
Diluted	**$ 11.77**	$ 14.49	$ 10.52

13. INCOME TAXES

Components of Income Tax Expense

The following table presents the components of income tax expense (benefit) included in the amounts reported in the Company's consolidated financial statements:

(for the year ended December 31, in millions)	2022	2021	2020
Composition of income tax expense included in the consolidated statement of income			
Current expense:			
Federal	**$ 636**	$ 659	$ 532
Foreign	**97**	67	35
State	**8**	6	4
Total current tax expense	**741**	732	571
Deferred expense (benefit):			
Federal	**(186)**	62	(29)
Foreign	**(43)**	2	(2)
Total deferred tax expense (benefit)	**(229)**	64	(31)
Total income tax expense included in the consolidated statement of income	**512**	796	540
Composition of income tax expense (benefit) included in shareholders' equity			
Expense (benefit) relating to changes in the unrealized gain (loss) on investments, unrealized loss on foreign exchange and other items in other comprehensive income (loss)	**(2,002)**	(362)	490
Total income tax expense (benefit) included in the consolidated financial statements	**$ (1,490)**	$ 434	$ 1,030

13. INCOME TAXES (Continued)

The following is a reconciliation of income tax expense at the U.S. federal statutory income tax rate to the income tax expense reported in the Company's consolidated statement of income:

(for the year ended December 31, in millions)	2022	2021	2020
Income before income taxes			
U.S.	**$ 3,101**	$ 4,107	$ 3,095
Foreign	**253**	351	142
Total income before income taxes	**3,354**	4,458	3,237
Effective tax rate			
Statutory tax rate	**21 %**	21 %	21 %
Expected federal income tax expense	**704**	936	680
Tax effect of:			
Nontaxable investment income	**(149)**	(147)	(147)
Audit reserve	**(40)**	1	15
Other, net	**(3)**	6	(8)
Total income tax expense	**$ 512**	$ 796	$ 540
Effective tax rate	**15 %**	18 %	17 %

The Company paid income taxes of $817 million, $707 million and $578 million during the years ended December 31, 2022, 2021 and 2020, respectively. The current income tax receivable of $32 million at December 31, 2022 was included in other assets in the consolidated balance sheet. The current income tax payable of $119 million at December 31, 2021 was included in other liabilities in the consolidated balance sheet.

13. INCOME TAXES (Continued)

Deferred Tax Asset (Liability)

The net deferred tax asset (liability) comprises the tax effects of temporary differences related to the following assets and liabilities:

(at December 31, in millions)	2022	2021
Deferred tax assets		
Investments	**$ 999**	$ —
Claims and claim adjustment expense reserves	**660**	601
Unearned premium reserves	**673**	603
Net operating losses	**96**	101
Other	**262**	187
Total gross deferred tax assets	**2,690**	1,492
Less: valuation allowance	**27**	23
Adjusted gross deferred tax assets	**2,663**	1,469
Deferred tax liabilities		
Claims and claim adjustment expense reserve discounting (transition rule)	**58**	77
Deferred acquisition costs	**539**	479
Investments	**—**	940
Intangibles	**65**	59
Depreciation	**105**	112
Other	**19**	91
Total gross deferred tax liabilities	**786**	1,758
Net deferred tax asset (liability)	**$ 1,877**	$ (289)

If the Company determines that any of its deferred tax assets will not result in future tax benefits, a valuation allowance must be established for the portion of these assets that are not expected to be realized. The net change in the valuation allowance for deferred tax assets was an increase of $4 million in 2022, primarily driven by a $5 million increase in the Company's Canadian subsidiary, partially offset by a decrease of $1 million in the Company's Republic of Ireland subsidiary. Based upon a review of the Company's anticipated future taxable income, and also including all other available evidence, both positive and negative, the Company's management concluded that it is more likely than not that the net deferred tax assets will be realized.

U.S. income taxes have not been recognized on any undistributed earnings that are intended to be permanently reinvested. Any potential U.S. income tax on these amounts is immaterial.

Net Operating Losses

For tax return purposes, as of December 31, 2022, the Company had net operating loss (NOL) carryforwards in the United States, Canada, the Republic of Ireland and the United Kingdom. The amount and timing of realizing the benefits of NOL carryforwards depend on future taxable income and limitations imposed by tax laws. Only the benefits of the United Kingdom NOL carryforwards have been recognized in the consolidated financial statements and are included in net deferred tax assets. The NOL amounts by jurisdiction and year of expiration are as follows:

(in millions)	Amount	Year of expiration
United States	**$ 2**	2035 - 2036
Canada	**$ 46**	2035 - 2042
Republic of Ireland	**$ 120**	None
United Kingdom	**$ 257**	None

13. INCOME TAXES (Continued)

Uncertain Tax Positions

The following is a reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2022 and 2021:

(in millions)	2022	2021
Balance at January 1	**$ 48**	$ 49
Additions for tax positions of prior years	**3**	2
Reductions for tax positions of prior years	**(44)**	(3)
Additions based on tax positions related to current year	**2**	—
Expiration of statute of limitations	**—**	—
Balance at December 31	**$ 9**	$ 48

Included in the balances at December 31, 2022 and 2021 were $8 million and $48 million, respectively, of unrecognized tax benefits that, if recognized, would affect the annual effective tax rate. Also included in the balances at those dates were $1 million and $0 million, respectively, of tax positions for which the ultimate deductibility is certain, but for which there is uncertainty about the timing of deductibility. The timing of such deductibility could affect the annual effective tax rate depending on the year of deduction and tax rate at the time.

The Company recognizes accrued interest and penalties, if any, related to unrecognized tax benefits in income taxes. During the years ended December 31, 2022, 2021 and 2020, the Company recognized approximately $(13) million, $3 million and $0 million in interest, respectively. The Company had approximately $3 million and $16 million accrued for the payment of interest at December 31, 2022 and 2021, respectively.

The IRS has completed examination of the Company's U.S. income tax returns for all years through 2018. The Company does not expect any significant changes to its liability for unrecognized tax benefits during the next twelve months.

Enactment of the Inflation Reduction Act of 2022

On August 16, 2022, the U.S. government enacted the Inflation Reduction Act (IRA) which, among other changes, created a new corporate alternative minimum tax (AMT) based on adjusted financial statement income and imposes a 1% excise tax on corporate stock repurchases. The effective date of these provisions is January 1, 2023. The enactment of the IRA did not have any impact on the Company's financial statements in 2022. While the Company will be an applicable corporation subject to the AMT tax beginning in 2023 based on its reported GAAP earnings for the past three years, the Company expects any AMT tax incurred to be treated as a taxable temporary difference and have no direct impact on total income tax expense, subject to any additional guidance or regulations that may be issued. Any excise tax incurred on corporate stock repurchases will generally be recognized as part of the cost basis of the treasury stock acquired and not reported as part of income tax expense.

14. SHARE-BASED INCENTIVE COMPENSATION

The Company has a share-based incentive compensation plan, The Travelers Companies, Inc. Amended and Restated 2014 Stock Incentive Plan (the 2014 Incentive Plan), the purposes of which are to align the interests of the Company's non-employee directors, executive officers and other employees with those of the Company's shareholders and to attract and retain personnel by providing incentives in the form of share-based awards. The 2014 Incentive Plan permits grants of nonqualified stock options, incentive stock options, stock appreciation rights, restricted stock, restricted stock units, deferred stock, deferred stock units, performance awards and other share-based or share-denominated awards with respect to the Company's common stock. The Company has a policy of issuing new shares to settle the exercise of stock option awards and the vesting of other equity awards.

In connection with the adoption of the 2014 Incentive Plan, The Travelers Companies, Inc. Amended and Restated 2004 Stock Incentive Plan, as amended (the 2004 Incentive Plan) was terminated, joining several other legacy share-based incentive compensation plans that had been terminated in prior years (together, the legacy plans). Outstanding grants were not affected by

14. SHARE-BASED INCENTIVE COMPENSATION (Continued)

the termination of the legacy plans. The 2014 Incentive Plan is currently the only plan pursuant to which future stock-based awards may be granted.

The number of shares of the Company's common stock initially authorized for grant under the 2014 Incentive Plan was 10 million shares. In May 2021, 2019, 2017 and 2016, the Company's shareholders authorized an additional 2.4 million, 3.1 million, 2.5 million and 4.4 million shares of the Company's common stock, respectively, for grant under the 2014 Incentive Plan. The following are not counted towards the combined 22.4 million shares available and will be available for future grants under the 2014 Incentive Plan: (i) shares of common stock subject to awards that expire unexercised, that are forfeited, terminated or canceled, that are settled in cash or other forms of property, or otherwise do not result in the issuance of shares of common stock, in whole or in part; (ii) shares that are used to pay the exercise price of stock options and shares used to pay withholding taxes on awards generally; and (iii) shares purchased by the Company on the open market using cash option exercise proceeds; provided, however, that the increase in the number of shares of common stock available for grant pursuant to such market purchases shall not be greater than the number that could be repurchased at fair market value on the date of exercise of the stock option giving rise to such option proceeds. In addition, the 22.4 million shares authorized by shareholders for issuance under the 2014 Incentive Plan will be increased by any shares subject to awards under the 2004 Incentive Plan that were outstanding as of May 27, 2014 and subsequently expire, are forfeited, canceled, settled in cash or otherwise terminate without the issuance of shares.

The Company also has a compensation program for non-employee directors (the Director Compensation Program). Under the Director Compensation Program, non-employee directors' compensation consists of an annual retainer, a deferred stock award, committee chair fees and a lead director fee. Each non-employee director may choose to receive all or a portion of his or her annual retainer, committee chair fee and lead director fee, as applicable, in the form of cash or deferred stock units which vest upon grant. The annual deferred stock awards vest in full one day prior to the date of the Company's annual meeting of shareholders occurring in the year following the year of the grant date, subject to continued service. The annual deferred stock awards, including dividend equivalents, accumulate until distribution either in a lump sum or, if the director so elects, in annual installments, in each case beginning at least six months following termination of service as a director. The deferred stock units issued under the Director Compensation Program are awarded under the 2014 Incentive Plan.

Stock Option Awards

Stock option awards granted to eligible officers and key employees have a ten-year term. All stock options are granted with an exercise price equal to the closing price of the Company's common stock on the date of grant. The stock options granted generally vest upon meeting certain years of service criteria. Except as the Compensation Committee of the Board of Directors may allow in the future, stock options cannot be sold or transferred by the participant. Stock options outstanding under the 2014 Incentive Plan and the 2004 Incentive Plan generally vest three years after grant date (cliff vest).

The fair value of each option award is estimated on the date of grant by application of a variation of the Black-Scholes option pricing model using the assumptions noted in the following table. The expected term of newly granted stock options is the time to vest plus half the remaining time to expiration. This considers the vesting restrictions and represents an even pattern of exercise behavior over the remaining term. The expected volatility assumption is based on the historical volatility of the Company's common stock for the same period as the estimated option term generally using the volatility of the week prior to the stock option grant. The expected dividend is based upon the Company's current quarter dividend annualized and assumed to be constant over the expected option term. The risk-free interest rate for each option is the interpolated market yield of a U.S. Treasury bill with a term comparable to the expected option term for the same week used for measuring volatility. The following table provides information about options granted:

14. SHARE-BASED INCENTIVE COMPENSATION (Continued)

(for the year ended December 31,)	2022	2021	2020
Assumptions used in estimating fair value of options on grant date			
Expected term of stock options	**6 years**	6 years	6 years
Expected volatility of Company's stock	**24.81 %**	24.22% - 24.53%	15.73 %
Weighted average volatility	**24.81 %**	24.22 %	15.73 %
Expected annual dividend per share	**$3.52**	$3.40 - $3.52	$3.28
Risk-free rate	**1.83 %**	0.59% - 1.08%	1.37 %
Additional information			
Weighted average grant-date fair value of options granted (per share)	**$ 35.70**	$ 23.32	$ 14.41
Total intrinsic value of options exercised during the year (in millions)	**$ 110**	$ 94	$ 47

A summary of stock option activity under the 2014 Incentive Plan and the legacy plans as of and for the year ended December 31, 2022 is as follows:

Stock Options	Number	Weighted Average Exercise Price	Weighted Average Contractual Life Remaining	Aggregate Intrinsic Value ($ in millions)
Outstanding, beginning of year	**9,419,885**	**$ 126.62**		
Original grants	**1,104,483**	**172.50**		
Exercised	**(1,905,314)**	**115.38**		
Forfeited or expired	**(60,190)**	**144.00**		
Outstanding, end of year	**8,558,864**	**$ 134.92**	**6.3 years**	**$ 450**
Vested at end of year [(1)]	**6,909,187**	**$ 132.54**	**6.0 years**	**$ 380**
Exercisable at end of year	**3,984,199**	**$ 124.32**	**4.6 years**	**$ 252**

(1) Represents awards for which the requisite service has been rendered, including those that are retirement eligible.

On February 7, 2023, the Company, under the 2014 Incentive Plan, granted 874,632 stock option awards with an exercise price of $189.01 per share. The fair value attributable to the stock option awards on the date of grant was $47.77 per share.

Restricted Stock Units, Deferred Stock Units and Performance Share Award Programs

The Company issues restricted stock unit awards to eligible officers and key employees under the Equity Awards program established pursuant to the 2014 Incentive Plan. A restricted stock unit represents the right to receive a share of common stock. These restricted stock unit awards are granted at market price, generally vest three years from the date of grant, do not have voting rights and the underlying shares of common stock are not issued until the vesting criteria is satisfied. In addition, members of the Company's Board of Directors can be issued deferred stock units from (i) an annual award; (ii) deferred compensation (in lieu of cash retainer, committee chair fees and lead director fees); and (iii) dividend equivalents earned on outstanding deferred compensation.

The Company also has a Performance Share Awards program established pursuant to the 2004 Incentive Plan and which continues pursuant to the 2014 Incentive Plan. Under the program, the Company may issue performance share awards to certain employees of the Company who hold positions of Vice President (or its equivalent) or above. The performance share awards provide the recipient the right to earn shares of the Company's common stock based upon the Company's attainment of certain performance goals and the recipient meeting certain years of service criteria. The performance goals for performance share awards are based on the Company's adjusted return on equity over a three-year performance period. Vesting of performance shares is contingent upon the Company attaining the relevant performance period minimum threshold return on equity and the

14. SHARE-BASED INCENTIVE COMPENSATION (Continued)

recipient meeting certain years of service criteria, generally three years for full vesting. If the performance period return on equity is below the minimum threshold, none of the performance shares will vest. If performance meets or exceeds the minimum performance threshold, a range of performance shares will vest (50% to 200% for awards granted in 2021, 2022 and 2023), depending on the actual return on equity attained.

The fair value of restricted stock units, deferred stock units and performance shares is measured at the market price of the Company stock at date of grant. Under terms of the 2014 Incentive Plan, holders of deferred stock units and performance shares may receive dividend equivalents.

The total fair value of shares that vested during the years ended December 31, 2022, 2021 and 2020 was $159 million, $124 million and $127 million, respectively.

A summary of restricted stock units, deferred stock units and performance share activity under the 2014 Incentive Plan and the legacy plans as of and for the year ended December 31, 2022 is as follows:

	Restricted and Deferred Stock Units		Performance Shares	
Other Equity Instruments	Number	Weighted Average Grant-Date Fair Value	Number	Weighted Average Grant-Date Fair Value
Nonvested, beginning of year	**1,108,825**	**$ 134.05**	**930,557**	**$ 136.96**
Granted	**523,727**	**172.28**	**317,342**	**172.50**
Vested	**(521,660)** (1)	**140.05**	**(367,365)** (2)	**132.58**
Forfeited	**(76,470)**	**145.52**	**(13,685)**	**145.18**
Performance-based adjustment	—	—	**196,075** (3)	**166.87**
Nonvested, end of year	**1,034,422**	**$ 149.53**	**1,062,924**	**$ 154.49**

(1) Represents awards for which the requisite service has been rendered.

(2) Reflects the number of performance shares attributable to the performance goals attained over the completed performance period (three years) and for which service conditions have been met.

(3) Represents the current year change in estimated performance shares to reflect the attainment of performance goals for the awards that were granted in each of the years 2020 through 2022.

In addition to the nonvested shares presented in the above table, there are related nonvested dividend equivalent shares. The number of nonvested dividend equivalent shares related to deferred stock units was 280 at the beginning of the year and 269 at the end of the year and the number of nonvested dividend equivalent shares related to performance shares was 32,670 at the beginning of the year and 36,719 at the end of the year. The dividend equivalent shares are subject to the same vesting terms as the deferred stock units and performance shares.

On February 7, 2023, the Company, under the 2014 Incentive Plan, granted 779,913 common stock awards in the form of restricted stock units, deferred stock units and performance share awards to participating officers, non-employee directors and other key employees. The restricted stock units and deferred stock units totaled 473,693 shares and the performance share awards totaled 306,220 shares. The fair value per share attributable to the common stock awards on the date of grant was $189.01.

14. SHARE-BASED INCENTIVE COMPENSATION (Continued)

Share-Based Compensation Cost Recognition

The amount of compensation cost for awards subject to a service condition is based on the number of shares expected to be issued and is recognized over the time period for which service is to be provided (requisite service period), generally the vesting period. Awards granted to retiree-eligible employees or to employees who become retiree-eligible before an award's vesting date are considered to have met the requisite service condition if the vesting terms are accelerated upon retirement. The compensation cost for awards subject to a performance condition is based upon the probable outcome of the performance condition, which on the grant date reflects an estimate of attaining 100% of the performance shares granted. The compensation cost reflects an estimated annual forfeiture rate from 1.5% to 4.5% over the requisite service period of the awards. That estimate is revised if subsequent information indicates that the actual number of instruments expected to vest is likely to differ from previous estimates. Compensation costs for awards are recognized on a straight-line basis over the requisite service period. For awards that have graded vesting terms, the compensation cost is recognized on a straight-line basis over the requisite service period for each separate vesting portion of the award as if the award was, in substance, multiple awards. The total compensation cost for all share-based incentive compensation awards recognized in earnings for the years ended December 31, 2022, 2021 and 2020 was $183 million, $162 million and $148 million, respectively. Included in these amounts are compensation cost adjustments of $23 million, $12 million and $3 million, for the years ended December 31, 2022, 2021 and 2020, respectively, that reflected the cost associated with the updated estimate of performance shares due to attaining certain performance levels from the date of the initial grant of the performance awards. The related tax benefits recognized in earnings were $31 million, $28 million and $25 million for the years ended December 31, 2022, 2021 and 2020, respectively.

At December 31, 2022, there was $179 million of total unrecognized compensation cost related to all nonvested share-based incentive compensation awards. This includes stock options, restricted and deferred stock units and performance shares granted under the 2014 Incentive Plan. The unrecognized compensation cost is expected to be recognized over a weighted-average period of 1.7 years. Cash received from the exercise of employee stock options under share-based compensation plans totaled $267 million, $293 million and $127 million in 2022, 2021 and 2020, respectively. The tax benefit for tax deductions from employee stock options exercised during 2022, 2021 and 2020 totaled $22 million, $19 million and $10 million, respectively.

15. PENSION PLANS, RETIREMENT BENEFITS AND SAVINGS PLANS

The Company sponsors a qualified non-contributory defined benefit pension plan (the qualified domestic pension plan), which covers substantially all U.S. domestic employees and provides benefits under a cash balance formula, except that certain limited groups of legacy participants are covered by a prior traditional final average pay formula. In addition, the Company sponsors a nonqualified defined benefit pension plan which covers certain highly-compensated employees, pension plans for employees of its foreign subsidiaries, and a postretirement health and life insurance benefit plan for employees satisfying certain age and service requirements and for certain retirees.

Obligations and Funded Status

The following tables summarize the funded status, obligations and amounts recognized in the consolidated balance sheet for the Company's benefit plans. The Company uses a December 31 measurement date for its pension and postretirement benefit plans.

15. PENSION PLANS, RETIREMENT BENEFITS AND SAVINGS PLANS (Continued)

(at and for the year ended December 31, in millions)	Qualified Domestic Pension Plan		Nonqualified and Foreign Pension Plans		Total	
	2022	2021	2022	2021	2022	2021
Change in projected benefit obligation:						
Benefit obligation at beginning of year	**$ 4,212**	$ 4,326	**$ 259**	$ 265	**$ 4,471**	$ 4,591
Benefits earned	**137**	135	**8**	6	**145**	141
Interest cost on benefit obligation	**95**	79	**6**	4	**101**	83
Actuarial gain	**(781)**	(73)	**(64)**	(2)	**(845)**	(75)
Benefits paid	**(263)**	(255)	**(14)**	(13)	**(277)**	(268)
Settlement	**—**	—	**(3)**	—	**(3)**	—
Foreign currency exchange rate change	**—**	—	**(12)**	(1)	**(12)**	(1)
Benefit obligation at end of year	**$ 3,400**	$ 4,212	**$ 180**	$ 259	**$ 3,580**	$ 4,471
Change in plan assets:						
Fair value of plan assets at beginning of year	**$ 4,902**	$ 4,631	**$ 134**	$ 125	**$ 5,036**	$ 4,756
Actual return on plan assets	**(701)**	526	**(22)**	11	**(723)**	537
Company contributions	**—**	—	**13**	12	**13**	12
Benefits paid	**(263)**	(255)	**(14)**	(13)	**(277)**	(268)
Settlement	**—**	—	**(3)**	—	**(3)**	—
Foreign currency exchange rate change	**—**	—	**(13)**	(1)	**(13)**	(1)
Fair value of plan assets at end of year	**3,938**	4,902	**95**	134	**4,033**	5,036
Funded status of plan at end of year	**$ 538**	$ 690	**$ (85)**	$ (125)	**$ 453**	$ 565
Amounts recognized in the consolidated balance sheet consist of:						
Accrued over-funded benefit plan assets	**$ 538**	$ 690	**$ 23**	$ 6	**$ 561**	$ 696
Accrued under-funded benefit plan liabilities	**—**	—	**(108)**	(131)	**(108)**	(131)
Total	**$ 538**	$ 690	**$ (85)**	$ (125)	**$ 453**	$ 565
Amounts recognized in accumulated other comprehensive income (loss) consist of:						
Net actuarial loss	**$ 785**	$ 618	**$ 5**	$ 49	**$ 790**	$ 667
Prior service cost (benefit)	**(1)**	(2)	**1**	1	**—**	(1)
Total	**$ 784**	$ 616	**$ 6**	$ 50	**$ 790**	$ 666

15. PENSION PLANS, RETIREMENT BENEFITS AND SAVINGS PLANS (Continued)

(at and for the year ended December 31, in millions)	Postretirement Benefit Plans 2022	2021
Change in accumulated benefit obligation:		
Benefit obligation at beginning of year	**$ 149**	$ 171
Benefits earned	**—**	—
Interest cost on benefit obligation	**3**	3
Actuarial gain	**(45)**	(16)
Benefits paid	**(7)**	(9)
Foreign currency exchange rate change	**(1)**	—
Benefit obligation at end of year	**$ 99**	$ 149
Change in plan assets:		
Fair value of plan assets at beginning of year	**$ 9**	$ 11
Actual return on plan assets	**—**	—
Company contributions	**6**	7
Benefits paid	**(7)**	(9)
Fair value of plan assets at end of year	**8**	9
Funded status of plan at end of year	**$ (91)**	$ (140)
Amounts recognized in the consolidated balance sheet consist of:		
Accrued under-funded benefit plan liability	**$ (91)**	$ (140)
Amounts recognized in accumulated other comprehensive income (loss) consist of:		
Net actuarial gain	**$ (94)**	$ (54)
Prior service benefit	**(11)**	(14)
Total	**$ (105)**	$ (68)

The total accumulated benefit obligation for the Company's defined benefit pension plans was $3.44 billion and $4.25 billion at December 31, 2022 and 2021, respectively. The qualified domestic pension plan accounted for $3.27 billion and $4.00 billion of the total accumulated benefit obligation at December 31, 2022 and 2021, respectively, whereas the nonqualified and foreign plans accounted for $170 million and $246 million of the total accumulated benefit obligation at December 31, 2022 and 2021, respectively.

For pension plans with a projected benefit obligation in excess of plan assets, the aggregate projected benefit obligation was $108 million and $131 million at December 31, 2022 and 2021, respectively, and the aggregate plan assets were $0 million at both December 31, 2022 and 2021. For pension plans with an accumulated benefit obligation in excess of plan assets, the aggregate accumulated benefit obligation was $99 million and $118 million at December 31, 2022 and 2021, respectively, and the aggregate plan assets were $0 million at both December 31, 2022 and 2021. For postretirement benefit plans with an accumulated benefit obligation in excess of plan assets, the aggregate accumulated benefit obligation was $99 million and $149 million at December 31, 2022 and 2021, respectively, and the aggregate plan assets were $8 million and $9 million at December 31, 2022 and 2021, respectively.

The $781 million actuarial gain experienced in 2022 for the qualified domestic pension plan was largely driven by the increase in the assumed discount rate from the prior year that was used to determine the projected benefit obligation at December 31, 2022. The $73 million actuarial gain experienced in 2021 for the qualified domestic pension plan was largely driven by the increase in the assumed discount rate from the prior year that was used to determine the projected benefit obligation at December 31, 2021.

The Company has discretion regarding whether to provide additional funding and when to provide such funding to its qualified domestic pension plan. In 2022, 2021 and 2020, there were no required or voluntary contributions to the qualified domestic pension plan. There is no required contribution to the qualified domestic pension plan during 2023, and the Company has not

15. PENSION PLANS, RETIREMENT BENEFITS AND SAVINGS PLANS (Continued)

determined whether additional funding will be made during 2023. With respect to the Company's foreign pension plans, there are no significant required contributions in 2023.

The following table summarizes the components of net periodic benefit cost (benefit) and other amounts recognized in other comprehensive income (loss) related to the benefit plans.

	Pension Plans			Postretirement Benefit Plans		
(for the year ended December 31, in millions)	**2022**	**2021**	**2020**	**2022**	**2021**	**2020**
Net Periodic Benefit Cost (Benefit):						
Service cost	**$ 145**	$ 141	$ 133	**$ —**	$ —	$ —
Non-service cost (benefit):						
Interest cost on benefit obligation	**101**	83	114	**3**	3	4
Expected return on plan assets	**(296)**	(274)	(275)	**—**	—	—
Amortization of unrecognized:						
Prior service benefit	**(1)**	(1)	(1)	**(3)**	(4)	(3)
Net actuarial (gain) loss	**49**	109	93	**(4)**	(2)	(4)
Total non-service cost (benefit)	**(147)**	(83)	(69)	**(4)**	(3)	(3)
Net periodic benefit cost (benefit)	**(2)**	58	64	**(4)**	(3)	(3)
Other Changes in Benefit Plan Assets and Benefit Obligations Recognized in Other Comprehensive Income (Loss):						
Prior service benefit	**—**	—	1	**—**	—	—
Net actuarial (gain) loss	**174**	(338)	61	**(45)**	(16)	4
Foreign currency exchange rate change	**(2)**	—	1	**1**	—	—
Amortization of prior service benefit	**1**	1	1	**3**	4	3
Amortization of net actuarial gain (loss)	**(49)**	(109)	(93)	**4**	2	4
Total other changes recognized in other comprehensive income (loss)	**124**	(446)	(29)	**(37)**	(10)	11
Total other changes recognized in net periodic benefit cost and other comprehensive income (loss)	**$ 122**	$ (388)	$ 35	**$ (41)**	$ (13)	$ 8

15. PENSION PLANS, RETIREMENT BENEFITS AND SAVINGS PLANS (Continued)

The following table indicates the line items in which the respective service costs and non-service cost (benefit) are presented in the consolidated statement of income for the years ended December 31, 2022, 2021 and 2020.

	Pension Plans			Postretirement Benefit Plans		
(for the year ended December 31, in millions)	2022	2021	2020	2022	2021	2020
Service Cost:						
Net investment income	**$ 1**	$ 1	$ 1	**$ —**	$ —	$ —
Claims and claim adjustment expenses	**58**	57	55	**—**	—	—
General and administrative expenses	**86**	83	77	**—**	—	—
Total service cost	**145**	141	133	**—**	—	—
Non-Service Cost (Benefit):						
Net investment income	**(1)**	—	—	**—**	—	—
Claims and claim adjustment expenses	**(59)**	(34)	(29)	**(2)**	(1)	(1)
General and administrative expenses	**(87)**	(49)	(40)	**(2)**	(2)	(2)
Total non-service cost (benefit)	**(147)**	(83)	(69)	**(4)**	(3)	(3)
Net periodic benefit cost (benefit)	**$ (2)**	$ 58	$ 64	**$ (4)**	$ (3)	$ (3)

15. PENSION PLANS, RETIREMENT BENEFITS AND SAVINGS PLANS (Continued)

Assumptions

The following table summarizes assumptions used with regard to the Company's qualified and nonqualified domestic pension plans and the domestic postretirement benefit plans.

(at and for the year ended December 31,)	2022	2021
Assumptions used to determine benefit obligations		
Discount rate:		
Qualified domestic pension plan	**5.19 %**	2.96 %
Nonqualified domestic pension plan	**5.13 %**	2.82 %
Domestic postretirement benefit plan	**5.08 %**	2.62 %
Cash balance interest crediting rate	**4.01 %**	4.01 %
Future compensation increase rate	**4.00 %**	4.00 %
Assumptions used to determine net periodic benefit cost		
Discount rate:		
Qualified domestic pension plan:		
Service cost	**3.18 %**	2.96 %
Interest cost	**2.34 %**	1.88 %
Nonqualified domestic pension plan:		
Service cost	**2.92 %**	2.58 %
Interest cost	**2.23 %**	1.69 %
Domestic postretirement benefit plan:		
Interest cost	**2.08 %**	1.57 %
Expected long-term rate of return on assets:		
Pension plan	**6.50 %**	6.50 %
Postretirement benefit plan	**4.00 %**	4.00 %
Assumed health care cost trend rates		
Following year:		
Medical (before age 65)	**7.25 %**	6.50 %
Medical (age 65 and older)	**9.50 %**	8.00 %
Rate to which the cost trend rate is assumed to decline (ultimate trend rate)	**4.50 %**	4.50 %
Year that the rate reaches the ultimate trend rate:		
Medical (before age 65)	**2032**	2029
Medical (age 65 and older)	**2032**	2031

The discount rate assumption used to determine the *benefit obligation* is based on a yield-curve approach. Under this approach, individual spot rates from the yield curve of a hypothetical portfolio of high quality fixed maturity corporate bonds (rated Aa) available at the year-end valuation date, for which the timing and amount of cash outflows correspond with the timing and amount of the estimated benefit payouts of the Company's benefit plan, are applied to expected future benefits payments in measuring the projected *benefit obligation*. The discount rate assumption used to determine *benefit obligations* disclosed above represents the weighted average of the individual spot rates.

The discount rate assumption used to determine the *net periodic benefit cost* is the single weighted average discount rate derived from the yield curve used to measure the *benefit obligation* at the beginning of the year.

In choosing the expected long-term rate of return on plan assets, the Company selected the rate that reflected the Company's current expectations with regard to long-term returns in the capital markets, taking into account the pension plan's asset

15. PENSION PLANS, RETIREMENT BENEFITS AND SAVINGS PLANS (Continued)

allocation targets, the historical performance and current valuation of U.S. and international equities, and the level of long term interest rate and inflation expectations.

The assumptions made for the Company's foreign pension and foreign postretirement benefit plans are not materially different from those of the Company's qualified domestic pension plan and the domestic postretirement benefit plan.

Plan Assets

The qualified domestic pension plan assets are invested for the exclusive benefit of the plan participants and beneficiaries and are intended, over time, to satisfy the benefit obligations under the plan. Risk tolerance is established through consideration of plan liabilities, plan funded status and corporate financial position. The asset mix guidelines have been established and are reviewed quarterly. These guidelines are intended to serve as tools to facilitate the investment of plan assets to maximize long-term total return and the ongoing oversight of the plan's investment performance. Investment risk is measured and monitored on an ongoing basis through daily and monthly investment portfolio reviews, annual liability measurements and periodic asset/liability studies.

The Company's overall investment strategy for the qualified domestic pension plan is to achieve a mix of approximately 85% to 90% of investments for long-term growth and 10% to 15% for near-term benefit payments with a diversification of asset types, fund strategies and fund managers. The current target allocations for plan assets are 55% to 65% equity securities and 20% to 40% fixed income securities, with the remainder allocated to short-term securities. Equity securities primarily include investments in large, medium and small-cap companies primarily located in the United States. Fixed income securities include corporate bonds of companies from diversified industries, mortgage-backed securities, U.S. Treasury securities and debt securities issued by foreign governments.

Assets of the Company's foreign pension plans are not significant.

Fair Value Measurement — Pension Plans and Other Postretirement Benefit Assets

For a discussion of the methods employed by the Company to measure the fair value of invested assets, see note 4. The following discussion of fair value measurements applies exclusively to the Company's pension plans and other postretirement benefit assets.

Fair value estimates for equity and bond mutual funds held by the pension plans reflect prices received from an external pricing service that are based on observable market transactions. These estimates are primarily included in Level 1.

Short-term securities are carried at fair value which approximates cost plus accrued interest or amortized discount. The fair value or market value of these is periodically compared to this amortized cost and is based on significant observable inputs as determined by an external pricing service. Accordingly, the estimates of fair value for such short-term securities, other than U.S. Treasury securities and money market mutual funds, provided by an external pricing service are included in the amount disclosed in Level 2 of the hierarchy. The estimated fair value of U.S. Treasury securities and money market mutual funds is included in the amount disclosed in Level 1 as the estimates are based on unadjusted market prices.

Fair Value Hierarchy — Pension Plans

The following tables present the level within the fair value hierarchy at which the financial assets of the Company's pension plans are measured on a recurring basis.

15. PENSION PLANS, RETIREMENT BENEFITS AND SAVINGS PLANS (Continued)

(at December 31, 2022, in millions)	Total	Level 1	Level 2	Level 3
Invested assets:				
Fixed maturities				
Obligations of U.S. states, municipalities and political subdivisions	**$ 80**	**$ —**	**$ 80**	**$ —**
Debt securities issued by foreign governments	**25**	**—**	**25**	**—**
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities	**4**	**—**	**4**	**—**
Corporate and all other bonds	**713**	**—**	**713**	**—**
Total fixed maturities	**822**	**—**	**822**	**—**
Mutual funds				
Equity mutual funds	**1,157**	**1,151**	**6**	**—**
Bond mutual funds	**754**	**751**	**3**	**—**
Total mutual funds	**1,911**	**1,902**	**9**	**—**
Equity securities	**1,116**	**1,116**	**—**	**—**
Other investments	**1**	**—**	**—**	**1**
Cash and short-term securities				
U.S. Treasury securities	**—**	**—**	**—**	**—**
Other	**183**	**131**	**52**	**—**
Total cash and short-term securities	**183**	**131**	**52**	**—**
Total	**$ 4,033**	**$ 3,149**	**$ 883**	**$ 1**

(at December 31, 2021, in millions)	Total	Level 1	Level 2	Level 3
Invested assets:				
Fixed maturities				
Obligations of U.S. states, municipalities and political subdivisions	$ 26	$ —	$ 26	$ —
Debt securities issued by foreign governments	38	—	38	—
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities	6	—	6	—
Corporate and all other bonds	678	—	678	—
Total fixed maturities	748	—	748	—
Mutual funds				
Equity mutual funds	1,645	1,638	7	—
Bond mutual funds	1,114	1,111	3	—
Total mutual funds	2,759	2,749	10	—
Equity securities	1,385	1,384	1	—
Other investments	1	—	—	1
Cash and short-term securities				
U.S. Treasury securities	—	—	—	—
Other	143	106	37	—
Total cash and short-term securities	143	106	37	—
Total	$ 5,036	$ 4,239	$ 796	$ 1

15. PENSION PLANS, RETIREMENT BENEFITS AND SAVINGS PLANS (Continued)

Other Postretirement Benefit Plans

The Company's overall investment strategy is to achieve a mix of approximately 35% to 65% of investments for long-term growth and 35% to 65% for near-term insurance payments with a wide diversification of asset types, fund strategies and fund managers. The current target allocations for plan assets are 25% to 75% fixed income securities, with the remainder allocated to short-term securities. Fixed income securities include corporate bonds of companies from diversified industries, mortgage-backed securities and U.S. Treasuries.

Fair Value — Other Postretirement Benefit Plans

The Company's other postretirement benefit plans had financial assets of $8 million and $9 million at December 31, 2022 and 2021, respectively, which are measured at fair value on a recurring basis. The assets are primarily corporate bonds, which are categorized as level 2 in the fair value hierarchy.

Estimated Future Benefit Payments

The following table presents the estimated benefits expected to be paid by the Company's pension and postretirement benefit plans for the next ten years (reflecting estimated future employee service).

	Benefits Expected to be Paid	
(in millions)	Pension Plans	Postretirement Benefit Plans
2023	$ 294	$ 9
2024	293	9
2025	292	9
2026	298	9
2027	296	9
2028 through 2032	1,442	40

Savings Plan

Substantially all U.S. domestic Company employees are eligible to participate in The Travelers 401(k) Savings Plan (the Savings Plan). Eligible employees can contribute to the Savings Plan, and the Company makes a matching contribution into the employee's Savings Plan account, subject to limitations described below. In addition, when an eligible U.S. employee makes a payment toward their student loans, the Company makes a contribution of that amount into the employee's Savings Plan account, subject to limitations described below. The total annual amount of the Company's matching contributions, student loan repayment contributions or a combination of both is the lesser of 5% of eligible pay or $7,000, which becomes 100% vested after three years of service. All Company contributions to the Savings Plan are made in cash and invested according to the employee's current investment elections and can be reinvested into other investment options in accordance with the terms of the Savings Plan. The Company's non-U.S. employees and certain domestic employees participate in separate savings plans. The total expense related to all of the savings plans was $139 million, $133 million and $132 million for the years ended December 31, 2022, 2021 and 2020, respectively.

All common shares held by the Savings Plan are considered outstanding for basic and diluted EPS computations and dividends paid on all shares are charged to retained earnings.

16. LEASES

The Company enters into lease agreements for real estate that is primarily used for office space in the ordinary course of business. These leases are accounted for as operating leases, whereby lease expense is recognized on a straight-line basis over the term of the lease, and a right-of-use asset and lease liability is recognized as part of other assets and other liabilities, respectively, in the consolidated balance sheet.

Most leases include an option to extend or renew the lease term. The exercise of the renewal option is at the Company's discretion. The operating lease liability includes lease payments related to options to extend or renew the lease term if the

16. LEASES (Continued)

Company is reasonably certain of exercising those options. The Company, in determining the present value of lease payments, utilizes either the rate implicit in the lease, if that rate is readily determinable, or the Company's incremental secured borrowing rate commensurate with the term of the underlying lease.

Lease expense is included in general and administrative expenses in the consolidated statement of income. Additional information regarding the Company's real estate operating leases is as follows:

(for the year ended December 31, in millions)	2022	2021	2020
Lease cost			
Operating leases	**$ 81**	$ 89	$ 95
Short-term leases [1]	**2**	1	2
Lease expense	**83**	90	97
Less: sublease income [2]	**—**	—	—
Net lease cost	**$ 83**	$ 90	$ 97
Other information on operating leases			
Cash payments to settle a lease liability reported in cash flows	**$ 93**	$ 104	$ 109
Right-of-use assets obtained in exchange for new lease liabilities	**$ 30**	$ 59	$ 67
Weighted average discount rate	**2.39 %**	2.25 %	
Weighted average remaining lease term	**4.4 years**	4.9 years	

(1) Leases with a term of twelve months or less are not recorded on the consolidated balance sheet.

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

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

(in millions)	Real Estate Lease Liability
2023	**$ 86**
2024	**68**
2025	**49**
2026	**43**
2027	**27**
Thereafter	**24**
Total undiscounted lease payments	**297**
Less: present value adjustment	**19**
Operating lease liability	**$ 278**

17. CONTINGENCIES, COMMITMENTS AND GUARANTEES

Contingencies

The major pending legal proceedings, other than ordinary routine litigation incidental to the business, to which the Company or any of its subsidiaries is a party or to which any of the Company's properties is subject are described below.

17. CONTINGENCIES, COMMITMENTS AND GUARANTEES (Continued)

Asbestos and Environmental Claims and Litigation

In the ordinary course of its insurance business, the Company has received and continues to receive claims for insurance arising under policies issued by the Company asserting alleged injuries and damages from asbestos- and environmental-related exposures that are the subject of related coverage litigation. The Company is defending asbestos- and environmental-related litigation vigorously and believes that it has meritorious defenses; however, the outcomes of these disputes are uncertain. In this regard, the Company employs dedicated specialists and comprehensive resolution strategies to manage asbestos and environmental loss exposure, including settling litigation under appropriate circumstances. Currently, it is not possible to predict legal outcomes and their impact on future loss development for claims and litigation relating to asbestos and environmental claims. Any such development could be affected by future court decisions and interpretations, as well as future changes, if any, in applicable legislation. Because of these uncertainties, additional liabilities may arise for amounts in excess of the Company's current insurance reserves. In addition, the Company's estimate of ultimate claims and claim adjustment expenses may change. These additional liabilities or changes in estimates, or a range of either, cannot now be reasonably estimated and could result in income statement charges that could be material to the Company's results of operations in future periods.

Other Proceedings Not Arising Under Insurance Contracts or Reinsurance Agreements

The Company is involved in other lawsuits, including lawsuits alleging extra-contractual damages relating to insurance contracts or reinsurance agreements, that do not arise under insurance contracts or reinsurance agreements. The legal costs associated with such lawsuits are expensed in the period in which the costs are incurred. Based upon currently available information, the Company does not believe it is reasonably possible that any such lawsuit or related lawsuits would be material to the Company's results of operations or would have a material adverse effect on the Company's financial position or liquidity.

Other Commitments and Guarantees

Commitments

Investment Commitments — The Company has unfunded commitments to private equity limited partnerships, real estate partnerships and others. These commitments totaled $1.80 billion and $1.70 billion at December 31, 2022 and 2021, respectively.

Guarantees

In the ordinary course of selling businesses to third parties, the Company has agreed to indemnify purchasers for losses arising out of breaches of representations and warranties, obligations arising from certain liabilities and any breach or failure to perform certain covenants with respect to the businesses being sold. Such indemnification provisions generally are applicable from the closing date to the expiration of the relevant statutes of limitations, although, in some cases, there may be agreed upon term limitations or no term limitations. Certain of these contingent obligations are subject to deductibles which have to be incurred by the obligee before the Company is obligated to make payments. The maximum amount of the Company's contingent obligation for indemnifications related to the sale of businesses that are quantifiable was $351 million at December 31, 2022.

The Company also has contingent obligations for guarantees related to certain investments, certain insurance policy obligations of former insurance subsidiaries and various other indemnifications. The Company also provides standard indemnifications that it utilizes with service providers in the normal course of business. The indemnification clauses are often standard contractual terms. The maximum amount of the Company's obligation related to the guarantee of certain insurance policy obligations of a former insurance subsidiary was $480 million at December 31, 2022, all of which is indemnified by a third party.

Certain of the guarantees and indemnifications described above have no stated or notional amounts or limitation to the maximum potential future payments, and, accordingly, the Company is unable to provide an estimate of the maximum potential payments for such arrangements.

18. NONCASH INVESTING AND FINANCING ACTIVITIES

There were no material noncash financing or investing activities during the years ended December 31, 2022, 2021 and 2020.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not Applicable.

Item 9A. CONTROLS AND PROCEDURES

The Company maintains disclosure controls and procedures (as that term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (Exchange Act)) that are designed to ensure that information required to be disclosed in the Company's reports under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures. Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. The Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures as of December 31, 2022. Based upon that evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2022, the design and operation of the Company's disclosure controls and procedures were effective to accomplish their objectives at the reasonable assurance level.

In addition, there was no change in the Company's internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarter ended December 31, 2022 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

The Company regularly seeks to identify, develop and implement improvements to its technology systems and business processes, some of which may affect its internal control over financial reporting. These changes may include such activities as implementing new, more efficient systems, updating existing systems or platforms, automating manual processes or utilizing technology developed by third parties. These systems changes are often phased in over multiple periods in order to limit the implementation risk in any one period, and as each change is implemented the Company monitors its effectiveness as part of its internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control over financial reporting is designed to provide reasonable assurances regarding the reliability of financial reporting and the preparation of the consolidated financial statements of the Company in accordance with U.S. generally accepted accounting principles. The Company's accounting policies and internal controls over financial reporting, established and maintained by management, are under the general oversight of the Company's Audit Committee.

The Company's internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures are being made only in accordance with authorizations of the Company's management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of 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.

Management has assessed the Company's internal control over financial reporting as of December 31, 2022. The standard measures adopted by management in making its evaluation are the measures in the *Internal Control - Integrated Framework (2013)* published by the Committee of Sponsoring Organizations of the Treadway Commission.

Based upon its assessment, management has concluded that the Company's internal control over financial reporting was effective at December 31, 2022, and that there were no material weaknesses in the Company's internal control over financial reporting as of that date.

KPMG LLP, an independent registered public accounting firm, which has audited and reported on the consolidated financial statements contained in this Form 10-K, has issued its report on the effectiveness of the Company's internal control over financial reporting which follows this report.

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
The Travelers Companies, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited The Travelers Companies, Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheet of the Company as of December 31, 2022 and 2021, the related consolidated statements of income, comprehensive income, changes in shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes and financial statement schedules as listed in the index to consolidated financial statements and schedules (collectively, the consolidated financial statements), and our report dated February 16, 2023 expressed an unqualified opinion on those consolidated financial statements.

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 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 a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. 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 of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included 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.

/s/ KPMG LLP

KPMG LLP

New York, New York
February 16, 2023

Item 9B. OTHER INFORMATION

Executive Ownership and Sales. All of the Company's executive officers are subject to the Company's executive stock ownership policy. For a summary of this policy as currently in effect, see "Compensation Discussion and Analysis - Additional Compensation Information - Stock Ownership Guidelines, Anti-Hedging and Pledging Policies, and Other Trading Restrictions" in the Company's proxy statement filed with the SEC on April 8, 2022. From time to time, some of the Company's executives may determine that it is advisable to diversify their investments for personal financial planning reasons, or may seek liquidity for other reasons, and may, in compliance with the stock ownership policy, sell shares of common stock of the Company on the open market, in private transactions or to the Company. To effect such sales, from time to time, some of the Company's executives may enter into trading plans designed to comply with the Company's securities trading policy and the provisions of Rule 10b5-1 under the Securities Exchange Act of 1934. The trading plans will not reduce any of the executives' ownership of the Company's shares below the applicable executive stock ownership guidelines. As of the date of this report, none of the Company's "named executive officers" (i.e. an executive officer included in the compensation disclosures in the Company's most recent proxy statement) has entered into a Rule 10b5-1 trading plan that remains in effect.

Item 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Executive Officers of the Company

Set forth below is information concerning the Company's executive officers as of February 16, 2023.

Name	Age	Office
Alan D. Schnitzer	57	Chairman of the Board of Directors and Chief Executive Officer
William H. Heyman	74	Vice Chairman and Chairman of the Investment Policy Committee
Avrohom J. Kess	54	Vice Chairman and Chief Legal Officer
Daniel S. Frey	58	Executive Vice President and Chief Financial Officer
Andy F. Bessette	69	Executive Vice President and Chief Administrative Officer
Michael F. Klein	55	Executive Vice President and President, Personal Insurance
Jeffrey P. Klenk	53	Executive Vice President and President, Bond & Specialty Insurance
Diane Kurtzman	53	Executive Vice President and Chief Human Resources Officer
Mojgan M. Lefebvre	57	Executive Vice President and Chief Technology & Operations Officer
Maria Olivo	58	Executive Vice President, Strategic Development and President, International
David D. Rowland	57	Executive Vice President and Co-Chief Investment Officer
Gregory C. Toczydlowski	56	Executive Vice President and President, Business Insurance
Daniel T.H. Yin	57	Executive Vice President and Co-Chief Investment Officer

Alan D. Schnitzer, 57, has been Chairman of the Board of Directors since August 2017 and Chief Executive Officer and Director since December 2015. He previously served as Vice Chairman and Chief Executive Officer, Business and International Insurance from July 2014. Mr. Schnitzer was Vice Chairman - Financial, Professional & International Insurance and Field Management; Chief Legal Officer from May 2012 until July 2014 and Vice Chairman and Chief Legal Officer and Executive Vice President - Financial, Professional and International Insurance from May 2008 until May 2012. He was Vice Chairman and Chief Legal Officer from April 2007 until May 2008. Prior to joining the Company, he was a partner at the law firm of Simpson Thacher & Bartlett LLP.

William H. Heyman, 74, has been Vice Chairman and Chairman of the Investment Policy Committee since August 2019. Prior to that, Mr. Heyman was Vice Chairman and Chief Investment Officer since May 2005. He previously served as Executive Vice President and Chief Investment Officer from May 2002. Mr. Heyman held various positions with Citigroup from 1995 until 2002, including the position of chairman of Citigroup Investments from 2000 until 2002. Prior to joining

Citigroup in 1995, Mr. Heyman was, successively: a managing director of Salomon Brothers; Director of the Division of Market Regulation of the U.S. Securities and Exchange Commission; and a managing director of Smith Barney.

Avrohom J. Kess, 54, has been Vice Chairman and Chief Legal Officer since December 2016. Prior to that, Mr. Kess was a partner, member of the Corporate Department and Head of the Public Company Advisory Practice at the law firm of Simpson Thacher & Bartlett LLP, which he joined in 1995.

Daniel S. Frey, 58, has been Executive Vice President and Chief Financial Officer since September 2018. Mr. Frey has held various financial management roles since joining a predecessor to the Company in 2003, including Senior Vice President and Chief Financial Officer, Personal Insurance from September 2014, Senior Vice President Finance, Business Insurance from August 2010 and Senior Vice President and Chief Financial Officer, Claim Services from June 2006. Prior to that, Mr. Frey held the position of Chief Financial Officer at Spalding Sports Worldwide from 1999 to 2003 and held various financial management positions at Duracell International, Inc. from 1994 to 1999. Mr. Frey began his career at Deloitte in 1986.

Andy F. Bessette, 69, has been Executive Vice President and Chief Administrative Officer since January 2002. Mr. Bessette previously held various management positions with predecessors of the Company since 1980, including Vice President, Corporate Real Estate and Services at Travelers Property Casualty Corp.

Michael F. Klein, 55, has been Executive Vice President and President, Personal Insurance since July 2015, and was also Head of Enterprise Business Intelligence & Analytics from May 2016 to May 2018. He previously served as Executive Vice President and Co-President, Business Insurance from July 2014, Executive Vice President, Middle Market from November 2012, President of Middle Market from March 2010, President of Commercial Accounts from September 2007, and Senior Vice President, Industry and Product Group from June 2006. Prior to that, Mr. Klein held various positions with the Company since 1990.

Jeffrey P. Klenk, 53, has been Executive Vice President and President, Bond & Specialty Insurance since September 2021. Mr. Klenk joined the Company in 1999 and previously since 2016, he served as Executive Vice President, Management Liability, Bond & Specialty Insurance.

Diane Kurtzman, 53, has been Executive Vice President and Chief Human Resources Officer since August 2020. She was previously Senior Vice President, Human Resources from July 2018 and Vice President, Human Resources, International & Corporate from July 2014. Prior to that, Ms. Kurtzman held various positions with the Company or its predecessors since 1991.

Mojgan M. Lefebvre, 57, has been Executive Vice President and Chief Technology & Operations Officer since May 2019. Prior to that, Ms. Lefebvre was Executive Vice President and Chief Information Officer, Enterprise Operations and eBusiness since joining the Company in September 2018. Ms. Lefebvre previously held various information technology roles at Liberty Mutual, where she was most recently Senior Vice President and Chief Information Officer for the Global Risk Solutions business, from 2010 to 2018, at bioMerieux from 2007 to 2010 and at TeleTech Holdings from 2004 to 2007.

Maria Olivo, 58, has been Executive Vice President, Strategic Development and President, International since October 2018. Prior to that, she was Executive Vice President, Strategic Development and Corporate Treasurer since July 2010. She previously served as Executive Vice President and Treasurer from June 2009 and Executive Vice President, Market Development from October 2007. Prior to that Ms. Olivo held various positions with the Company or its predecessors since 2002, including leading Corporate Development, Investor Relations and Corporate Communications. Ms. Olivo was deputy head of Strategic Investments at Swiss Re Capital Partners from April 2000 until June 2002. Prior to joining Swiss Re Capital Partners, she was a director in Salomon Smith Barney's Investment Bank.

David D. Rowland, 57, has been Executive Vice President and Co-Chief Investment Officer since August 2019. He previously served as Executive Vice President and Deputy Chief Investment Officer since October 2017 and prior to that he was Executive Vice President, Fixed Income. Mr. Rowland joined the Company in 1996 from Piper Jaffray Companies, where he was Vice President in the fixed income group.

Gregory C. Toczydlowski, 56, has been Executive Vice President and President, Business Insurance since June 2016. He previously served as Executive Vice President and President, Small Commercial and Business Insurance Technology and Operations from July 2015 and Executive Vice President and President, Personal Insurance from July 2009. Prior to that, Mr. Toczydlowski held various positions with the Company or its predecessors since 1990, including Chief Operating Officer of Personal Insurance and Chief Financial Officer for the independent agency distribution channel within Personal Insurance.

Daniel T.H. Yin, 57, has been Executive Vice President and Co-Chief Investment Officer since August 2019. He previously served as Executive Vice President and Deputy Chief Investment Officer since October 2017 and prior to that he was Executive Vice President, Alternative Investments. Mr. Yin joined the Company in 2002 from ACE Asset Management, the investment arm of what is now Chubb, Ltd., where he was responsible for implementing investment strategies across a global portfolio.

Code of Ethics

The Company has adopted a Code of Business Conduct and Ethics (Code of Ethics) that applies to all employees, including executive officers, and to directors. The Code of Ethics is available on the Corporate Governance page of the Company's website at *www.travelers.com*. If the Company ever were to amend or waive any provision of its Code of Ethics that applies to the Company's principal executive officer, principal financial officer, principal accounting officer or any person performing similar functions, the Company intends to satisfy its disclosure obligations, if any, with respect to any such waiver or amendment by posting such information on its website set forth above rather than by filing a Current Report on Form 8-K.

Other

The following sections of the Company's definitive Proxy Statement relating to its 2023 Annual Meeting of Shareholders, which will be filed with the SEC no later than 120 days after the end of the Company's fiscal year on December 31, 2022 (the Proxy Statement), are incorporated herein by reference: "Nominees for Election of Directors," "Governance of Your Company - Specific Considerations Regarding the 2023 Nominees," "Governance of Your Company - Committees of the Board and Meetings - Audit Committee," "Share Ownership Information - Delinquent Section 16(a) Reports" and "Other Information - Shareholder Proposals for 2024 Annual Meeting" to the extent applicable.

Item 11. EXECUTIVE COMPENSATION

The following sections of the Proxy Statement are incorporated herein by reference: "Compensation Discussion and Analysis," "Compensation Committee Report," "Summary Compensation Table," "Grants of Plan-Based Awards in 2022," "Narrative Supplement to Summary Compensation Table and Grants of Plan-Based Awards in 2022," "Option Exercises and Stock Vested in 2022," "Outstanding Equity Awards at December 31, 2022," "Post-Employment Compensation," "Potential Payments to Named Executive Officers Upon Termination of Employment or Change in Control," "Non-Employee Director Compensation," "Governance of Your Company - Risk Management and Compensation" and "CEO Pay Ratio."

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED SHAREHOLDER MATTERS

The "Share Ownership Information - 5% Owners" and "Share Ownership Information - Directors and Executive Officers" sections of the Proxy Statement are incorporated herein by reference.

EQUITY COMPENSATION PLAN INFORMATION

The following table sets forth information as of December 31, 2022 regarding the Company's equity compensation plans. The only plan pursuant to which the Company may currently make additional equity grants is The Travelers Companies, Inc. Amended and Restated 2014 Stock Incentive Plan (the 2014 Incentive Plan).

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders [1]	11,527,414 (2)	$134.52 per share (3)	7,358,850 (4)

(1) In addition to the 2014 Incentive Plan, also included are The Travelers Companies, Inc. Amended and Restated 2004 Stock Incentive Plan, as amended (the 2004 Incentive Plan), which was replaced by the 2014 Incentive Plan, and certain plans for employees in the United Kingdom and the Republic of Ireland and The Travelers Deferred Compensation Plan for Non-Employee Directors. Shares delivered under these plans are issued pursuant to the 2004 Incentive Plan and the 2014 Incentive Plan.

(2) Total includes (i) 8,665,954 stock options, (ii) 1,056,677 performance shares and dividend equivalents accrued thereon (assuming issuance of 100% of performance shares granted), (iii) 1,523,527 restricted stock units, (iv) 260,778 director deferred stock awards and dividend equivalents accrued thereon and (v) 20,478 common stock units credited to the deferred compensation accounts of certain non-employee directors in lieu of cash compensation, at the election of such directors.

(3) The weighted average exercise prices for both the 2004 Incentive Plan and the 2014 Incentive Plan relate only to stock options. The calculation of the weighted average exercise price does not include outstanding equity awards that are received or exercised for no consideration and also does not include common stock units credited to the deferred compensation accounts of certain non-employee directors at fair market value in lieu of cash compensation at the election of such directors.

(4) These shares are available for grant as of December 31, 2022 under the 2014 Incentive Plan pursuant to which the Compensation Committee of the Board of Directors may make various stock-based awards including nonqualified stock options, incentive stock options, stock appreciation rights, restricted stock, restricted stock units, deferred stock, deferred stock units, performance awards and other stock-based or stock-denominated awards with respect to the Company's common stock. This includes 10 million shares initially authorized for issuance under the 2014 Incentive Plan and an additional 2.4 million shares, 3.1 million shares, 2.5 million shares and 4.4 million shares authorized by shareholders in May 2021, May 2019, May 2017 and May 2016, respectively, and shares subject to awards under the 2004 Incentive Plan and the 2014 Incentive Plan that expired, were cancelled, forfeited, settled in cash or otherwise terminated without the issuance of shares.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The "Governance of Your Company—Transactions with Related Persons," "Nominees for Election of Directors" and "Governance of Your Company—Director Independence and Independence Determinations" sections of the Proxy Statement are incorporated herein by reference.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The "Audit and Non-Audit Fees" section of the Proxy Statement is incorporated herein by reference.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

Documents filed as a part of the report:

(1) Financial Statements and Schedules. See Index to Consolidated Financial Statements and Schedules on page 119 hereof.

(2) Exhibits:

Exhibit Number	Description of Exhibit
3.1	Amended and Restated Articles of Incorporation of The Travelers Companies, Inc. (the "Company"), as amended and restated May 23, 2013, were filed as Exhibit 3.1 to the Company's current report on Form 8-K filed on May 24, 2013, and are incorporated herein by reference.
3.2	Bylaws of The Travelers Companies, Inc. as Amended and Restated December 7, 2022, were filed as Exhibit 3.2 to the Company's current report on Form 8-K filed on December 12, 2022, and are incorporated herein by reference.
4.1	Description of Common Stock was filed as Exhibit 4.1 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2019, and is incorporated herein by reference.
10.1	Revolving Credit Agreement, dated June 15, 2022, between the Company and a syndicate of financial institutions, was filed as Exhibit 10.1 to the Company's current report on Form 8-K filed on June 17, 2022, and is incorporated herein by reference.
10.2*	The Travelers Companies, Inc. Policy Regarding Executive Incentive Compensation Recoupment was filed as Exhibit 10.42 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2009, and is incorporated herein by reference.
10.3*	Letter Agreement between Alan D. Schnitzer and the Company, dated April 15, 2007, was filed as Exhibit 10.1 to the Company's quarterly report on Form 10-Q for the fiscal quarter ended June 30, 2007, and is incorporated herein by reference.
10.4*	Letter Agreement between Alan D. Schnitzer and the Company, dated August 4, 2015, was filed as Exhibit 10.2 to the Company's quarterly report on Form 10-Q for the fiscal quarter ended September 30, 2015, and is incorporated herein by reference.

10.5*	Time Sharing Agreement, dated September 2, 2015, by and between the Company and Alan D. Schnitzer, was filed as Exhibit 10.3 to the Company's quarterly report on Form 10-Q for the fiscal quarter ended September 30, 2015, and is incorporated herein by reference.
10.6*	Letter Agreement between Avrohom J. Kess and the Company, dated December 19, 2016, was filed as Exhibit 10.49 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2016, and is incorporated by reference.
10.7*	The Travelers Companies, Inc. Amended and Restated 2014 Stock Incentive Plan was filed as Exhibit 10.1 to the Company's current report on Form 8-K filed on May 25, 2021, and is incorporated herein by reference.
10.8*	The Travelers Companies, Inc. Amended and Restated 2004 Stock Incentive Plan was filed as Exhibit 10.28 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2008, and is incorporated herein by reference.
10.9*	Amendment to The Travelers Companies, Inc. Amended and Restated 2004 Stock Incentive Plan was filed as Exhibit 10.7 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2012, and is incorporated herein by reference.
10.10*	Travelers Property Casualty Corp. ("TPC") 2002 Stock Incentive Plan, as amended effective January 23, 2003, was filed as Exhibit 10.22 to TPC's annual report on Form 10-K for the fiscal year ended December 31, 2002, and is incorporated herein by reference.
10.11*	Amendment to the TPC 2002 Stock Incentive Plan, as amended effective January 23, 2003, was filed as Exhibit 10.9 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2012, and is incorporated herein by reference.
10.12*	Current Director Compensation Program, effective as of May 20, 2021, was filed as Exhibit 10.2 to the Company's quarterly report on Form 10-Q for the fiscal quarter ended June 30, 2021, and is incorporated herein by reference.
10.13*	The Company's Amended and Restated Deferred Compensation Plan for Non-Employee Directors was filed as Exhibit 10.29 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2008, and is incorporated herein by reference.
10.14*	TPC Compensation Plan for Non-Employee Directors, as amended on January 22, 2004, was filed as Exhibit 10.16 to TPC's annual report on Form 10-K for the fiscal year ended December 31, 2003, and is incorporated herein by reference.
10.15*	The St. Paul Companies, Inc. Directors' Deferred Compensation Plan was filed as Exhibit 10(b) to the Company's annual report on Form 10-K for the fiscal year ended December 31, 1997, and is incorporated herein by reference.
10.16*	The St. Paul Companies, Inc. Deferred Stock Plan for Non-Employee Directors was filed as Exhibit 10(a) to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2000, and is incorporated herein by reference.
10.17*	The Travelers Severance Plan (as Amended and Restated, effective January 1, 2022) was filed as Exhibit 10.1 to the Company's quarterly report on Form 10-Q for the fiscal quarter ended March 31, 2022, and is incorporated herein by reference.
10.18*	The Company's Senior Executive Performance Plan was filed as Exhibit 10.1 to the Company's quarterly report on Form 10-Q for the fiscal quarter ended March 31, 2005, and is incorporated herein by reference.
10.19*	First Amendment to the Company's Senior Executive Performance Plan was filed as Exhibit 10.40 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2009, and is incorporated herein by reference.
10.20*	The Travelers Deferred Compensation Plan, as Amended and Restated, effective January 1, 2009, was filed as Exhibit 99.1 to the Company's Registration Statement on Form S-8 (Registration No. 333-157091) dated February 4, 2009, and is incorporated herein by reference.
10.21*	First Amendment to The Travelers Deferred Compensation Plan was filed as Exhibit 10.37 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2009, and is incorporated herein by reference.
10.22*	TPC Deferred Compensation Plan was filed as Exhibit 10.23 to TPC's annual report on Form 10-K for the fiscal year ended December 31, 2002, and is incorporated herein by reference.
10.23*	The Travelers Benefit Equalization Plan, as Amended and Restated effective as of January 1, 2016, was filed as Exhibit 10.29 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2015, and is incorporated herein by reference.
10.24*	TPC Benefit Equalization Plan was filed as Exhibit 10.24 to TPC's annual report on Form 10-K for the fiscal year ended December 31, 2002, and is incorporated herein by reference.

10.25*	The St. Paul Companies, Inc. Benefit Equalization Plan-2001 Revision and the first and second amendments thereto were filed as Exhibit 10.27 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2004, and are incorporated herein by reference.
10.26*	Form of Non-Competition Agreement was filed as Exhibit 10.43 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2009, and is incorporated herein by reference.
10.27*	Form of Amended and Restated Non-Solicitation and Non-Disclosure Agreement for Executive Officers was filed as Exhibit 10.35 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2016, and is incorporated herein by reference.
10.28*	Form of Restricted Stock Unit Award Notification and Agreement (For Management Committee Member Executing Non-Compete) was filed as Exhibit 10.37 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2014, and is incorporated herein by reference.
10.29†*	Form of Stock Option Grant Notification and Agreement.
10.30†*	Form of Restricted Stock Unit Award Notification and Agreement.
10.31*	Form of Performance Share Award Notification and Agreement (2020) was filed as Exhibit 10.35 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2019, and is incorporated herein by reference.
10.32*	Form of Performance Share Award Notification and Agreement (2021) was filed as Exhibit 10.35 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2020, and is incorporated herein by reference.
10.33*	Form of Performance Share Award Notification and Agreement (2022) was filed as Exhibit 10.34 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2021, and is incorporated herein by reference.
10.34†*	Form of Performance Share Award Notification and Agreement (2023).
10.35†*	Form of Non-Employee Director Notification and Agreement of Annual Deferred Stock Award.
21.1†	A list of the subsidiaries of the Company.
23.1†	Consent of KPMG LLP, Independent Registered Public Accounting Firm, with respect to the incorporation by reference of KPMG LLP's audit reports into Registration Statements of the Company on Form S-8 and Form S-3.
24.1†	Power of Attorney.
31.1†	Certification of Alan D. Schnitzer, Chairman and Chief Executive Officer of the Company, as required by Section 302 of the Sarbanes-Oxley Act of 2002.
31.2†	Certification of Daniel S. Frey, Chief Financial Officer of the Company, as required by Section 302 of the Sarbanes-Oxley Act of 2002.
32.1†	Certification of Alan D. Schnitzer, Chairman and Chief Executive Officer of the Company, as required by Section 906 of the Sarbanes-Oxley Act of 2002.
32.2†	Certification of Daniel S. Frey, Chief Financial Officer of the Company, as required by Section 906 of the Sarbanes-Oxley Act of 2002.
101.1†	The following information from The Travelers Companies, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2022 formatted in Inline XBRL: (i) Consolidated Statement of Income for the years ended December 31, 2022, 2021 and 2020; (ii) Consolidated Statement of Comprehensive Income (Loss) for the years ended December 31, 2022, 2021 and 2020; (iii) Consolidated Balance Sheet at December 31, 2022 and 2021; (iv) Consolidated Statement of Changes in Shareholders' Equity for the years ended December 31, 2022, 2021 and 2020; (v) Consolidated Statement of Cash Flows for the years ended December 31, 2022, 2021 and 2020; (vi) Notes to Consolidated Financial Statements; (vii) Financial Statement Schedules; and (viii) the cover page.
104.1	Cover Page Interactive Data File (Embedded within the Inline XBRL document and included in Exhibit 101.1).

† Filed herewith.
* Management contract or compensatory plan in which directors and/or executive officers are eligible to participate.

The total amount of securities authorized pursuant to any instrument defining rights of holders of long-term debt of the Company does not exceed 10% of the total assets of the Company and its consolidated subsidiaries. Therefore, the Company is not filing any instruments evidencing long-term debt. However, the Company will furnish copies of any such instrument to the Securities and Exchange Commission upon request.

Copies of any of the exhibits referred to above will be furnished to security holders who make written request therefor to The Travelers Companies, Inc., 385 Washington Street, Saint Paul, MN, 55102, Attention: Corporate Secretary.

The agreements and other documents filed as exhibits to this report are not intended to provide factual information or other disclosure other than the terms of the agreements or other documents themselves, and you should not rely on them for that purpose. In particular, any representations and warranties made by the Company in these agreements or other documents were made solely within the specific context of the relevant agreement or document and may not describe the actual state of affairs at the date they were made or at any other time.

Item 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, The Travelers Companies, Inc. has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

THE TRAVELERS COMPANIES, INC.
(Registrant)

Date: February 16, 2023 By /s/ CHRISTINE K. KALLA

Christine K. Kalla
Executive Vice President and General Counsel
(Authorized Signatory)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of The Travelers Companies, Inc. and in the capacities and on the dates indicated.

			Date
By	/s/ ALAN D. SCHNITZER **Alan D. Schnitzer**	Director, Chairman and Chief Executive Officer (Principal Executive Officer)	February 16, 2023
By	/s/ DANIEL S. FREY **Daniel S. Frey**	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 16, 2023
By	/s/ DOUGLAS K. RUSSELL **Douglas K. Russell**	Senior Vice President and Corporate Controller (Principal Accounting Officer)	February 16, 2023
By	* **Alan L. Beller**	Director	February 16, 2023
By	* **Janet M. Dolan**	Director	February 16, 2023
By	* **Patricia L. Higgins**	Director	February 16, 2023
By	* **William J. Kane**	Director	February 16, 2023
By	* **Thomas B. Leonardi**	Director	February 16, 2023
By	* **Clarence Otis Jr.**	Director	February 16, 2023
By	* **Elizabeth E. Robinson**	Director	February 16, 2023
By	* **Philip T. Ruegger III**	Director	February 16, 2023
By	* **Rafael Santana**	Director	February 16, 2023
By	* **Todd C. Schermerhorn**	Director	February 16, 2023
By	* **Laurie J. Thomsen**	Director	February 16, 2023
By	* **Bridget van Kralingen**	Director	February 16, 2023
	/s/ CHRISTINE K. KALLA **Christine K. Kalla,** **Attorney-in-fact**		February 16, 2023

FINANCIAL STATEMENT SCHEDULES

SCHEDULE II

THE TRAVELERS COMPANIES, INC.
(Parent Company Only)

CONDENSED FINANCIAL INFORMATION OF REGISTRANT
(in millions)

CONDENSED STATEMENT OF INCOME

For the year ended December 31,	2022	2021	2020
Revenues			
Net investment income	**$ 30**	$ 13	$ 19
Net realized investment gains (losses)	**(51)**	28	27
Total revenues	**(21)**	41	46
Expenses			
Interest	**303**	292	292
Other	**13**	13	18
Total expenses	**316**	305	310
Loss before income taxes and net income of subsidiaries	**(337)**	(264)	(264)
Income tax benefit	**(99)**	(59)	(61)
Loss before net income of subsidiaries	**(238)**	(205)	(203)
Net income of subsidiaries	**3,080**	3,867	2,900
Net income	**$ 2,842**	$ 3,662	$ 2,697

The condensed financial statements should be read in conjunction with the notes to the condensed financial information of the registrant, as well as the consolidated financial statements and notes thereto.

See the Report of Independent Registered Public Accounting Firm.

SCHEDULE II

THE TRAVELERS COMPANIES, INC.
(Parent Company Only)

CONDENSED FINANCIAL INFORMATION OF REGISTRANT
(in millions)

CONDENSED STATEMENT OF COMPREHENSIVE INCOME (LOSS)

For the year ended December 31,	2022	2021	2020
Net income	**$ 2,842**	$ 3,662	$ 2,697
Other comprehensive income (loss)—parent company:			
Changes in net unrealized gains (losses) on investment securities having no credit losses recognized in the condensed statement of income	**(12)**	(4)	3
Net changes in benefit plan assets and obligations	**(105)**	444	25
Other comprehensive income (loss) before income taxes and other comprehensive income (loss) of subsidiaries	**(117)**	440	28
Income tax expense (benefit)	**(38)**	87	9
Other comprehensive income (loss), net of taxes, before other comprehensive income (loss) of subsidiaries	**(79)**	353	19
Other comprehensive income (loss) of subsidiaries	**(7,559)**	(1,662)	1,843
Other comprehensive income (loss)	**(7,638)**	(1,309)	1,862
Comprehensive income (loss)	**$ (4,796)**	$ 2,353	$ 4,559

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SCHEDULE II

THE TRAVELERS COMPANIES, INC.
(Parent Company Only)

CONDENSED FINANCIAL INFORMATION OF REGISTRANT
(in millions)

CONDENSED BALANCE SHEET

At December 31,	2022	2021
Assets		
Fixed maturities	**$ 112**	$ 95
Equity securities	**234**	279
Short-term securities	**1,406**	1,479
Investment in subsidiaries	**26,098**	33,298
Other assets	**748**	704
Total assets	**$ 28,598**	$ 35,855
Liabilities		
Debt	**$ 6,597**	$ 6,596
Other liabilities	**433**	366
Total liabilities	**7,030**	6,962
Shareholders' equity		
Common stock (1,750.0 shares authorized; 232.1 and 241.2 shares issued and outstanding)	**24,565**	24,154
Retained earnings	**43,524**	41,561
Accumulated other comprehensive income (loss)	**(6,445)**	1,193
Treasury stock, at cost (553.5 and 541.5 shares)	**(40,076)**	(38,015)
Total shareholders' equity	**21,568**	28,893
Total liabilities and shareholders' equity	**$ 28,598**	$ 35,855

The condensed financial statements should be read in conjunction with the notes to the condensed financial information of the registrant, as well as the consolidated financial statements and notes thereto.

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SCHEDULE II

THE TRAVELERS COMPANIES, INC.
(Parent Company Only)

CONDENSED FINANCIAL INFORMATION OF REGISTRANT
(in millions)

CONDENSED STATEMENT OF CASH FLOWS

For the year ended December 31,	2022	2021	2020
Cash flows from operating activities			
Net income	**$ 2,842**	$ 3,662	$ 2,697
Adjustments to reconcile net income to net cash provided by operating activities:			
Equity in net income of subsidiaries	**(3,080)**	(3,867)	(2,900)
Dividends received from consolidated subsidiaries	**2,860**	2,149	1,964
Deferred federal income tax expense	**14**	7	3
Change in income taxes payable	**(13)**	—	(6)
Other	**7**	(69)	(79)
Net cash provided by operating activities	**2,630**	1,882	1,679
Cash flows from investing activities			
Net sales (purchases) of short-term securities	**73**	167	(256)
Other investments, net	**(35)**	(11)	(7)
Net cash provided by (used in) investing activities	**38**	156	(263)
Cash flows from financing activities			
Treasury stock acquired—share repurchase authorization	**(2,000)**	(2,156)	(625)
Treasury stock acquired—net employee share-based compensation	**(61)**	(44)	(47)
Dividends paid to shareholders	**(875)**	(869)	(861)
Payment of debt	**—**	—	(500)
Issuance of debt	**—**	739	490
Issuance of common stock—employee share options	**267**	293	127
Net cash used in financing activities	**(2,669)**	(2,037)	(1,416)
Net increase (decrease) in cash	**(1)**	1	—
Cash at beginning of year	**1**	—	—
Cash at end of year	**$ —**	$ 1	$ —
Supplemental disclosure of cash flow information			
Cash received during the year for taxes	**$ 100**	$ 66	$ 81
Cash paid during the year for interest	**$ 301**	$ 289	$ 291

The condensed financial statements should be read in conjunction with the notes to the condensed financial information of the registrant, as well as the consolidated financial statements and notes thereto.

See the Report of Independent Registered Public Accounting Firm.

SCHEDULE II

THE TRAVELERS COMPANIES, INC.
(Parent Company Only)

NOTES TO THE CONDENSED FINANCIAL INFORMATION OF REGISTRANT

1. GUARANTEES

The Travelers Companies, Inc. (TRV) fully and unconditionally guarantees the payment of all principal, premiums, if any, and interest on certain debt obligations of its subsidiaries TPC and TIGHI. The guarantees pertain to the $200 million 7.75% notes due 2026 and the $500 million 6.375% notes due 2033.

TRV also has contingent obligations for guarantees in connection with the selling of businesses to third parties, certain insurance and reinsurance obligations of certain subsidiaries and various indemnifications including indemnifications that it utilizes with service providers in the normal course of business. The guarantees and indemnification clauses are often standard contractual terms and include indemnifications for breaches of representations and warranties and in some cases obligations arising from certain liabilities. The terms of these provisions vary in duration and nature.

Certain of the guarantees and indemnifications described above have no stated or notional amounts or limitation to the maximum potential future payments. Accordingly, TRV is unable to provide an estimate of the maximum potential payments for such arrangements, and the likelihood for any payment under these guarantees is remote.

SCHEDULE III

THE TRAVELERS COMPANIES, INC. AND SUBSIDIARIES
Supplementary Insurance Information
2020-2022
(in millions)

Segment	Deferred Acquisition Costs	Claims and Claim Adjustment Expense Reserves	Unearned Premiums	Earned Premiums	Net Investment Income (1)	Claims and Claim Adjustment Expenses	Amortization of Deferred Acquisition Costs	Other Operating Expenses (2)	Net Written Premiums
2022									
Business Insurance	**$ 1,315**	**$ 45,909**	**$ 8,619**	**$ 17,095**	**$ 1,864**	**$ 10,907**	**$ 2,788**	**$ 2,827**	**$ 17,635**
Bond & Specialty Insurance	**430**	**4,482**	**2,679**	**3,418**	**258**	**1,378**	**625**	**590**	**3,732**
Personal Insurance	**1,091**	**8,252**	**6,942**	**13,250**	**440**	**10,569**	**2,102**	**1,362**	**14,047**
Total—Reportable Segments	**2,836**	**58,643**	**18,240**	**33,763**	**2,562**	**22,854**	**5,515**	**4,779**	**35,414**
Other	**—**	**6**	**—**	**—**	**—**	**—**	**—**	**382**	**—**
Consolidated	**$ 2,836**	**$ 58,649**	**$ 18,240**	**$ 33,763**	**$ 2,562**	**$ 22,854**	**$ 5,515**	**$ 5,161**	**$ 35,414**
2021									
Business Insurance	$ 1,206	$ 45,358	$ 7,953	$ 15,734	$ 2,265	$ 10,398	$ 2,581	$ 2,746	$ 16,092
Bond & Specialty Insurance	375	4,247	2,360	3,138	247	1,473	570	532	3,376
Personal Insurance	961	7,292	6,156	11,983	521	8,427	1,892	1,370	12,491
Total—Reportable Segments	2,542	56,897	16,469	30,855	3,033	20,298	5,043	4,648	31,959
Other	—	10	—	—	—	—	—	369	—
Consolidated	$ 2,542	$ 56,907	$ 16,469	$ 30,855	$ 3,033	$ 20,298	$ 5,043	$ 5,017	$ 31,959
2020									
Business Insurance	$ 1,152	$ 44,162	$ 7,556	$ 15,294	$ 1,633	$ 10,804	$ 2,518	$ 2,664	$ 15,431
Bond & Specialty Insurance	328	3,814	2,020	2,823	213	1,464	519	500	2,951
Personal Insurance	878	6,534	5,646	10,927	381	6,855	1,736	1,314	11,350
Total—Reportable Segments	2,358	54,510	15,222	29,044	2,227	19,123	4,773	4,478	29,732
Other	—	11	—	—	—	—	—	370	—
Consolidated	$ 2,358	$ 54,521	$ 15,222	$ 29,044	$ 2,227	$ 19,123	$ 4,773	$ 4,848	$ 29,732

(1) See note 2 of the notes to the consolidated financial statements for discussion of the method used to allocate net investment income and invested assets to the identified segments.

(2) Expense allocations are determined in accordance with prescribed statutory accounting practices. These practices make a reasonable allocation of all expenses to those product lines with which they are associated.

See the Report of Independent Registered Public Accounting Firm.

SCHEDULE V

THE TRAVELERS COMPANIES, INC. AND SUBSIDIARIES
Valuation and Qualifying Accounts
(in millions)

	Balance at beginning of period	Charged to costs and expenses	Charged to other accounts	Deductions (1)	Balance at end of period
2022					
Reinsurance recoverables	**$ 141**	**$ (9)**	**$ —**	**$ —**	**$ 132**
Allowance for uncollectible:					
Premiums receivable from underwriting activities	**$ 107**	**$ 56**	**$ (2)**	**$ 84**	**$ 77**
Deductibles	**$ 29**	**$ (3)**	**$ —**	**$ 1**	**$ 25**
2021					
Reinsurance recoverables	$ 146	$ (5)	$ —	$ —	$ 141
Allowance for uncollectible:					
Premiums receivable from underwriting activities	$ 105	$ 65	$ —	$ 63	$ 107
Deductibles	$ 27	$ 2	$ —	$ —	$ 29
2020					
Reinsurance recoverables (2)	$ 92	$ 1	$ 53	$ —	$ 146
Allowance for uncollectible:					
Premiums receivable from underwriting activities	$ 55	$ 95	$ 2	$ 47	$ 105
Deductibles	$ 22	$ 7	$ (2)	$ —	$ 27

(1) Credited to the related asset account.
(2) The $53 million represents the cumulative effect of adoption of updated accounting guidance for credit losses at January 1, 2020.

See the Report of Independent Registered Public Accounting Firm.

SCHEDULE VI

THE TRAVELERS COMPANIES, INC. AND SUBSIDIARIES
Supplementary Information Concerning Property-Casualty Insurance Operations [1]
2020-2022
(in millions)

Affiliation with Registrant(2)	Deferred Acquisition Costs	Claims and Claim Adjustment Expense Reserves	Discount From Reserves for Unpaid Claims(3)	Unearned Premiums	Earned Premiums	Net Investment Income	Claims and Claim Adjustment Expenses Incurred Related to: Current Year	Claims and Claim Adjustment Expenses Incurred Related to: Prior Year	Amortization of Deferred Acquisition Costs	Paid Claims and Claim Adjustment Expenses	Net Written Premiums
2022	**$ 2,836**	**$ 58,643**	**$ 1,124**	**$ 18,240**	**$ 33,763**	**$ 2,562**	**$ 23,308**	**$ (537)**	**$ 5,515**	**$ 20,351**	**$ 35,414**
2021	$ 2,542	$ 56,897	$ 1,146	$ 16,469	$ 30,855	$ 3,033	$ 20,698	$ (484)	$ 5,043	$ 17,871	$ 31,959
2020	$ 2,358	$ 54,510	$ 1,138	$ 15,222	$ 29,044	$ 2,227	$ 19,285	$ (267)	$ 4,773	$ 16,589	$ 29,732

(1) Excludes accident and health insurance business.

(2) Consolidated property-casualty insurance operations.

(3) For a discussion of types of reserves discounted and discount rates used, see note 8 of the notes to the consolidated financial statements.

See the Report of Independent Registered Public Accounting Firm.