TRAVELERS COMPANIES, INC.
Form 10-K
February 14, 2019

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

FORM 10-K
x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018
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	Name of each exchange on which registered
Common stock, without par value	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 x 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 x

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 x 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 x No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ¨

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 x	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 is a shell company (as defined in Rule 12b-2 of the Act). Yes ¨ No x

As of June 30, 2018, the aggregate market value of the registrant's voting and non-voting common equity held by non-affiliates was $32,661,754,275.

As of February 8, 2019, 263,391,034 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 2019 Annual Meeting of Shareholders are incorporated by reference into Part III of this report.

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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 relationships and methods of distribution. Distribution methods include the use of independent agents, exclusive agents, direct marketing and/or salaried employees. According to A.M. Best, there are approximately 1,150 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 92% of the consolidated industry's total net written premiums in 2017. The Company competes with both foreign and domestic insurers. In addition, several 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;
- reputation, experience and qualifications of 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 the long-term 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, 2018:

Location	% of Total	
Domestic:		
California	9.8	%
New York	9.6	
Texas	7.9	
Pennsylvania	4.5	
Florida	4.2	
New Jersey	3.9	
Illinois	3.8	
Georgia	3.5	
Massachusetts	3.0	
All other domestic (1)	43.2	
Total Domestic	93.4	
International:		
Canada	4.5	
All other international (1)	2.1	
Total International	6.6	
Consolidated total	100.0	%

(1) No other single state or country accounted for 3.0% or more of the Company's consolidated direct written premiums written in 2018.

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 computer modeling processes, to continually 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 deductibles specific to hurricane-, tornado-, wind- 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 and insurance-related services to its customers, primarily in the United States, as well as in Canada, the United Kingdom, the Republic of Ireland, Brazil and throughout other parts of the world 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. National Accounts also includes the Company's commercial residual market business, which primarily offers workers' compensation services 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 transportation industry through Northland Transportation, general liability and commercial property policies for small, difficult to place specialty classes of commercial business primarily on an excess and surplus lines basis through Northfield, and tailored property and casualty insurance programs on an admitted basis for customers with common risk characteristics or coverage requirements through National Programs. National Property and Other also serves small to medium-sized agricultural businesses, including farms, ranches, wineries and related operations, through Agribusiness.

International

- International, through its operations in Canada, the United Kingdom, the Republic of Ireland and Brazil, 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 six principal businesses — international marine, retail marine, global property, construction & special risks, energy and aviation.

Business Insurance also includes Simply Business, a leading provider of small business insurance policies primarily in the United Kingdom that was acquired in August 2017, as well as 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)	2018	2017	2016	% of Total 2018
By market:				
Domestic:				
Select Accounts	$2,828	$2,800	$2,729	18.9 %
Middle Market	8,214	7,756	7,379	54.9
National Accounts	1,025	1,010	1,058	6.9
National Property and Other	1,805	1,691	1,779	12.1
Total Domestic	13,872	13,257	12,945	92.8
International	1,084	1,013	955	7.2
Total Business Insurance by market	$14,956	$14,270	$13,900	100.0%
By product line:				
Domestic:				
Workers' compensation	$3,840	$3,926	$3,945	25.7 %
Commercial automobile	2,518	2,219	2,037	16.8
Commercial property	1,867	1,772	1,787	12.5
General liability	2,227	2,086	1,987	14.9
Commercial multi-peril	3,390	3,228	3,157	22.7
Other	30	26	32	0.2
Total Domestic	13,872	13,257	12,945	92.8
International	1,084	1,013	955	7.2
Total Business Insurance by product line	$14,956	$14,270	$13,900	100.0%

Principal Markets and Methods of Distribution

Business Insurance markets and distributes its products through approximately 9,800 independent agencies and brokers. Agencies and brokers are serviced by 112 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 attributes, 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 carefully 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. Additionally, several operations may underwrite business with agents that specialize in servicing the needs of certain of the industries served by these operations. Business Insurance continues to make significant investments in enhanced technology to provide real-time interface capabilities with independent agencies and brokers.

Domestic

- Select Accounts markets and distributes its 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. Select Accounts has established a strong marketing relationship with its distribution network and has provided this network with defined underwriting policies, a broad array of products and competitive prices.
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Middle Market markets and distributes its 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, claim, risk management or other insurance-related products and services.

- National Accounts markets and distributes its products and services to large companies through a network of national and regional brokers, primarily utilizing loss-sensitive products in connection with a large deductible or self-insured program and, to a lesser extent, a retrospectively rated or a guaranteed-cost insurance policy. National Accounts also provides casualty products and services through retail brokers on an unbundled basis, using third-party administrators for insureds who utilize programs such as collateralized deductibles, captive reinsurers and self-insurance. National Accounts provides insurance-related services, such as risk management services, claims administration, loss control and risk management information services, either in addition to, or in lieu of, pure risk coverage, and generated $242 million of fee income in 2018, excluding commercial residual market business. The commercial residual market business of National Accounts sells claims and policy management services to workers' compensation pools throughout the United States, and generated $111 million of fee income in 2018. National Accounts services approximately 37% of the total workers' compensation assigned risk market, making the Company one of the largest servicing carriers in the industry. Workers' compensation accounted for approximately 69% of sales to National Accounts customers during 2018, based on direct written premiums and fees.
- National Property and Other markets and distributes its 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 markets and distributes its products through brokers, wholesale agents, program managers and specialized retail agents who operate in certain markets that are not typically served by the Company's appointed retail agents, or who maintain certain affinity arrangements in specialized market segments. The wholesale excess and surplus lines market, which is characterized by the absence of rate and form regulation, 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 its products 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.

Pricing and Underwriting

Business Insurance utilizes underwriting, claims, engineering, actuarial and product development disciplines for particular industries, in conjunction with extensive amounts of proprietary data gathered and analyzed over many years, to facilitate its risk selection process and develop pricing parameters. The Company utilizes both standard industry forms and proprietary 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 is subject to credit risk until such reimbursement is made. At December 31, 2018, contractholder payables on unpaid losses within the deductible layer of large deductible policies and the associated receivables were both approximately $4.78 billion. Business Insurance also utilizes retrospectively rated policies for another portion of the 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 $93 million at December 31, 2018. 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 predicated upon the creditworthiness of the customer and the nature of the insured risks. Business Insurance continually 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 also 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 products and services:

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 cooperative effort that focuses on the injured employee's early return to work and cost-effective quality care. The Company offers the following types of workers' compensation products:

- guaranteed-cost insurance products, where the premiums charged will not be adjusted for actual loss experience during the covered period;
- loss-sensitive insurance products, including large deductible and retrospectively rated policies, in which 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 loss prevention, risk management, and claim and benefit administration services to organizations under service agreements.

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

- 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 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. For additional information on terrorism coverages, see "Reinsurance—Catastrophe Reinsurance—Terrorism Risk Insurance Program." 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.

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 potentially 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, 2019. For third-party liability, Business Insurance generally limits its net retention, through the use of reinsurance, to a maximum of $16.0 million per insured, per occurrence. For property exposures, Business Insurance generally limits its net retention, through the use of reinsurance, to a maximum amount per risk of $20.0 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, 2018:

Location	% of Total	
Domestic:		
California	12.2	%
New York	9.5	
Texas	6.9	
Illinois	4.6	
Pennsylvania	3.9	
New Jersey	3.8	
Florida	3.8	
Massachusetts	3.1	
All other domestic [1]	46.3	
Total Domestic	94.1	
International:		
Canada	3.1	
All other international [1]	2.8	
Total International	5.9	
Total Business Insurance	100.0	%

(1) No other single state or country accounted for 3.0% or more of Business Insurance's direct written premiums in 2018.

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 works 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 control, at prices and terms that retain existing customers and attract new customers. See "Item 1A—Risk Factors—The intense competition that we face, 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, to a lesser extent, regional brokers, and as direct writers. 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 primarily based on breadth of product offerings, service levels, ease 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 and claim and loss prevention services. 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, 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 control and loss 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, the Republic of Ireland and Brazil. Companies compete on the basis of price, product offerings, distribution partnerships and the level of claim and risk management services provided. 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. Competition is based on price, product and service. The Company focuses on lines it believes it can underwrite profitably with an emphasis on short-tail insurance lines.

BOND & SPECIALTY INSURANCE

Bond & Specialty Insurance provides surety, fidelity, management liability, professional liability, and other property and casualty coverages and related risk management services to its customers in the United States and certain specialty insurance products in Canada, the United Kingdom, the Republic of Ireland and Brazil, 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; fidelity insurance for private companies, not-for-profit organizations and financial institutions; management liability coverages including directors' and officers' liability, employment practices 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; and in the United States only, property, workers' compensation, auto and general liability for financial institutions.

Bond & Specialty Insurance 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 start-up 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)	2018	2017	2016	% of Total 2018
Domestic:				
Fidelity and surety	$1,049	$993	$961	41.5 %
General liability	1,037	977	954	41.0
Other	204	190	184	8.1
Total Domestic	2,290	2,160	2,099	90.6
International	238	199	172	9.4
Total Bond & Specialty Insurance	$2,528	$2,359	$2,271	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 approximately 5,400 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 attributes, 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 closely monitored. Bond & Specialty Insurance, in conjunction with Business Insurance, continues to make investments in enhanced technology to provide 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, in conjunction with extensive amounts of proprietary data gathered and analyzed over many years, to facilitate its risk selection process and develop pricing parameters. The Company utilizes both standard industry forms and proprietary forms for the insurance policies 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 insurer agrees to pay a third party or complete an obligation in response to the default, acts or omissions of an insured. Surety is generally provided for construction performance, legal matters such as appeals, trustees in bankruptcy and probate and other performance bonds.

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

- Other. Coverages include 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, as well as cyber risk coverages, 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, 2019. For third party liability, 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 $122.5 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, 2018:

Location	% of Total
Domestic:	
California	9.8 %
Texas	6.5
New York	6.2
Florida	5.4
Illinois	3.8
Pennsylvania	3.6
All other domestic (1)	54.8
Total Domestic	90.1
International:	
United Kingdom	4.7
Canada	4.3
All other international (1)	0.9
Total International	9.9
Total Bond & Specialty Insurance	100.0 %

(1) No other single state or country accounted for 3.0% or more of Bond & Specialty Insurance's direct written premiums in 2018.

Competition

The competitive landscape in which Bond & Specialty Insurance operates is affected by many of the same factors described previously 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, 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, 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 provides additional competitive advantages for the Company. See "Item 1A—Risk Factors—The intense competition that we face, 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, Brazil and Colombia. Companies compete on the basis of price, product offerings and the level of claim and risk management services provided. 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 writes a broad range of property and casualty insurance covering individuals' personal risks, primarily in the United States, as well as in Canada. The 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)	2018	2017	2016	% of Total 2018
Domestic:				
Agency:				
Automobile	$4,972	$4,646	$4,103	48.6 %
Homeowners and Other	4,148	3,933	3,772	40.6
Total Agency	9,120	8,579	7,875	89.2
Direct-to-Consumer	396	361	309	3.9
Total Domestic	9,516	8,940	8,184	93.1
International	708	650	603	6.9
Total Personal Insurance	$10,224	$9,590	$8,787	100.0%

Principal Markets and Methods of Distribution

Domestic

Personal Insurance products are marketed and distributed primarily through approximately 10,200 active independent agencies 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. While the principal markets for Personal Insurance products continue to be in states along the East Coast, California and Texas, the business continues to expand its geographic presence across the United States.

In selecting new independent agencies to distribute its products, Personal Insurance considers, among other attributes, each agency's profitability, financial stability, staff experience and strategic fit with its operating and marketing plans. Once an agency is appointed, Personal Insurance carefully 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 one of the Company's Customer Care Centers, where the Company provides, on behalf of an agency, a comprehensive array of customer service needs, including response to billing and coverage inquiries, and policy changes. Approximately 1,650 agents take advantage of this service alternative, for which they generally pay a fee.

Personal Insurance also markets and distributes its products through 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. In addition, since 1995, the Company has had a marketing agreement with GEICO to underwrite homeowners business for certain of their auto customers.

The Company also markets its insurance products directly to consumers, largely through online channels. The Company's direct-to-consumer business continues to grow but still represents modest premium volume for Personal Insurance.

International

International markets and distributes its products principally through approximately 630 brokers located throughout Canada.

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 repairs, 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 building supplies, 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. Insurers writing personal lines property and casualty policies may be unable to increase prices until some time after the costs associated with coverage have increased, primarily because of state insurance rate regulation. The pace at which an insurer can change rates in response to increased costs depends, in part, on whether the applicable state law requires prior approval of rate increases 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 raise prices, modify underwriting terms or reduce exposure to certain geographies may be limited due to considerations of public policy, the competitive environment, the evolving political 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 7.5 million active policies (i.e., policies-in-force) in the United States at December 31, 2018.

Personal Insurance writes the following types of coverages:

- Personal 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 residences 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 and valuable personal items such as jewelry, and also writes coverages for umbrella liability, identity fraud, 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 574,000 active policies in Canada at December 31, 2018.

Net Retention Policy Per Risk

The following discussion reflects the Company's retention policy with respect to Personal Insurance as of January 1, 2019. 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, 2018:

Location	% of Total
Domestic:	
New York	10.6 %
Texas (1)	9.7
California	6.1
Pennsylvania	5.7
Georgia	5.1
Florida	4.6
New Jersey	4.4
Virginia	3.5
Connecticut	3.2
Colorado	3.1
South Carolina	3.1
All other domestic (2)	34.1
Total Domestic	93.2
International:	
Canada	6.8
Total International	6.8
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 2018.

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 hundreds of local companies. Personal Insurance primarily competes based on breadth of product offerings, price, service (including claims handling), ease and speed of doing business, stability of the insurer and name recognition. Personal Insurance competes for business within each independent agency since these agencies also offer policies of competing companies. At the agency level, competition is primarily based on price, service (including claims handling), the level of automation and the development of long-term relationships with individual agents. 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 business and, increasingly, on renewal business. Personal Insurance also competes with insurance companies that use exclusive agents or salaried employees to sell their products, as well as those that employ direct marketing strategies.

International

Personal Insurance competes with numerous international and domestic insurers in Canada. Companies compete on the basis of price, breadth of product offerings and the level of claim and risk management services provided. 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, 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 more than 12,000 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 44 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 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 continually 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 claim-handling operations, including the utilization of drone technology, and routinely 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 catastrophe, treaty, facultative and quota share reinsurance. 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 an ongoing 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 to 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 5 of notes to the consolidated financial statements and "Item 1A—Risk Factors." For a description of reinsurance-related litigation, see note 16 of notes to the consolidated financial statements.

Catastrophe Reinsurance

Catastrophes can be caused by a variety of events, including, among others, hurricanes, tornadoes and other windstorms, earthquakes, hail, wildfires, severe winter weather, floods, tsunamis, volcanic eruptions and other naturally-occurring events, such as solar flares. Catastrophes can also result from terrorist attacks and other intentionally destructive acts including those involving nuclear, biological, chemical and radiological events, cyber events, 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 and wildfires may produce significant damage in larger areas, especially those areas that are heavily populated. 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 an ongoing review of its risk and catastrophe coverages and from time to time makes changes as it deems appropriate. The following discussion summarizes the Company's catastrophe reinsurance coverage at January 1, 2019.

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, 2019 through and including December 31, 2019. The treaty provides for recovery of 75% of the dollar amount of each qualifying loss in excess of a $3.0 billion retention, up to a maximum amount of qualifying losses of $2.0 billion (i.e. for every dollar of loss between $3.0 billion and $5.0 billion this treaty provides for 75 cents of coverage). Therefore, the maximum recovery under the treaty would be $1.5 billion. Qualifying losses for each occurrence are after a $100 million deductible. The treaty covers all of the Company's exposures in the United States and Canada and their territories and possessions, the Caribbean Islands, Mexico 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.

Underlying Property Aggregate 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, 2019 through and including December 31, 2019.

The treaty provides for up to $430 million part of $500 million of coverage, subject to a $1.3 billion retention (i.e. for every dollar of loss between $1.3 billion and $1.8 billion this treaty provides for 86 cents of coverage), of aggregate qualifying losses. Qualifying losses are subject to a $5 million franchise deductible per occurrence, so that qualifying catastrophic events at or greater than $5 million count toward the aggregate retention from dollar one. Coverage for, and contributions to the $1.3 billion retention from, hurricanes and/or tropical storms and earthquakes are limited to $250 million per event. The treaty covers property perils for PCS events in the United States and Canada and their territories and possessions, the Caribbean Islands, Mexico and all waters contiguous thereto. The treaty excludes losses arising from cyber and terrorism, including nuclear, biological, chemical or radiological.

Catastrophe Bonds. The Company has catastrophe protection through an indemnity reinsurance agreement with Long Point Re III Ltd. (Long Point Re III), an independent Cayman Islands company licensed as a Class C insurer in the Cayman Islands. 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 III 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 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 2018 and provides coverage of up to $500 million to the Company through May 24, 2022 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. Until and including May 24, 2019, the Company is entitled to begin recovering amounts under this reinsurance agreement if the covered losses in the covered area for a single occurrence reach an initial attachment amount of $1.9 billion. The full $500 million coverage amount is available until such covered losses reach a maximum $2.4 billion. 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 Bond & Specialty Insurance 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 III 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 III, the credit risk is mitigated by a reinsurance trust account that has been funded by Long Point Re III 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 III, 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 III, 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 III 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 III 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 III).

Accordingly, the Company is not the primary beneficiary of Long Point Re III 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 III, 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 III agreement since its inception.

Northeast Property Catastrophe Excess-of-Loss Reinsurance Treaty. This treaty provides up to $600 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 71 cents of coverage), for losses arising from a single occurrence, subject to one reinstatement. Coverage is provided on an all perils basis, including but not limited to hurricanes, tornadoes, hail storms, earthquakes and winter storm and/or freeze losses (coverage is included for terrorism events in limited circumstances, but nuclear, biological and radiological attacks are entirely excluded) from Virginia to Maine for the period July 1, 2018 through and including June 30, 2019. Losses from a covered event anywhere in the United States, Canada, the Caribbean and Mexico 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 $184.5 million part of $205 million of coverage, subject to a $95 million retention (i.e. for every dollar of loss between $95 million and $300 million this treaty provides 90 cents of coverage), for losses arising from an earthquake, including fire following and sprinkler leakage incurred under policies written by Technology, Public Sector Services and Commercial Accounts in Business Insurance for the period July 1, 2018 through and including June 30, 2019.

Personal Insurance Earthquake Catastrophe Excess-of-Loss Reinsurance Treaty. This treaty provides for up to $200 million of coverage, subject to a $150 million retention, for losses arising from an earthquake, including fire following and sprinkler leakage incurred under policies written by Personal Insurance for the period January 1, 2019 through and including December 31, 2019.

Canadian Property Catastrophe Excess-of-Loss Reinsurance Treaty. This treaty, effective for the period July 1, 2018 through and including June 30, 2019, covers the accumulation of net property losses arising out of one occurrence on business written by the Company's Canadian businesses. 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. The treaty provides coverage for 50% of losses in excess of C$100 million (US$73 million at December 31, 2018), up to C$200 million (US$147 million at December 31, 2018) and for 100% of losses in excess of C$200 million (US$147 million at December 31, 2018), up to C$600 million (US$440 million at December 31, 2018).

Other International Reinsurance Treaties. For other business underwritten in Canada, as well as for business written in the United Kingdom, the Republic of Ireland, Brazil 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, 2020 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 2019, see note 5 of notes to the consolidated financial statements and "Item 1A—Risk Factors—Catastrophe losses 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 ultimate unpaid costs of losses and loss adjustment expenses for claims that have been reported and claims that have been incurred but not yet reported.

The Company continually refines its reserve estimates as part of a 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 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 7 of notes to the consolidated financial statements for further discussion.

Reserves on Statutory Accounting Basis

At December 31, 2018, 2017 and 2016, claims and claim adjustment expense reserves (net of reinsurance) prepared in accordance with U.S. generally accepted accounting principles (GAAP reserves) were $62 million higher, $56 million higher and $44 million higher, respectively, than those reported in the Company's respective annual reports filed with insurance regulators, which are prepared in accordance with statutory accounting practices (statutory reserves).

The differences between GAAP and statutory reporting for reserves are primarily due to the differences in GAAP and statutory accounting for two items: (1) fee reimbursements associated with large deductible business and (2) 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.

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. 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 Standard & Poor’s Corp. (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 LIBOR plus 75 basis points to LIBOR plus 137.5 basis points, 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 8 of 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.

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 14, 2019, 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 C&S Co. of Europe, Ltd.	A++	(1st of 16)	Aa2	(3rd of 21)	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)	—	

(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, Northfield Insurance Company, Northland Casualty Company, American Equity Specialty Insurance 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, Travelers Excess and Surplus Lines Company, St. Paul Fire and Marine Insurance Company, St. Paul Surplus Lines 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, Discover Specialty Insurance Company and United States Fidelity and Guaranty 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 14, 2019. 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)
Subordinated debt	a (6th of 22)	A3 (7th of 21)	A-	(7th of 22)	BBB+	(8th of 22)
Junior subordinated debt	a- (7th of 22)	A3 (7th of 21)	BBB+	(8th of 22)	BBB+	(8th of 22)
Trust preferred securities	a- (7th of 22)	A3 (7th of 21)	BBB+	(8th of 22)	BBB+	(8th of 22)
Commercial paper	AMB-1+ (1st of 6)	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 15, 2018, the date on which the Company filed its Annual Report on Form 10-K for the year ended December 31, 2017, through February 14, 2019:

- On June 5, 2018, Fitch affirmed all ratings of the Company. The outlook for all ratings is stable.
- On October 31, 2018, A.M. Best affirmed all ratings of the Company, except for Travelers Insurance Company Limited, for which the financial strength rating was upgraded to "A++" from "A." 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 U.S. municipal and taxable corporate and U.S. agency mortgage-backed bonds. The Company closely monitors the 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's management of the duration of the fixed maturity investment portfolio, including its use of Treasury futures at times, has produced a duration that is less than the estimated 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 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 notes to the consolidated financial statements for additional information regarding the Company's investment portfolio.

REGULATION

U.S. State and Federal Regulation

TRV's domestic insurance subsidiaries are collectively licensed to transact insurance business in all U.S. states, the District of Columbia, Guam, Puerto Rico and the U.S. Virgin Islands and are subject to regulation in the various states and jurisdictions in which they transact business. The extent of regulation varies, but generally derives from statutes that delegate regulatory, supervisory and administrative authority to a department of insurance 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 licensing of insurers and their agents, the nature of and limitations on investments, premium rates, restrictions on the 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, approval of policy forms and the regulation of market conduct, including the use of credit 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 Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 established a Federal Insurance Office (FIO) within the U.S. Department of the Treasury. While the FIO has limited regulatory authority, it has been active in the discussions 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), are working with the Federal Reserve and the FIO to consider and develop changes to the U.S. regulatory framework.

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 from both a group-wide and legal-entity basis. Some of the items evaluated during the colleges include the insurer's business strategies, enterprise risk management and corporate governance.

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 group-wide supervisor (i.e., lead regulator) for the insurance holding company system based upon certain criteria, including the place 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 TRV's lead regulator and conducts the supervisory colleges for the Company.

Insurance Regulation Concerning Dividends from Insurance Subsidiaries. TRV'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 adjusted unassigned surplus, as determined in accordance with statutory accounting practices.

The insurance holding company laws of other states in which TRV's domestic insurance subsidiaries are domiciled generally contain similar, although in some instances somewhat more restrictive, limitations on the payment of dividends.

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.

Assessments for Guaranty Funds and Second-Injury Funds and Other Mandatory Assigned Risk and Reinsurance Arrangements. Virtually all states require insurers licensed to do business in their state, including TRV's domestic insurance subsidiaries, to bear a portion of the loss suffered by some claimants because of the insolvency of other insurers. Many states also have laws that establish second-injury funds to provide compensation to injured employees for aggravation of a prior condition or injury.

TRV’s domestic insurance subsidiaries are also required to participate in various involuntary assigned risk pools, principally involving workers’ compensation, automobile insurance, property 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.

Assessments may include any charge mandated by statute or regulatory authority that is 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 a component 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 2018 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 and The Standard Fire Insurance Company had results outside the normal range for one IRIS ratio due to the amount of dividends received from its subsidiaries. In 2017, 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 2018 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 property and casualty insurance companies 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, 2018 significantly above the level at which any RBC regulatory action would occur.

While there is currently no group regulatory capital requirement 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, 2018, 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 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. At December 31, 2018, the Company was in compliance with these laws and regulations.

International Regulation

TRV'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 which regulates market conduct, including pricing, underwriting, coverage and claim conduct, in varying degrees by province/territory and by product line.

TRV'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. TRV's insurance operations in the Republic of Ireland have been conducted through the Irish branch of Travelers Insurance Company Limited which is supervised by the Insurance Supervision Departments of the Central Bank of Ireland (as to conduct) and also by the PRA.

TRV'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 75 jurisdictions 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.

TRV's operations in the U.K. and the Republic of Ireland are 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. The applicability to TRV's businesses of all of the EU requirements are likely to change in ways yet to be determined as a result of the U.K.'s exit from the EU, which is currently expected to be effective in March 2019.

Following the withdrawal of the U.K. from the EU, Travelers will conduct its insurance operations in the Republic of Ireland and across Europe through a newly established insurance subsidiary that is incorporated in the Republic of Ireland and authorized and regulated by the Central Bank of Ireland. Certain operations will be conducted in the U.K. through a U.K. branch of the Irish subsidiary, which will be supervised by the PRA and FCA as well as the Central Bank of Ireland. Lloyd's has established an insurance subsidiary in Brussels, Belgium which is authorized and regulated by the National Bank of Belgium. From January 1, 2019, TRV will use Lloyd's Brussels to cover its Lloyd's customers' risks in the EU.

A TRV subsidiary, Travelers Casualty and Surety Company, has a representative office in China. The representative office is regulated by the China Insurance Regulatory Commission. TRV's Brazilian operations are regulated by the Superintendencia de Seguros Privados (SUSEP).

Regulators in these jurisdictions require insurance companies to maintain certain levels of capital depending on, among other things, the type and amount of insurance policies in force. Each of the Company's foreign insurance subsidiaries had capital above their respective regulatory requirements at December 31, 2018.

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 each of 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. will take full effect at the earlier of the satisfaction of certain conditions or the U.K.'s exit from the EU. 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.

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 requirement is conditioned on the reinsurer meeting capital and solvency standards and maintaining a record of prompt payments to ceding insurers. The Covered Agreements include a five-year transition period to full compliance.

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 material transactions between an insurance company and an affiliate. The holding company statutes and other laws also require, among other things, prior approval of an acquisition of control of a domestic insurer, some transactions between affiliates 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 that it 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. They may also require pre-acquisition notification in those states that have adopted pre-acquisition notification provisions and in which such insurance subsidiaries are admitted to transact business.

Two 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 operations are subject to regulatory change of control and other share transfer restrictions, including approval of 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

For a discussion of domestic and international regulatory developments, see "Item 1A—Risk Factors" including "Changes in federal regulation could impose significant burdens on us and otherwise adversely impact our results" and "Regulatory changes outside of the United States, including in Canada, the U.K., the Republic of Ireland and the European Union, could adversely impact our results of operations and limit our growth."

ENTERPRISE RISK MANAGEMENT

As a large property and casualty insurance enterprise, the Company is exposed to many risks. These risks are a function of the environments within which the Company operates. 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. These exposures require 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. This approach to Company-wide risk evaluation and management is commonly called Enterprise Risk Management (ERM). ERM activities involve both the identification and assessment of a broad range of risks and the execution of synchronized strategies to effectively manage such risks. Effective ERM also includes the determination 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 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 computer 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 computer 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 and Business Risk Committees of management, the Credit Committee, Chief Legal Officer, General Counsel, the Chief Ethics and Compliance Officer, the Corporate Actuarial group, the Corporate Audit group, the Corporate Controller group, the Accounting Policy group and the Enterprise Underwriting group, among others. A senior executive team comprised of the Chief Risk Officer and the 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 fostering, leading and supporting 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 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

Customer Concentration

In the opinion of the Company's management, no material part of the business of the Company and its subsidiaries is dependent upon a single customer or group of customers, the loss of any one of which would have a material adverse effect on the Company, and no one customer or group of affiliated customers accounts for 10% or more of the Company's consolidated revenues.

Employees

At December 31, 2018, the Company had approximately 30,400 employees. The Company believes that its employee relations are satisfactory. None of the Company's U.S. employees are subject to collective bargaining agreements.

Sources of Liquidity

For a discussion of the Company's sources of funds and maturities of the long-term debt of the Company, see "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources," and note 8 of notes to the consolidated financial statements.

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 12 of 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 "For 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 the "Email Notifications" section under the "For Investors" heading 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 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 and other naturally-occurring events, such as solar flares. 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, 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. The threshold for 2018 ranged from approximately \$18 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	Financial ratios calculated by the NAIC to assist state insurance departments in monitoring the financial condition of insurance companies.

(IRIS) ratios	
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.

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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."

Catastrophe losses 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.

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 and other naturally-occurring events, such as solar flares. 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, explosions and destruction of infrastructure. The geographic distribution of our business subjects us to catastrophe exposures in the United States and Canada, which include, but are not limited to: hurricanes from Maine through Texas; tornadoes and hail storms throughout the Central, Mid-Atlantic and Southeastern regions of the United States; earthquakes in California, the New Madrid region and the Pacific Northwest region of North America; wildfires, particularly in western states and Canada; and terrorism in major cities in the United States. In addition to our operations in the United States and Canada, our international operations subject us to catastrophe exposures in the United Kingdom, the Republic of Ireland and Brazil as well as to a variety of worldwide catastrophe exposures through our Lloyd’s operations.

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 future climate trends, and potentially changing climate conditions could add to the frequency and severity of natural disasters and create additional uncertainty as to future trends and exposures. During that time period, the insurance industry experienced increased catastrophe losses due to a number of potential causal factors, including, in addition to weather/climate variability, more people living in high-risk areas, population growth in areas with weaker enforcement of building codes, urban expansion and an increase in the average size of a house. For example, hurricane activity has impacted areas further inland than previously experienced by us, and demographic changes have resulted in larger populations in coastal areas which historically have been subject to severe storms and related storm surge, thus expanding our potential for losses from hurricanes. Additionally, both the frequency and severity of tornado and hail storms in the United States have been more volatile during the last decade. The frequency and severity of wildfire losses have been elevated in more recent years. Demographic changes in areas prone to wildfires have expanded our potential for losses from wildfires. Moreover, we could experience more than one severe catastrophic event in any given period.

All of the catastrophe modeling tools that we use, or that we rely on from outside parties, to evaluate certain of our catastrophe exposures are based on assumptions and judgments that are subject to error and mis-estimation and may produce estimates that are materially different than actual results. 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 and hail storms are newer and may be even less reliable due to the highly random geographic nature and size of these events. As a result, models for earthquakes and tornado and hail storms may have even greater difficulty 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. See "We may be adversely affected if our pricing and capital models provide materially different indications than actual results" below as well as "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, which can be both property and casualty coverages. 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 from catastrophic events in the future. For example, the specific geographic 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 larger to the extent that the event impacts platforms, systems or vulnerabilities shared by a large number of policyholders.

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. Participation in residual market mechanisms has resulted in, and may continue to result in, significant losses or assessments to insurers, including us, and, in certain states, those losses or assessments may not be commensurate with our direct catastrophe exposure in those states. If our competitors leave those states having residual market mechanisms, remaining insurers, including us, may be subject to significant increases in losses or assessments following a catastrophe. In addition, following catastrophes, there are sometimes 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 insurer rights available under the policies. Also, our ability to adjust terms, including deductible levels, or to increase pricing to the extent necessary to offset rising costs of catastrophes, particularly in the Personal Insurance segment, requires approval of regulatory authorities of certain states. Our ability or our willingness to manage our catastrophe exposure by raising prices, modifying underwriting terms or reducing exposure to certain geographies may be limited due to considerations of public policy, the evolving political environment and/or changes in the general economic climate. Furthermore, reduction or elimination of the National Flood Insurance Program could result in an increase in our exposure to flood risk. We also may choose to write business in catastrophe-prone areas that we might not otherwise write for strategic purposes, such as improving our access to other underwriting opportunities.

There are also factors that impact the estimation of ultimate costs for catastrophes. For example, the estimation of claims and claim adjustment expense reserves related to hurricanes can be affected by the inability to access portions of the impacted areas, the complexity of factors contributing to the losses, the limited availability of the necessary labor and supplies, the legal and regulatory uncertainties and the nature of the information available to establish the claims and claim adjustment expense 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; infrastructure disruption; fraud; the effect of mold damage; business interruption costs; late reported claims; litigation; and reinsurance collectability. 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 us in estimating claims and claim adjustment expense reserves for that reporting period. The estimates related to catastrophes are adjusted in subsequent periods as actual claims emerge and additional information becomes available.

Exposure to catastrophe losses or actual losses resulting from a catastrophe 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 or actual losses following a catastrophe, 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, such as states or municipalities, in which we have invested.

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, 2020. Under current provisions of this program, once our losses exceed 20% of our commercial property and casualty insurance premium for the preceding calendar year, the federal government will reimburse us for 81% 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 $2.52 billion for 2019. The federal government reimbursement percentage will fall from 81% to 80% in 2020. In addition, because the interpretation of this law is untested, there is substantial uncertainty as to how it will be applied to specific circumstances. For example, application of the law to a specific event will depend upon whether the government has designated such event as a covered event. It is also possible that future legislation could change or eliminate the program, which could adversely affect our business by increasing our exposure to terrorism losses, or by lowering our business volume through efforts to avoid that exposure. For a further description of the Terrorism Risk Insurance Program, see note 5 of notes to the consolidated financial statements.

Because of the risks set forth above, catastrophes such as those caused by various natural or man-made events, such as a terrorist attack or other intentionally destructive acts, including those involving nuclear, biological, chemical or radiological events or cyber events, 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. In addition, while we seek to manage our exposure to man-made catastrophic events involving conventional means, we may not have sufficient resources to respond to 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, regulatory and economic environments in which the Company operates, our financial results could be materially and adversely affected. Claims and claim adjustment expense reserves do not represent an exact calculation of liability, but instead 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 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; adverse changes in loss cost trends, including inflationary pressures and technology changes which may impact medical, auto and home repair costs; economic conditions, including general and wage inflation; legal trends, including social inflation (increased litigation, expanded theories of liability and higher jury awards); 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 and could be material. Claims and claim adjustment expense 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 reporting lags (the time between the occurrence of the policyholder event and when it is actually reported to the insurer).

It is possible that, among other things, past or future steps taken by the federal government and the Federal Reserve to stimulate the U.S. economy, including actions to manage interest rates, tax reform, the imposition of tariffs and other changes in international trade regulation, could lead to higher inflation than we had anticipated, which could in turn lead to an increase 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, as they require a relatively long period of time to finalize and settle claims for a given accident year. In addition, a significant portion of claims costs, including those in “long tail” lines of business, consists of medical costs. Changes in healthcare legislation could significantly impact the availability, cost and allocation of payments for medical services, and it is possible that, as a result, inflationary pressures in medical costs may increase or claim frequency and/or severity may otherwise be adversely impacted. The estimation of claims and claim adjustment expense reserves may also be more difficult during times of adverse 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 of claims. In addition, the estimation of claims and claim adjustment expense reserves may be influenced by other external factors, including increased attorney involvement in insurance claims.

We continually refine our claims and claim adjustment expense reserve estimates in 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 choose different assumptions when faced with material uncertainty, based on their individual backgrounds, professional experiences and areas of focus. Hence, such experts may at times produce estimates materially different from each other. This risk may be exacerbated in the context of 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 may have to consider varying individual viewpoints as part of its estimation of claims and claim adjustment expense reserves.

We attempt to consider all significant facts and circumstances known at the time claims and claim adjustment expense reserves are established or reviewed. Due to the inherent uncertainty underlying claims and claim adjustment expense reserve estimates, the final resolution of the estimated liability for claims and claim adjustment expenses will likely be higher or lower than the related claims and claim adjustment expense reserves at the reporting date. Therefore, actual paid losses in the future may yield a materially different amount than is currently reserved.

Because of the uncertainties set forth above, additional liabilities resulting from one insured event, or an accumulation of insured events, may exceed the current related reserves. 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, cannot now be reasonably estimated and could materially and adversely affect our results of operations and/or our financial position.

For a discussion of claims and claim adjustment expense reserves by product line, including examples of common factors that can affect required 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."

During or following a period of financial market disruption or an economic downturn, our business could be materially and adversely affected. Worldwide financial markets and economic conditions have, from time to time, experienced significant disruption or deterioration and likely will experience periods of disruption or deterioration in the future. If financial markets experience significant disruption or if economic conditions deteriorate, 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, as well as heightened credit risk and reduced valuations for certain of our investments. An inflationary environment, as a result of government efforts to stabilize the economy after a disruption or otherwise, may also, as we discuss in risk factors above and below, adversely impact our loss costs and the valuation of our investment portfolio.

Financial market disruption or an economic downturn could be exacerbated by actual or potential economic and geopolitical instability in many regions of the world. This can impact our business even if we do not conduct business in the region subject to the instability. For example, due to globalization, instability in one region can spread to other regions where we do business.

The United Kingdom's withdrawal from the European Union could have a negative impact on economic conditions in the United Kingdom and could result in unintended consequences in other countries as well. In the United States, actions or inactions of the United States government may also impact economic conditions. For example, actions that may be taken with respect to fiscal stimulus programs, a government shutdown, the debt ceiling, the Federal budget, international trade and tariffs, interest rates, the Affordable Care Act, tax laws and regulation generally, among other things, may contribute, positively or negatively, to economic conditions generally and create economic and fiscal uncertainty.

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 those discussed below related to our investment portfolio, the competitive environment, emerging claim and coverage issues, reinsurance arrangements, other credit exposures, regulatory developments and the impact of rating agency actions. You should also refer to "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, 2018. Changes in interest rates caused by inflation or other factors (inclusive of credit spreads) 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, while rising interest rates reduce the market value of existing fixed maturity investments, thereby negatively impacting our book value. At December 31, 2018, the net pre-tax unrealized loss in our fixed income portfolio was $137 million, compared to a pre-tax unrealized gain of $1.38 billion at December 31, 2017, as interest rates increased. Any future increases in interest rates (inclusive of credit spreads) would result in an increase in that unrealized loss position, thereby adversely impacting our book value. Despite the increase in interest rates in 2018, rates remain at very low levels relative to historical experience, and it is possible that rates may remain at low levels for a prolonged period. 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. Rapid changes in commodity prices, such as a significant decline in oil prices, could also subject certain of our investments to a higher risk of default.
Our fixed maturity investment portfolio is invested, in substantial part, in obligations of states, municipalities and political subdivisions (collectively referred to as the municipal bond portfolio). Notwithstanding the relatively low historical rates of default on many of these obligations and notwithstanding that we typically seek to invest in high-credit-quality securities (including those with structural protections such as being secured by dedicated or pledged sources of revenue), our municipal bond portfolio could be subject to default or impairment. In particular:

- In recent years, many state and local governments have been operating under deficits or projected deficits. 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 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. The recent tax reform also could lead state and local governments to decrease taxes, which could result in a deterioration of the credit quality of these state and local governments.

- Some municipal bond issuers may be unwilling to increase tax rates, particularly in light of the recent tax reform, 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 (such as reduced access to capital markets) 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.
Approximately 30% of the fixed maturity portfolio is expected to mature over the next three years (this includes the early redemption of bonds, assuming interest rates (including credit spreads) do not rise significantly by applicable call dates). As a result, even if our investment strategy does not significantly change over the next few years, the overall yield on and composition of our portfolio could be meaningfully impacted by the types of investments available for reinvestment with the proceeds of matured bonds. For example, if yields decrease when we reinvest such proceeds, our future net investment income would be adversely affected. In addition, depending on the specific bonds available for purchase at the time of re-investment, the mix of specific issuers in our fixed-income and municipal bond portfolio will change.

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. See “Changes in U.S. tax laws or in the tax laws of other jurisdictions in which we operate could adversely impact us” below.

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 and/or financial market disruption.

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, such as oil. All of these asset classes are subject to greater volatility in their investment returns than fixed maturity investments. General economic 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. For example, the percentage of our investment portfolio consisting of tax-exempt municipal bonds has decreased from 42% to 39% in the past year due, in part, to the impact of the Tax Cuts and Jobs Act of 2017 on the municipal bond market.

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.

Our business could be harmed because of our potential exposure to asbestos and environmental claims and related litigation. With regard to asbestos claims, we have received and 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 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. This trend of prioritizing claims involving credible evidence of injuries, along with the focus on defendants who were not traditionally primary targets of asbestos litigation, has contributed to the claims and claim adjustment expense payments we experienced.

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. In these instances, policyholders also may assert that each individual bodily injury claim should be treated as a separate occurrence under the policy. It is difficult to predict whether these policyholders will be successful on both issues. 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. It is difficult to predict the outcome of these proceedings, including whether the plaintiffs will be able to sustain these actions against insurers based on novel legal theories of liability.

With regard to environmental claims, we have received and 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. Mostly, these claims arise under various legislative as well as regulatory efforts aimed at environmental remediation. For instance, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), enacted in 1980 and later modified, 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 CERCLA and 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. 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.

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.

While the ongoing evaluation 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, 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" and "Environmental Claims and Litigation" sections of "Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations." Also see "Item 3—Legal Proceedings."

The intense competition that we face, 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 an increasing number of 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. In recent years, pension and hedge funds and other entities with substantial available capital and 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, existing competitors that receive substantial infusions of capital, as well as competitors that can take advantage of more favorable tax domiciles than the United States, may conduct business in ways that adversely impact our business volumes and profitability. Further, an expanded supply of reinsurance capital may lower costs for insurers that rely significantly on reinsurance and, as a consequence, those insurers may be able to price their products more competitively. 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 (where we currently and may increasingly compete against direct writers), 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, customer behavior could evolve in the future towards buying insurance in point-of-sale distribution channels where we do not currently have a meaningful presence. Consolidation within the insurance industry also could alter the competitive environment in which we operate, which may impact our business volumes and/or the rates or terms of our products.

In Personal Insurance, the use of comparative rating technologies has impacted, and may continue to impact, our business as well as the industry as a whole. A substantial amount of the Company's Personal Insurance new business is written after an agent compares quotes using comparative rating technologies, a cost-efficient means of obtaining quotes from multiple companies. Because the use of this technology, whether by agents or directly by customers, facilitates the process of generating multiple quotes, the technology has increased price comparison on new business and, increasingly, on renewal business. It also has resulted in an increase in the level of quote activity and a lower percentage of quotes that result in new business from customers, and these trends may continue or accelerate. If we are not able to operate with a competitive cost structure or accurately estimate and price for claims and claim adjustment expenses, our business volume and underwriting margins could be adversely affected over time. Additionally, similar technology is starting to be used to access comparative rates for small commercial business and that trend is likely to continue and may accelerate. In recent years, there have been new entrants into the small commercial insurance business and this trend may continue.

Technology companies or other third parties have created, and may in the future create, digitally-enabled business models, platforms or alternate distribution channels for personal or commercial business that may adversely impact our competitive position. These technology companies or other third parties may compete with us directly by providing, or arranging to provide, insurance coverage themselves. See also "Disruptions to our relationships with our independent agents and brokers could adversely affect us" below.

Other technological changes also present competitive risks. For example, innovations, such as telematics and other usage-based methods of determining premiums, can impact product design and pricing and may become an increasingly important competitive factor. In addition, our competitive position could be impacted if we are unable to deploy, in a cost effective manner, technology 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, or are able to use such data more efficiently and/or effectively than we are able to. See also "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" below.

Competitive dynamics may impact the success of efforts to improve our underwriting margins on our insurance products. These efforts could include seeking improved rates, as well as 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 retention and new business levels and therefore 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 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 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.

Overall, our competitive position in our various businesses is based on many factors, including but not limited to our:

- ability to profitably price our 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 our competitors with changes in technology and information systems;
- effectiveness of our claims process, including the speed of payment;
- ability to avoid and mitigate fraudulent claims;
- ability to provide our 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 we operate;
- ability to provide access to the distribution channels preferred by customers and prospective customers;
- perceived overall financial strength and corresponding ratings assigned by independent rating agencies;
- reputation, experience and qualifications of employees;
- geographic scope of business; and
- local presence.

We may have difficulty in continuing to compete successfully on any of these bases in the future. 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."

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, as well as other insurance carriers such as GEICO with which we have had a marketing 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. See also "The intense competition that we face could harm our ability to maintain or increase our business volumes and our profitability." 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.

We may also seek to develop new products or distribution channels, which could disrupt our relationships with our agents and brokers. In addition, agents and brokers may create alternate distribution channels for commercial business that may adversely impact product differentiation and pricing. Access to greater levels of data and increased utilization of technology by agents and brokers may also impact our relationship with them and our competitive position. Our efforts or their efforts with respect to new products or alternate distribution channels, as well as changes in the way agents and brokers utilize data and technology, 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 as well as, in some cases, requesting a commitment to participate in such portfolios in advance. 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.

We rely on internet applications for the marketing and sale of certain of our products, and we may increasingly rely on internet applications and toll-free numbers for distribution. In some instances, our agents and brokers are required to access separate business platforms to execute the sale of our personal insurance or commercial insurance products. 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. See “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” below.

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 related to actions taken or not taken by our agents.

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. In addition to asbestos and environmental claims, we face potential exposure to other types of mass tort claims, including claims related to exposure to potentially harmful products or substances, such as lead paint, silica, talc and opioids. Establishing claims and claim adjustment expense reserves for mass tort claims is subject to uncertainties because of many factors, including expanded theories of liability, 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. Moreover, evolving judicial interpretations regarding the application of various tort theories and defenses, including application of various theories of joint and several liabilities, as well as the application of insurance coverage to these claims, make it difficult to estimate our ultimate liability for such claims.

Because of the uncertainties set forth above, additional liabilities may arise for amounts in excess of the current related reserves. In addition, our estimate of claims and claim adjustment expenses may change, and such change could be material. These additional liabilities or increases in estimates, or a range of either, cannot now be reasonably estimated and could materially and adversely affect our results of operations.

The effects of emerging claim and coverage issues on our business are uncertain. 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 property and casualty insurers, including us, 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 under directors' & officers' and/or errors and omissions insurance policies relating to losses from involvement in financial market activities; failed financial institutions; fraud; improper sales practices; anti-trust allegations; possible accounting irregularities; and corporate governance issues;
- claims related to data and network security breaches, information system failures or cyber events, particularly as the "internet of things" becomes more prevalent, including cases where coverage was not intended to be provided;
- the assertion of "public nuisance" or similar theories of liability, pursuant to which plaintiffs seek to recover monies spent to administer public health care programs, abate hazards to public health and safety and/or recover damages purportedly attributable to a "public nuisance";
- claims related to liability or workers' compensation arising out of the spread of infectious disease or pandemic;

- 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;