

TRAVELERS COMPANIES, INC.  
Form 10-K  
February 15, 2018

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[ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA](#)

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## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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### FORM 10-K

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

For the fiscal year ended December 31, 2017

or

o 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)

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**Minnesota**  
(State or other jurisdiction of  
incorporation or organization)

**41-0518860**  
(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:**

<b>Title of each class</b>	<b>Name of each exchange on which registered</b>
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  No

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files).    Yes  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 (Check one):

Large accelerated filer   

Accelerated filer   

Non-accelerated filer   

Smaller reporting company   

(Do not check if a 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

As of June 30, 2017, the aggregate market value of the registrant's voting and non-voting common equity held by non-affiliates was \$34,813,427,330.

As of February 9, 2018, 271,427,959 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 2018 Annual Meeting of Shareholders are incorporated by reference into Part III of this report.

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**The Travelers Companies, Inc.**  
**Annual Report on Form 10-K**  
**For Fiscal Year Ended December 31, 2017**

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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.

For a summary of the Company's revenues, core income and total assets by reportable business segments, see note 2 of notes to the consolidated financial statements.

**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 1,200 property and casualty groups in the United States, comprising approximately 2,630 property and casualty companies. Of those groups, the top 150 accounted for approximately 92% of the consolidated industry's total net written premiums in 2016. 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;

speed of claims payment;

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.

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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, 2017:

Location	% of Total
Domestic:	
New York	9.9%
California	9.9
Texas	7.7
Pennsylvania	4.6
Florida	4.2
New Jersey	4.0
Illinois	3.8
Georgia	3.5
All other domestic(1)	46.1
<b>Total Domestic</b>	<b>93.7</b>
International:	
Canada	4.4
All other international(1)	1.9
<b>Total International</b>	<b>6.3</b>
<b>Consolidated total</b>	<b>100.0%</b>

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(1) No other single state or country accounted for 3.0% or more of the Company's consolidated direct written premiums written in 2017.

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**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."

**Segment Realignment**

Effective April 1, 2017, the Company's results are reported in the following three business segments Business Insurance, Bond & Specialty Insurance and Personal Insurance, reflecting a change in the manner in which the Company's businesses were being managed as of that date, as well as the aggregation of products and services based on the type of customer, how the business is marketed and the manner in which risks are underwritten. While the segmentation of the Company's domestic businesses was unchanged, the Company's international businesses, which were previously managed and reported in total within the Business and International Insurance segment, were disaggregated by product type among the three newly aligned reportable business segments. In connection with these changes, the Company revised the names and descriptions of certain businesses comprising the Company's segments and has reflected other related changes. The following discussion of the Company's reportable business segments reflects the realigned segment reporting structure. Financial data for all prior periods presented was reclassified to be consistent with the 2017 presentation.

**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

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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 products and 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*. Through its Lloyd's syndicate (Syndicate 5000), for which the Company provides 100% of the capital, International underwrites five principal businesses marine, global property, accident & special risks, power & utilities and aviation.

Business Insurance also includes Simply Business, a leading provider of small business insurance policies in the United Kingdom that was acquired in August 2017, as well as Business Insurance Other, which comprises the Special Liability Group (which manages 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.



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(for the year ended December 31, in millions)	2017	2016	2015	% of Total 2017
<b>By market:</b>				
Domestic:				
Select Accounts	\$ 2,800	\$ 2,729	\$ 2,716	19.6%
Middle Market	7,756	7,379	7,186	54.3
National Accounts	1,010	1,058	1,048	7.1
National Property and Other	1,691	1,779	1,791	11.9
Total Domestic	13,257	12,945	12,741	92.9
International	1,013	955	1,033	7.1
<b>Total Business Insurance by market</b>	<b>\$ 14,270</b>	<b>\$ 13,900</b>	<b>\$ 13,774</b>	<b>100.0%</b>

**By product line:**

Domestic:				
Workers' compensation	\$ 3,926	\$ 3,945	\$ 3,915	27.5%
Commercial automobile	2,219	2,037	1,958	15.6
Commercial property	1,772	1,787	1,760	12.4
General liability	2,086	1,987	1,924	14.6
Commercial multi-peril	3,228	3,157	3,146	22.6
Other	26	32	38	0.2
Total Domestic	13,257	12,945	12,741	92.9
International	1,013	955	1,033	7.1
<b>Total Business Insurance by product line</b>	<b>\$ 14,270</b>	<b>\$ 13,900</b>	<b>\$ 13,774</b>	<b>100.0%</b>

**Principal Markets and Methods of Distribution**

Business Insurance markets and distributes its products through approximately 10,500 independent agencies and brokers. Agencies and brokers are serviced by 114 field offices and three customer service centers.

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 at their desktop in an efficient manner that significantly reduces the time period between quoting a price on a new policy and issuing that



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policy. 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. In addition, the Company has established centralized service centers to help agents perform many service functions, in return for a fee.

**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 \$252 million of fee income in 2017, 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 \$120 million of fee income in 2017. National Accounts services approximately 36% 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 71% of sales to National Accounts customers during 2017, 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.

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**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, 2017, contractholder payables on unpaid losses within the deductible layer of large deductible policies and the associated receivables were both approximately \$4.77 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, 2017. 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.

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**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, 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, personal accident and kidnap & ransom. Marine provides coverage for ship hulls, cargoes carried, private yachts, marine-related liability, offshore energy, ports and terminals, fine art and terrorism. 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, 2018. 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

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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, 2017:

Location	% of Total
Domestic:	
California	12.3%
New York	9.7
Texas	6.7
Illinois	4.6
New Jersey	3.9
Pennsylvania	3.9
Florida	3.6
Massachusetts	3.1
All other domestic(1)	46.6
<b>Total Domestic</b>	<b>94.4</b>
International:	
Canada	3.0
All other international(1)	2.6
<b>Total International</b>	<b>5.6</b>
<b>Total Business Insurance</b>	<b>100.0%</b>

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(1) No other single state or country accounted for 3.0% or more of Business Insurance's direct written premiums in 2017.

**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



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standard industry product offerings. Competition in this market is primarily based on breadth of product offerings, service levels, ease and speed of doing business and price.

Competitors typically write Middle Market business through independent agents and brokers. Several of Middle Market's operations require unique combinations of industry knowledge, customized coverage, specialized risk control and loss handling services, along with partnerships with agents and brokers that also focus on these markets. Competitors in this market are primarily national property and casualty insurance companies (including international companies doing business in the U.S.) that write most classes of business using traditional products and pricing, and regional insurance companies. Companies compete based on product offerings, service levels, price 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.



Table of Contents**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 and fidelity bonds for construction and general commercial enterprises; management liability coverages including directors' and officers' liability, employee dishonesty, 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 J. Malucelli Participações em Seguros e Resseguros S.A. (JMalucelli) and J. Malucelli Latam S.A. in Brazil. The Company owns 49.5% of both JMalucelli, a market leader in surety coverages in Brazil, and J. Malucelli Latam S.A., which in September 2015 acquired 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)	2017	2016	2015	% of Total 2017
<b>Domestic:</b>				
Fidelity and surety	\$ 993	\$ 961	\$ 952	42.1%
General liability	977	954	952	41.4
Other	190	184	177	8.1
<b>Total Domestic</b>	<b>2,160</b>	<b>2,099</b>	<b>2,081</b>	<b>91.6</b>
International	199	172	192	8.4
<b>Total Bond &amp; Specialty Insurance</b>	<b>\$ 2,359</b>	<b>\$ 2,271</b>	<b>\$ 2,273</b>	<b>100.0%</b>

**Principal Markets and Methods of Distribution**

Bond & Specialty Insurance markets and distributes the vast majority of its products in the United States through approximately 5,600 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.

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**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, as well as cyber risk coverages.

**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 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, 2018. For third party liability, including but not limited to umbrella liability, professional liability, directors' and officers' liability, employment practices liability and cyber risk liability, Bond & Specialty Insurance generally limits net retentions to \$25.0 million per policy. For surety protection, where insured limits are often significant, Bond & Specialty Insurance generally retains up to \$115.0 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.

Table of Contents**Geographic Distribution**

The following table shows the geographic distribution of Bond & Specialty Insurance's direct written premiums for the year ended December 31, 2017:

<b>Location</b>	<b>% of Total</b>
<b>Domestic:</b>	
California	10.3%
New York	6.4
Texas	6.0
Florida	5.0
Illinois	4.1
Pennsylvania	3.6
Massachusetts	3.0
All other domestic(1)	52.6
<b>Total Domestic</b>	<b>91.0</b>
<b>International:</b>	
Canada	4.4
United Kingdom	4.0
All other international(1)	0.6
<b>Total International</b>	<b>9.0</b>
<b>Total Bond &amp; Specialty Insurance</b>	<b>100.0%</b>

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(1) No other single state or country accounted for 3.0% or more of Bond & Specialty Insurance's direct written premiums in 2017.

**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."

Table of Contents*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 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)	2017	2016	2015	% of Total 2017
Domestic:				
Agency:				
Automobile	\$ 4,646	\$ 4,103	\$ 3,534	48.4%
Homeowners and Other	3,933	3,772	3,687	41.0
Total Agency	8,579	7,875	7,221	89.4
Direct-to-Consumer	361	309	236	3.8
Total Domestic	8,940	8,184	7,457	93.2
International	650	603	617	6.8
Total Personal Insurance	\$ 9,590	\$ 8,787	\$ 8,074	100.0%

**Principal Markets and Methods of Distribution***Domestic*

Personal Insurance products are marketed and distributed primarily through approximately 10,300 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

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customer service needs, including response to billing and coverage inquiries, and policy changes. Approximately 1,500 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, which is expected to continue for a number of years. The Company's direct-to-consumer business is also expected to be slightly unprofitable for a number of years.

*International*

International markets and distributes its products principally through approximately 640 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 natural disasters, particularly those related to weather and, for homeowners insurance, earthquakes. 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.

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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 7.2 million active policies (e.g., policies-in-force) in the United States at December 31, 2017.

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 562,000 active policies in Canada at December 31, 2017.

**Net Retention Policy Per Risk**

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

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The following table shows the geographic distribution of Personal Insurance's direct written premiums for the year ended December 31, 2017:

<b>Location</b>	<b>% of Total</b>
<b>Domestic:</b>	
New York	11.2%
Texas(1)	9.6
Pennsylvania	6.1
California	5.9
Georgia	4.9
Florida	4.9
New Jersey	4.5
Virginia	3.6
Connecticut	3.5
All other domestic(2)	39.1
<b>Total Domestic</b>	<b>93.3</b>
<b>International:</b>	
Canada	6.7
<b>Total International</b>	<b>6.7</b>
<b>Total Personal Insurance</b>	<b>100.0%</b>

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- (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 2017.

**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. In recent years, most independent personal insurance agents have begun utilizing 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.

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*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 11,000 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 20 claim centers and 53 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. 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.



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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 record number 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, 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 and earthquakes 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, 2018.

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*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, 2018 through and including December 31, 2018. 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. 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.

*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 expires in May 2018 and 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 with Long Point Re III provides coverage of up to \$300 million to the Company for 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 15, 2018, 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 \$2.346 billion. The full \$300 million coverage amount is available on a proportional basis until such covered losses reach a maximum \$2.846 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 on the issuance date of the bonds and thereafter must be rated by Standard & Poor's. 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.

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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 \$800 million part of \$850 million of all perils (coverage for terrorism events in limited circumstances and excludes entirely losses from nuclear, biological and radiological attacks), subject to a \$2.25 billion retention, from Virginia to Maine for the period July 1, 2017 through and including June 30, 2018. Losses from a covered event (occurring over several days) 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 \$150 million part of \$165 million of coverage, subject to an \$80 million retention, 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, 2017 through and including June 30, 2018.

*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, 2018 through and including December 31, 2018.

*Canadian Property Catastrophe Excess-of-Loss Reinsurance Treaty.* This treaty, effective for the period July 1, 2017 through and including June 30, 2018, 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 for Canadian insureds, including, but not limited to, habitational property, commercial property, inland marine, ocean marine and auto physical damages exposures, with respect to risks located worldwide, written for Canadian insureds. The treaty provides coverage for 50% of losses in excess of C\$100 million (US\$80 million at December 31, 2017), up to C\$200 million (US\$160 million at December 31, 2017) and for 100% of losses in excess of

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C\$200 million (US\$160 million at December 31, 2017), up to C\$600 million (US\$479 million at December 31, 2017).

*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 2018, 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."

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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, 2017, 2016 and 2015, claims and claim adjustment expense reserves (net of reinsurance) prepared in accordance with U.S. generally accepted accounting principles (GAAP reserves) were \$56 million higher, \$44 million higher and \$41 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 reserves are primarily due to the differences in GAAP and statutory accounting for two items: (1) fees associated with billing of required reimbursements under large deductible business and (2) the accounting for retroactive 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. This fee is reported as fee income for GAAP reporting, but as an offset to claim expenses paid for statutory reporting. Retroactive reinsurance balances result from reinsurance placed to cover losses on insured events occurring prior to the inception of a reinsurance contract. For GAAP reporting, retroactive reinsurance balances are included in reinsurance recoverables and result in lower net reserve amounts. 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 by the Company's Special Liability Group, a separate unit staffed by dedicated legal, claim, finance and engineering professionals. 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

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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 87.5 basis points to LIBOR plus 150 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 15, 2018, including the position of each rating in the applicable agency's rating scale.

	<b>A.M. Best</b>	<b>Moody's</b>	<b>S&amp;P</b>	<b>Fitch</b>
Travelers Reinsurance Pool(a)(b)	A++ (1 <sup>st</sup> of 16)	Aa2 (3 <sup>rd</sup> of 21)	AA (3 <sup>rd</sup> of 21)	AA (3 <sup>rd</sup> of 21)
Travelers C&S Co. of America	A++ (1 <sup>st</sup> of 16)	Aa2 (3 <sup>rd</sup> of 21)	AA (3 <sup>rd</sup> of 21)	AA (3 <sup>rd</sup> of 21)
First Floridian Auto and Home Ins. Co.	A (4 <sup>th</sup> of 16)			AA (3 <sup>rd</sup> of 21)
Travelers C&S Co. of Europe, Ltd.	A++ (1 <sup>st</sup> of 16)	Aa2 (3 <sup>rd</sup> of 21)	AA (3 <sup>rd</sup> of 21)	
Travelers Insurance Company of Canada	A++ (1 <sup>st</sup> of 16)		AA (4 <sup>th</sup> of 21)	
The Dominion of Canada General Insurance Company	A (3 <sup>rd</sup> of 16)			
Travelers Insurance Company Limited	A (3 <sup>rd</sup> of 16)		AA (3 <sup>rd</sup> 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

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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 15, 2018. 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+ (5 <sup>th</sup> of 22)	A2 (6 <sup>th</sup> of 21)	A (6 <sup>th</sup> of 22)	A (6 <sup>th</sup> of 22)
Subordinated debt	a (7 <sup>th</sup> of 22)	A3 (7 <sup>th</sup> of 21)	A (7 <sup>th</sup> of 22)	BBB+ (8 <sup>th</sup> of 22)
Junior subordinated debt	bbb+ (8 <sup>th</sup> of 22)	A3 (7 <sup>th</sup> of 21)	BBB+ (8 <sup>th</sup> of 22)	BBB+ (8 <sup>th</sup> of 22)
Trust preferred securities	bbb+ (8 <sup>th</sup> of 22)	A3 (7 <sup>th</sup> of 21)	BBB+ (8 <sup>th</sup> of 22)	BBB+ (8 <sup>th</sup> of 22)
Commercial paper	AMB-1+(1 <sup>st</sup> of 6)	P-1 (1 <sup>st</sup> of 4)	A-1 (2 <sup>nd</sup> of 10)	F1 (2 <sup>nd</sup> of 8)

**Rating Agency Actions**

The following rating agency actions were taken with respect to the Company from February 16, 2017, the date on which the Company filed its Annual Report on Form 10-K for the year ended December 31, 2016, through February 15, 2018:

On June 19, 2017, Fitch affirmed all ratings of the Company. The outlook for all ratings is stable.

On July 13, 2017, Moody's affirmed all ratings of the Company. The outlook for all ratings is stable.

On October 5, 2017, A.M. Best affirmed all ratings of the Company, except ratings for Travelers Insurance Company Limited, which were affirmed on January 12, 2018. The outlook for all ratings is stable. Concurrently with the affirmation of these ratings, A.M. Best withdrew its ratings for The Premier Insurance Company of Massachusetts at the Company's request.

**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.

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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



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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

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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.* The NAIC developed the Insurance Regulatory Information System (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 2017 IRIS ratios calculated by the Company for its lead domestic insurance subsidiaries, The Travelers Indemnity Company had results outside the normal range for one IRIS ratio due to the size of its investments in certain non-fixed maturity securities, while Travelers Casualty and Surety Company had results outside the normal range for one IRIS ratio due to the amount of dividends received from its subsidiaries. In 2016, The Travelers Indemnity Company and Travelers Casualty and Surety Company had results outside the normal range for these same ratios. Additionally, St. Paul Fire and Marine Insurance Company had results outside the normal range for one IRIS ratio in 2016 due to the amount of dividends received from its subsidiaries.

Management does not anticipate regulatory action as a result of the 2017 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, 2017 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, 2017, 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,

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subject to specified limits and certain other qualifications. At December 31, 2017, 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 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 are 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) 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. The Company announced in December 2017 that it applied to the Central Bank of Ireland for authorization of a new wholly owned insurance subsidiary to be incorporated in the Republic of Ireland to serve its customers and broking partners in Ireland and across Europe upon the U.K.'s exit from 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. A TRV subsidiary, TCI Global Services, Inc., has a liaison office in India. Insurance business in India is regulated by the Insurance Regulatory and Development Authority. 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, 2017.

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**United States and European Union Covered Agreement**

On September 22, 2017, the U.S. Department of the Treasury (Treasury) and the Office of the U.S. Trade Representative (USTR) signed a covered agreement (the Covered Agreement) regarding prudential (solvency) insurance and reinsurance measures with the EU. The Covered Agreement includes three areas of prudential insurance supervision related to: reinsurance contracts, group supervision, and the exchange of information between U.S. and EU insurers and the respective insurance regulators. The EU is expected to finalize approval of the Covered Agreement in the first half of 2018.

The Covered Agreement is intended to promote cooperation between the U.S. and EU insurance regulators, and limits the ability of the EU to apply solvency and group capital requirements to the worldwide operations of any U.S. insurer operating in the EU. The Covered Agreement eliminates the collateral and local presence requirements for EU reinsurers operating in the U.S. insurance market, and for U.S. reinsurers operating in the EU, 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 Agreement includes 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. Insurers in the United Kingdom are subject to change of control restrictions, including approval of the PRA and FCA. 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.

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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. 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,

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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, 2017, the Company had approximately 30,800 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, including recently enacted federal tax reform, 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.

**Financial Information about Reportable Business Segments**

For financial information regarding reportable business segments of the Company, see "Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations," and note 2 of notes to the consolidated financial statements.

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**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](http://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.

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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.



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	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 2017 ranged from approximately \$17 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 <i>written</i> premium and the underwriting expense ratio as used in this report is based on net <i>earned</i> premiums.

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	<p>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.</p> <p>Other companies' method of computing a similarly titled measure may not be comparable to the Company's method of computing this ratio.</p>
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.

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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 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.

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	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.
IRIS ratios	Financial ratios calculated by the NAIC to assist state insurance departments in monitoring the financial condition of insurance companies.
Large deductible policy	An insurance policy where the customer assumes at least \$25,000 or more of each loss. Typically, the insurer is responsible for paying the entire loss under those policies and then seeks reimbursement from the insured for the deductible amount.
Lloyd's	An insurance marketplace based in London, England, where brokers, representing clients with insurable risks, deal with Lloyd's underwriters, who represent investors. The investors are grouped together into syndicates that provide capital to insure the risks.
Loss	An occurrence that is the basis for submission and/or payment of a claim. Losses may be covered, limited or excluded from coverage, depending on the terms of the policy.
Loss adjustment expenses (LAE)	The expenses of settling claims, including legal and other fees and the portion of general expenses allocated to claim settlement costs.

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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.

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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.
S-curve method	A mathematical function which depicts an initial slow change, followed by a rapid change and then ending in a slow change again. This results in an "S" shaped line when depicted graphically. The actuarial application of these curves fit the reported data to date for a particular cohort of claims to an S-curve to project future activity for that cohort.
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 a person 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.

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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 settlements	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.



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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 <i>written</i> 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 <i>earned</i> 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.

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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. For example, over the last two decades, 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. Demographic changes in areas prone to wildfires have also expanded our potential for losses from wildfires. Additionally, both the frequency and severity of tornado and hail storms in the United States have been more volatile during the last decade. Moreover, we could experience more than one severe catastrophic event in any given period.

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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), currently there are no reliable modeling techniques. 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 prohibiting 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 or seek to prevent the application of deductibles. 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. 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

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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. 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 82% 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 \$2.46 billion for 2018. Over the remaining three-year life of the reauthorized program, the federal government reimbursement percentage will fall from 82% to 80%. 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

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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 and legislative changes; and varying judgments and viewpoints of the individuals involved in the estimation process, among others. The impact of many of these items on ultimate costs for claims and claim adjustment expenses is difficult to estimate. 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 and 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 continued intensive advertising by plaintiff attorneys.

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.

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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, 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, the recently enacted Tax Cuts and Jobs Act of 2017 as well as actions that may be taken by the U.S. administration to address the U.S. Federal budget, the national debt, international trade, the Affordable Care Act 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 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, 2017. 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

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net investment income, while rising interest rates reduce the market value of existing fixed maturity investments, thereby negatively impacting our book value. During 2017, the net pre-tax unrealized gain in our fixed income portfolio increased from \$865 million to \$1.38 billion as interest rates decreased. Any future increases in interest rates (inclusive of credit spreads) would result in a decline in that unrealized gain position or in an unrealized loss, thereby adversely impacting our book value. Interest rates in recent years have been and 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. 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). For a schedule of the contractual maturities of our fixed maturity portfolio by year for the next several years, see "Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations Investment Portfolio." As a result, even if

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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, or potential consequences of the recent tax reforms, make changes to the mix of investments in our investment portfolio as part of our ongoing efforts to seek appropriate risk-adjusted returns. These changes may impact the duration, volatility and risk of our investment portfolio.

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

**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 from policyholders (including others seeking coverage under a policy). 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



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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;

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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

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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. We do not currently have a presence in that distribution channel. 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.

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."

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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 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;

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 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. 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

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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. 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 a narrower range of 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 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 welding rod fumes. 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.

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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 emerging 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, such as mortgage or financial product origination, distribution, structuring or servicing and foreclosure procedures; 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;

claims alleging that one or more of our underwriting criteria have a disparate impact on persons belonging to a protected class in violation of the law, including the Fair Housing Act;

claims arising out of modern techniques and practices used in connection with the extraction of natural resources, such as hydraulic fracturing or wastewater injection;

claims arising out of the use of personal cars, homes or other property in commercial transactions, such as ride or home sharing;

claims relating to unanticipated consequences of current or new technologies or business models or processes, including as a result of related behavioral changes; and

claims relating to potentially changing climate conditions, including higher frequency and severity of weather-related events.



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

In addition, the potential passage of new legislation designed to expand the right to sue, to remove limitations on recovery, to deem by statute the existence of a covered occurrence, to extend the statutes of limitations or otherwise to repeal or weaken tort reforms could have an adverse impact on our business.

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

**We may not be able to collect all amounts due to us from reinsurers, reinsurance coverage may not be available to us in the future at commercially reasonable rates or at all and we are exposed to credit risk related to our structured settlements.** Although the reinsurer is liable to us to the extent of the ceded reinsurance, we remain liable as the direct insurer on all risks reinsured. As a result, ceded reinsurance arrangements do not eliminate our obligation to pay claims. Accordingly, we are subject to credit risk with respect to our ability to recover amounts due from reinsurers.

In the past, certain reinsurers have ceased writing business and entered into runoff. Some of our reinsurance claims may be disputed by the reinsurers, and we may ultimately receive partial or no payment. This is a particular risk in the case of claims that relate to insurance policies written many years ago, including those relating to asbestos and environmental claims. In addition, in a number of jurisdictions, particularly the European Union and the United Kingdom, 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.

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

The availability and cost of reinsurance are subject to prevailing market conditions, both in terms of price and available capacity. The availability of reinsurance capacity can be impacted by general economic conditions and conditions in the reinsurance market, such as the occurrence of significant reinsured events. The availability and cost of reinsurance could affect our business volume and profitability. In addition, the Covered Agreement with the European Union recently signed by the U.S. will eliminate the requirement for European reinsurers operating in the U.S. to provide collateral in connection with reinsurance agreements, which could make it more difficult for U.S. companies, including us, to obtain sufficient collateral, if any, in such reinsurance arrangements.

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

**We are 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.** In addition to exposure to credit risk related to our investment portfolio and reinsurance recoverables (discussed above), we are exposed to credit risk in several other areas of our business operations, including credit risk relating to policyholders, independent agents and brokers.

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

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

Our efforts to mitigate the credit risk that we have to our insureds may not be successful. To reduce such credit risk, we require certain insureds to post collateral for some or all of these obligations, often in the form of pledged securities such as money market funds or letters of credit provided by banks, surety bonds or cash. In cases where we receive pledged securities and the insureds are unable to honor their obligations, we may be exposed to credit risk on the securities pledged and/or the risk that our access to that collateral may be stayed during an insured's bankruptcy. In cases where we receive letters of credit from banks and the insureds are unable to honor their obligations, we are exposed to the credit risk of the banks that issued the letters of credit.

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

To a large degree, the credit risk we face is a function of the economy; accordingly, we face an increased credit risk in an economic downturn. While we attempt to manage the risks discussed above through underwriting guidelines, collateral requirements and other oversight mechanisms, our efforts may not be successful. For example, collateral obtained may subsequently have little or no value. Further, the amount of collateral protection we have been able to obtain on the business we write in certain markets has decreased, and may continue to decrease, as a result of competition. We are also exposed to credit risk related to certain guarantee or indemnification arrangements that we have with third parties. See note 16 of notes to the consolidated financial statements. As a result, our exposure to the above credit risks could materially and adversely affect our results of operations.

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**Within the United States, our businesses are heavily regulated by the states in which we conduct business, including licensing, market conduct and financial supervision, and changes in regulation may reduce our profitability and limit our growth.** These regulatory systems are generally designed to protect the interests of policyholders, and not necessarily the interests of insurers, their shareholders and other investors. For example, to protect policyholders whose insurance company becomes financially insolvent, guaranty funds have been established in all 50 states to pay the covered claims of policyholders in the event of an insolvency of an insurer, subject to applicable state limits. The funding of guaranty funds is provided through assessments levied against remaining insurers in the marketplace. As a result, the insolvency of one or more insurance companies could result in additional assessments levied against us. In addition, many states restrict the timing and/or the ability of an insurer to discontinue writing a line of business or to cancel or non-renew certain policies.

These regulatory systems also address authorization for lines of business, statutory capital and surplus requirements, limitations on the types and amounts of certain investments, underwriting limitations, transactions with affiliates, dividend limitations, changes in control, premium rates and a variety of other financial and non-financial components of an insurer's business including, recently, cyber-security.

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

As part of these changes, insurance holding company regulations were amended to require insurers who are part of a holding company system to file an enterprise risk report to provide the lead insurance regulator with a summary of the company's Enterprise Risk Management (ERM) framework, including the material risks within the insurance holding company system that could pose risk to the insurance entities within the holding company system. Insurers having premium volume above certain thresholds, including the Company, are also required to perform at least annually a self-assessment of their current and future risks, including their likely future solvency position (known as an own risk and solvency assessment or ORSA) and file a confidential report with the insurer's lead insurance regulator. The requirement for an insurer to conduct an ORSA is intended to foster an effective level of ERM at all insurers within a holding company system, and to provide a group-wide perspective on risk and capital as a supplement to the legal entity view. ORSA is now included in the International Association of Insurance Supervisors (IAIS) standards and is in various stages of implementation in the United States, Europe, Canada, and other jurisdictions. It is possible that, as a result of ORSA and the manner in which it may be used by insurance regulators, our states of domicile or other regulatory bodies may require changes in our ERM process (e.g., prescribe the use of specific models or the application of certain assumptions in the Company's models) that have the effect of limiting our ability to write certain risks, limit our risk appetite to write additional business or reduce our capital management flexibility. See "Enterprise Risk Management" for further discussion of the Company's ERM.

The NAIC and state insurance regulators, as well as the Federal Reserve and Federal Insurance Office, are currently working with the IAIS to develop a global common framework (ComFrame) for the supervision of internationally active insurance groups (IAIGs). If adopted, ComFrame would require the designation of a group-wide supervisor (regulator) for each IAIG and would impose a group capital requirement that would be applied to an IAIG in addition to the current legal entity capital requirements imposed by state insurance laws and regulations. In response to ComFrame, the NAIC developed a model law that allows state insurance regulators in the U.S. to be designated as group-wide supervisors for U.S.-based IAIGs. Additionally, the NAIC is developing a group capital analytical tool that would be applied to U.S.-based insurance groups in addition to the risk-based

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capital (RBC) requirement that is applied on a legal entity basis. These regulatory developments could increase the amount of capital that the Company is required to have and could result in the Company being subject to increased regulatory requirements.

States may choose to adopt more restrictive insurance laws and regulations that could, among other things, restrict the ability of insurance subsidiaries to distribute funds to their parent companies or they could reject rate increases due to the economic environment. The state insurance regulators may also increase the statutory capital and surplus requirements for our insurance subsidiaries. In addition, state tax laws that specifically impact the insurance industry, such as premium taxes or other taxes, could be enacted or changed by states to raise revenues.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (TCJA) was signed into law. This is the first major revision of the U.S. tax code since 1986 and its ultimate impact is uncertain. For example, some elected state officials and regulators have criticized the new law and may attempt to take legal, legislative, or regulatory actions designed to change the TCJA's impact on their jurisdictions.

State laws or regulations that are adopted or amended may be more restrictive than current laws or regulations and may result in lower revenues and/or higher costs of compliance and thus could materially and adversely affect our results of operations and limit our growth.

**A downgrade in our claims-paying and financial strength ratings could adversely impact our business volumes, adversely impact our ability to access the capital markets and increase our borrowing costs.** Claims-paying and financial strength ratings are important to an insurer's competitive position. Rating agencies periodically review insurers' ratings and change their ratings criteria; therefore, our current ratings may not be maintained in the future. A downgrade in one or more of our ratings could negatively impact our business volumes because demand for certain of our products may be reduced, particularly because many customers may require that we maintain minimum ratings to enter into, maintain or renew business with us. Additionally, we may find it more difficult to access the capital markets and we may incur higher borrowing costs. If significant losses, including, but not limited to, those resulting from one or more major catastrophes, or significant reserve additions or significant investment losses were to cause our capital position to deteriorate significantly, or if one or more rating agencies substantially increase their capital requirements, we may need to raise equity capital in the future (which we may not be able to do at a reasonable cost or at all, especially at a time of financial market disruption) in order to maintain our ratings or limit the extent of a downgrade. A continued trend of more frequent and severe weather-related or other catastrophes or a prolonged financial market disruption or economic downturn may lead rating agencies to substantially increase their capital requirements. See also "During or following a period of financial market disruption or economic downturn, our business could be materially and adversely affected." For further discussion about our ratings, see "Item 1 Business Ratings."

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

We are subject to state insurance regulation as an insurance holding company system. Our U.S. insurance subsidiaries are subject to various regulatory restrictions that limit the maximum amount of dividends available to be paid to their parent without prior approval of insurance regulatory authorities. In a time of prolonged economic downturn or otherwise, insurance regulators may choose to further restrict the ability of insurance subsidiaries to make payments to their parent companies. The ability of

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our insurance subsidiaries to pay dividends to our holding company is also restricted by regulations that set standards of solvency that must be met and maintained.

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

**Our efforts to develop new products, expand in targeted markets or improve business processes and workflows may not be successful and may create enhanced risks.** From time to time, to protect and grow market share and/or improve our efficiency, we invest in strategic initiatives to:

Develop products that insure risks we have not previously insured, contain new coverages or change coverage terms;

Change commission terms;

Change our underwriting processes;

Improve business processes and workflow to increase efficiencies and productivity and to enhance the experience of our customers and distributors;

Expand distribution channels; and

Enter geographic markets within or outside of the United States where we have had relatively little or no market share.

We may not be successful in these efforts, and even if we are successful, they may create the following risks, among others:

Demand for new products or expansion into new markets may not meet our expectations;

New products and expansion into new markets may change our risk exposures, and the data and models we use to manage such exposures may not be as effective as those we use in existing markets or with existing products;

Models underlying automated underwriting and pricing decisions may not be effective;

Efforts to develop new products or markets and to change commission terms may create or increase distribution channel conflict, such as described above under " Disruptions to our relationships with our independent agents and brokers could adversely affect us;"

In connection with the conversion of existing policyholders to a new product, some policyholders' pricing may increase while the pricing for other policyholders may decrease, the net impact of which could negatively impact retention and profit margins; and

Changes to our business processes or workflow, including the use of new technologies, may give rise to execution risk.

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

**We may be adversely affected if our pricing and capital models provide materially different indications than actual results.** The profitability of our property and casualty business substantially depends on the extent to which our actual claims experience is consistent with the assumptions we use in pricing our policies. We utilize proprietary and third party models to help us price business in a manner that is intended to be consistent, over time, with actual results and return objectives. We incorporate the Company's historical loss experience, external industry and other data, and economic indices into our modeling processes, and we use various methods, including predictive modeling, forecasting and sophisticated simulation modeling techniques, to analyze loss trends and the risks

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associated with our assets and liabilities. We also use these modeling processes, analyses and methods in making underwriting, pricing and reinsurance decisions as part of managing our exposure to catastrophes and other extreme adverse events. These modeling processes incorporate numerous assumptions and forecasts about the future level and variability of the frequency and severity of losses, inflation, interest rates and capital requirements, among others, that are difficult to make and may differ materially from actual results.

Whether we use a proprietary or third-party model, future experience may be materially different from past and current experience incorporated in a model's forecasts or simulations. This includes the likelihood of events occurring or continuing or the correlation among events. Third-party models may provide substantially different indications than what our proprietary modeling processes provide. As a result, third-party model estimates of losses can be, and often have been, materially different for similar events in comparison to our proprietary estimates. The differences between third-party model estimates and our proprietary estimates are driven by the use of different data sets as well as different assumptions and forecasts regarding the frequency and severity of events and claims arising from the events. In addition, as the number of third-party models increases, it becomes more difficult to validate and manage such models as they evolve over time, and the risk associated with assimilating the output from such models into our decisions increases.

If we fail to appropriately price the risks we insure or fail to change our pricing models to appropriately reflect our experience, or if our claims experience is more frequent or severe than our underlying risk assumptions, our profit margins may be negatively affected. If we underestimate the frequency and/or severity of extreme adverse events occurring, our financial condition may be adversely affected. If we overestimate the risks we are exposed to, we may overprice our products, and new business growth and retention of our existing business may be adversely affected. See "Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations - Catastrophe Modeling."

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

**If we experience difficulties with technology, data and network security (including as a result of cyber attacks), outsourcing relationships or cloud-based technology, our ability to conduct our business could be negatively impacted.** While technology can streamline many business processes and ultimately reduce the cost of operations, technology initiatives present significant risks. Our business is highly dependent upon our employees' ability to perform, in an efficient and uninterrupted fashion, necessary business functions. A shut-down of, or inability to access, one or more of our facilities (including our primary data processing facility); a power outage; or a failure of one or more of our information technology, telecommunications or other systems could significantly impair our ability to

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perform such functions on a timely basis, particularly if such an interruption lasts for an extended period of time. In the event of a computer virus or disaster such as a natural catastrophe, terrorist or other attack or industrial accident, our systems could be inaccessible for an extended period of time. In addition, because our information technology and telecommunications systems increasingly interface with and depend on third-party systems, including cloud-based, we could experience service denials or failures of controls if demand for our service exceeds capacity or a third-party system fails or experiences an interruption. Business interruptions and failures of controls could also result if our internal systems do not interface with each other as intended or if changes to such systems are not effectively implemented. Business continuity can also be disrupted by an event, such as a pandemic, that renders large numbers of a workforce unable to work as needed, particularly at critical locations; for example, our largest location employs about 20% of our employees. If our business continuity plans did not sufficiently address a business interruption, system failure or service denial, this could result in a deterioration of our ability to write and process new and renewal business, provide customer service, pay claims in a timely manner or perform other necessary business functions.

Our operations rely on the reliable and secure processing, storage and transmission of confidential and other information in our computer systems and networks. Computer viruses, hackers (including individuals, organizations or rogue states) and employee or vendor misconduct, and other external hazards, could expose our data systems to security breaches, cyber-attacks or other disruptions. In addition, we routinely transmit and receive personal, confidential and proprietary information by e-mail and other electronic means. While we attempt to develop secure transmission capabilities with third-party vendors and others with whom we do business, we may be unable to put in place secure capabilities with all of such vendors and third parties and, in addition, these third parties may not have appropriate controls in place to protect the confidentiality of the information.

Like other global companies, our computer systems are regularly subject to and will continue to be the target of computer viruses, malware or other malicious codes (including ransomware), unauthorized access, cyber-attacks or other computer-related penetrations. While we have experienced threats to our data and systems, to date, we are not aware that we have experienced a material cyber-security breach. However, over time, the sophistication of these threats continues to increase. Our administrative and technical controls as well as other preventative actions we take to reduce the risk of cyber incidents and protect our information may be insufficient to detect or prevent unauthorized access, other physical and electronic break-ins, cyber-attacks or other security breaches to our computer systems or those of third parties with whom we do business. In addition, new technology that could result in greater operational efficiency may further expose our computer systems to the risk of cyber-attacks. Our increased use of open source software, cloud technology and software as a service can make it more difficult to identify and remedy such situations due to the disparate location of code utilized in our operations.

We have outsourced certain technology and business process functions to third parties and may increasingly do so in the future. If we do not effectively develop, implement and monitor our outsourcing relationships, if third party providers do not perform as anticipated, if we experience technological or other problems with a transition, or if outsourcing relationships relevant to our business process functions are terminated, we may not realize expected productivity improvements or cost efficiencies and may experience operational difficulties, increased costs and a loss of business. Our outsourcing of certain technology and business process functions to third parties may expose us to increased risk related to data security, service disruptions or the effectiveness of our control system, which could result in monetary and reputational damages or harm to our competitive position. These risks could increase as vendors increasingly offer cloud-based software services rather than software services which can be run within our data centers. See also "We could be adversely affected if our controls designed to ensure compliance with guidelines, policies and legal and regulatory standards are not effective." In addition to risks caused by third party providers, our ability to receive services from



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third-party providers outside of the United States might be impacted by cultural differences, political instability, unanticipated regulatory requirements or public policy inside or outside of the United States.

The increased risks identified above could expose us to data loss or manipulation, disruption of service, monetary and reputational damages, competitive disadvantage and significant increases in compliance costs and costs to improve the security and resiliency of our computer systems. The compromise of personal, confidential or proprietary information could also subject us to legal liability or regulatory action under evolving cyber-security, data protection and privacy laws and regulations enacted by the U.S. federal and state governments, Canada, the European Union or other jurisdictions or by various regulatory organizations or exchanges. As an example, the European General Data Protection Regulation will be applicable in all European Union member states beginning May 25, 2018. This regulation adds a broad array of requirements for handling personal data and could impose a fine of up to 4% of global annual revenue for violations. As a result, our ability to conduct our business and our results of operations might be materially and adversely affected.

**We are also subject to a number of additional risks associated with our business outside the United States.** We conduct business outside the United States primarily in Canada, the United Kingdom and the Republic of Ireland. In addition, we conduct business in Brazil, primarily through a joint venture, and we have an indirect interest in a joint venture in Colombia. We may also explore opportunities in other countries, including other Latin American countries and other emerging markets such as India.

In conducting business outside of the United States, we are also subject to a number of additional risks, particularly in emerging economies. These risks include restrictions such as price controls, capital controls, currency exchange limits, ownership limits and other restrictive or anti-competitive governmental actions or requirements, which could have an adverse effect on our business and our reputation. A portion of our premiums from outside of the United States is generated in Canada, a substantial portion of which consists of automobile premiums from the province of Ontario, which is a highly regulated market. Our business activities outside the United States may also subject us to currency risk and, in some markets, it may be difficult to effectively hedge that risk, or we may choose not to hedge that risk. In addition, in some markets, we may invest as part of a joint venture with a local counterparty. Because our governance rights may be limited, we may not have control over the ability of the joint venture to make certain decisions and/or mitigate risks it faces, and significant disagreements with a joint venture counterparty may adversely impact our investment and/or reputation. Our business activities outside the United States could subject us to increased volatility in earnings resulting from the need to recognize and subsequently revise a valuation allowance associated with income taxes if we became unable to fully utilize any deferred tax assets, including loss carry-forwards from those foreign operations. Also, political instability, particularly in emerging economies, and changing market conditions around the globe, could result in financial market disruption or an economic downturn in such regions.

Our business activities outside the United States also subject us to additional domestic and foreign laws and regulations, including the Foreign Corrupt Practices Act and similar laws in other countries that prohibit the making of improper payments to foreign officials. Although we have policies and controls in place that are designed to ensure compliance with these laws, if those controls are ineffective and an employee or intermediary fails to comply with applicable laws and regulations, we could suffer civil and criminal penalties and our business and our reputation could be adversely affected. Some countries, particularly emerging economies, have laws and regulations that lack clarity and, even with local expertise and effective controls, it can be difficult to determine the exact requirements of, and potential liability under, the local laws. In some jurisdictions, including Brazil, parties to a joint venture may, in some circumstances, have liability for some obligations of the venture, and that liability may extend beyond the capital invested. Failure to comply with local laws in a

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particular market may result in substantial liability and could have a significant and negative effect not only on our business in that market but also on our reputation generally.

In addition, competition for skilled employees in developing markets and other non-U.S. locations may be intense. If we are not able to hire, integrate, motivate and retain a sufficient number of employees with the knowledge and background necessary for our global businesses, those businesses and our results of operations may be adversely affected.

**Regulatory changes outside of the United States, including in Canada, the U.K. and the European Union, could adversely impact our results of operations and limit our growth.** Insurance laws or regulations that are adopted or amended in jurisdictions outside the U.S. may be more restrictive than current laws or regulations and may result in lower revenues and/or higher costs of compliance and thus could materially and adversely affect our results of operations and limit our growth.

In particular, the European Union's executive body, the European Commission, implemented new capital adequacy and risk management regulations called Solvency II on January 1, 2016 that apply to the Company's businesses across the European Union. Under Solvency II, it is possible that the U.S. parent of a European Union subsidiary could be subject to certain Solvency II requirements if the regulator determines that the subsidiary's capital position is dependent on the parent company and the U.S. parent is not already subject to regulations deemed "equivalent" to Solvency II. In addition, regulators in countries where the Company has operations are working with the International Association of Insurance Supervisors (IAIS) (and with the NAIC, the Federal Reserve and FIO in the U.S.) to consider changes to insurance company supervision, including group supervision and group capital requirements.

The IAIS has developed a methodology for identifying "global systemically important insurers" (G-SIIs) and high level policy measures that will apply to the G-SIIs. The methodology and measures were endorsed by the Financial Stability Board (FSB) created by the G-20. Using the IAIS methodology, the FSB, working with national authorities and the IAIS, identified nine insurers in November 2016 that they designated as G-SIIs. The IAIS is working on the policy measures which include higher capital requirements and enhanced supervision. The Company has not been designated as a G-SII by the FSB; however, the FSB updates the list annually, and it is possible that the methodologies could be amended or interpreted differently in the future and the Company could be named as a G-SII.

The IAIS is also in the process of developing the Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame). As the current draft of ComFrame is completed, it likely will lead to similar policy measures as those being developed for G-SIIs being made applicable to internationally active insurance groups (or "IAIGs"), including group supervision, group capital requirements, and resolution planning, i.e., a written plan developed by a financial group detailing how it would be wound down in the event of an insolvency. The IAIS is currently in the process of field testing the group capital requirements. The Company would be considered an Internationally Active Insurance Group under the current Consultation Draft. It is possible that ComFrame, if adopted, could lead to enhanced supervision and higher capital standards on a global basis if the IAIS, the NAIC and the individual states adopt the proposed or similar provisions.

The U.S. Department of the Treasury (Treasury) and the Office of the U.S. Trade Representative (USTR) entered into a covered agreement (the Covered Agreement) in September 2017 regarding prudential (solvency) insurance and reinsurance measures with the European Union (EU). The EU is expected to approve the agreement later in 2018. The Covered Agreement includes three areas of prudential insurance supervision related to: reinsurance contracts, group supervision, and the exchange of information between U.S. and EU insurers and the respective insurance regulators. The Covered Agreement is intended to promote cooperation between the U.S. and EU insurance regulators and is intended to limit the ability of the EU to apply solvency and group capital requirements to the

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worldwide operations of any U.S. insurer operating in the EU. It is possible that individual members of the EU could choose to apply none or only parts of the Covered Agreement, resulting in greater regulation and higher capital standards as well as inconsistent regulatory requirements among the jurisdictions that the Company does business.

While it is not yet known how or if these actions will impact us, such regulation could result in increased costs of compliance, increased disclosure and less flexibility in our capital management, and could adversely impact our results of operations and limit our growth.

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

**Acquisitions and integration of acquired businesses may result in operating difficulties and other unintended consequences.** From time to time we may pursue acquisition opportunities if we believe that such opportunities are consistent with our long-term objectives and that the potential rewards of an acquisition justify the risks. The process of integrating an acquired company or business can be complex and costly, however, and may create unforeseen operating difficulties and expenditures. For example, acquisitions may present significant risks, including:

the potential disruption of our ongoing business;

the ineffective integration of, or other difficulties with, underwriting, risk management, claims handling, information technology and actuarial practices;

uncertainties related to an acquiree's reserve estimates and its design and operation of internal controls over financial reporting;

the diversion of management time and resources to acquisition integration challenges;

the loss of key employees;

unforeseen liabilities;

difficulties in achieving the strategic objectives of an acquisition, including the business, financial, technological or distribution objectives;

the cultural challenges associated with integrating employees; and

the impact on our financial position and/or credit ratings.

The expected benefits of acquired businesses may not be realized, any cost savings and other synergies anticipated from the acquisition may not be achieved and costs associated with the integration may be greater than anticipated. Acquired businesses may not be successfully

integrated, resulting in

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substantial costs or delays and adversely affecting our ability to compete. Accordingly, our results of operations might be materially and adversely affected.

**We could be adversely affected if our controls designed to ensure compliance with guidelines, policies and legal and regulatory standards are not effective.** Our business is highly dependent on our ability to engage on a daily basis in a large number of insurance underwriting, claim processing and investment activities, many of which are highly complex. These activities often are subject to internal guidelines and policies, as well as legal and regulatory standards. A control system, no matter how well designed and operated, can provide only reasonable assurance that the control system's objectives will be met. If our controls are not effective, it could lead to financial loss, unanticipated risk exposure (including underwriting, credit and investment risk), errors in financial reporting or damage to our reputation. See also "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."

In addition, ineffective controls, including with respect to any joint ventures or recently acquired businesses, could lead to litigation or regulatory action. The volume of claims and amount of damages and penalties claimed in litigation and regulatory proceedings against various types of financial institutions have increased over time. Substantial legal liability or significant regulatory action against us could have a material adverse financial impact. See note 16 of notes to our consolidated financial statements for a discussion of certain legal proceedings in which we are involved.

**Our businesses may be adversely affected if we are unable to hire and retain qualified employees.** There is significant competition from within the property and casualty insurance industry and from businesses outside the industry for qualified employees, especially those in key positions and those possessing highly specialized knowledge in areas such as underwriting, data and analytics, technology and e-commerce. Our performance is largely dependent on the talents, efforts and proper conduct of highly-skilled individuals, including our senior executives (many of whom have decades of experience in the insurance industry), and the Board of Directors regularly engages in succession discussions. See "Item 10 Directors, Executive Officers and Corporate Governance" for more information relating to our executive officers, including our senior leaders. For many of our senior positions, we compete for talent not just with insurance or financial service companies, but with other large companies and other businesses. Our continued ability to compete effectively in our businesses and to expand into new business areas depends on our ability to attract new employees and to retain and motivate our existing employees. If we are not able to successfully attract, retain and motivate our employees, our business, financial results and reputation could be materially and adversely affected.

**Intellectual property is important to our business, and we may be unable to protect and enforce our own intellectual property or we may be subject to claims for infringing the intellectual property of others.** Our success depends in part upon our ability to protect our proprietary trademarks, technology and other intellectual property. See "Item 1 Other Information Intellectual Property." We may not, however, be able to protect our intellectual property from unauthorized use and disclosure by others. Further, the intellectual property laws may not prevent our competitors from independently developing trademarks, products and services that are similar to ours. Moreover, the agreements we execute to protect our intellectual property rights may be breached, and we may not have adequate remedies in response. Our attempts to patent or register our intellectual property rights in the U.S. and worldwide may not succeed initially or may later be challenged by third parties. Further, the laws of certain countries outside the United States may not adequately protect our intellectual property rights. We may incur significant costs in our efforts to protect and enforce our intellectual property, including the initiation of expensive and protracted litigation, and we may not prevail. Any inability to enforce our intellectual property rights could have a material adverse effect on our business and our ability to compete.

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

**Changes in federal regulation could impose significant burdens on us and otherwise adversely impact our results.** The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the Dodd-Frank Act) established a Federal Insurance Office (FIO) within the U.S. Department of the Treasury. The FIO has limited regulatory authority and is empowered to gather data and information regarding the insurance industry and insurers, but it has in the past recommended an expanded federal role in some circumstances. The Dodd-Frank Act also gives the Federal Reserve supervisory authority over a number of nonbank financial services holding companies, including insurance companies, if they are designated by a two-thirds vote of a Financial Stability Oversight Council (the FSOC) as "systemically important financial institutions" (SIFI) or own a bank or thrift. The Company, based upon the FSOC's rules and interpretive guidance, has not been designated as a SIFI and is not subject to regulation by the Federal Reserve. In addition, the Federal Reserve appears to be moving away from SIFI designations altogether. Nonetheless, it is possible that FSOC may change its rules or interpretations in the future and conclude that we are a SIFI. If we were designated as a SIFI, the Federal Reserve's supervisory authority could include the ability to impose heightened financial regulation and could impact requirements regarding our capital, liquidity and leverage as well as our business and investment conduct. The Dodd-Frank Act also authorizes assessments to pay for the resolution of SIFI's that have become insolvent. We (as a financial company with more than \$50 billion in assets) could be assessed, and although any such assessment is required to be risk weighted (i.e., riskier firms pay more), such costs could be material to us and are not currently estimable. As a result of the foregoing, the Dodd-Frank Act, including any changes thereto as a result of its current re-evaluation or otherwise, or other additional federal regulation that is adopted in the future, could impose additional burdens on us, including impacting the ways in which we conduct our business, increasing compliance costs and duplicating state regulation, and could result in a competitive disadvantage, particularly relative to other competitors that may not be subject to the same level of regulation.

Even if we are not subject to additional regulation by the federal government, significant financial sector regulatory reform could have a significant impact on us. For example, regulatory reform could have an unexpected impact on our rights as a creditor or on our competitive position. The current administration is reviewing rules and regulations across the entire federal regulatory spectrum, including Treasury, the SEC, the Department of Transportation, the Department of Labor and other agencies, as well as treaty relationships with parties to the North American Free Trade Agreement. We expect executive action on regulatory changes to continue in 2018 and beyond.

Other potential changes in U.S. federal legislation, regulation and/or administrative policies, including the potential repeal of the McCarran-Ferguson Act (which exempts insurance from most federal regulation), could also significantly harm the insurance industry, including us.

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**Changes in U.S. tax laws or in the tax laws of other jurisdictions in which we operate could adversely impact us.** Tax laws may change in ways that adversely impact us, including increasing the statutory U.S. federal corporate income tax rate. Alternatively, federal tax legislation could be enacted to further reduce the existing statutory U.S. federal corporate income tax rate from 21%, which would, accordingly, reduce any U.S. net deferred tax asset. The amount of any net deferred tax asset is volatile and significantly impacted by changes in unrealized investment gains and losses. The effect of a reduction in a tax rate on net deferred tax assets is required to be recognized, in full, as a reduction of income from continuing operations in the period when enacted and, along with other changes in the tax rules that may increase the Company's actual tax expense, could materially and adversely affect our results of operations. In addition, a reduction in the existing statutory U.S. federal corporate income tax rate could increase the after-tax effect of future significant loss events and our after-tax borrowing costs. Additional uncertainties exist with respect to potential technical corrections and clarifications to the recently enacted Tax Cuts and Jobs Act of 2017.

Our investment portfolio has benefited from certain tax exemptions and certain other tax laws and regulations, including, but not limited to, those governing dividends-received deductions and tax credits. Federal and/or state tax legislation could be enacted in connection with deficit reduction or various types of fundamental tax reform that would lessen or eliminate some or all of the tax advantages currently benefiting us and therefore could materially and adversely impact our results of operations. In addition, such legislation could adversely affect the value of our investment portfolio, particularly changes to the taxation of interest from municipal bonds (which comprise 43% of our investment portfolio as of December 31, 2017), which could materially and adversely impact the value of those bonds.

Other tax law changes could materially and adversely impact our results of operations. For example, budget constraints faced by many states and localities increase the likelihood that state and local governments will raise revenue by enacting legislation increasing the taxes paid by individuals and corporations.

**Item 1B. UNRESOLVED STAFF COMMENTS**

NONE.

**Item 2. PROPERTIES**

The Company leases its principal executive offices in New York, New York, as well as approximately 224 field and claim offices totaling approximately 4.5 million square feet throughout the United States under leases or subleases with third parties. The Company also leases offices in Canada, the United Kingdom, the Republic of Ireland, Brazil, India and China that house operations (primarily for Business Insurance) in those locations. The Company owns six buildings in Hartford, Connecticut, consisting of approximately 1.8 million square feet of office space. The Company also owns buildings located in other areas of Connecticut; Norcross, Georgia; St. Paul, Minnesota; and Omaha, Nebraska. The Company owns a building in London, England, which houses a portion of Business Insurance's operations in the United Kingdom.

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

**Item 3. LEGAL PROCEEDINGS**

The information required with respect to this item can be found under "Contingencies" in note 16 of notes to the consolidated financial statements in this annual report and is incorporated by reference into this Item 3.

Table of Contents**Item 4. MINE SAFETY DISCLOSURES**

NONE.

**EXECUTIVE OFFICERS OF THE REGISTRANT**

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

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

The Company's common stock is traded on the New York Stock Exchange under the symbol "TRV." The number of holders of record of the Company's common stock was 41,773 as of February 9, 2018. This is not the actual number of beneficial owners of the Company's common stock as some shares are held in "street name" by brokers and others on behalf of individual owners. The following table sets forth the high and low closing sales prices of the Company's common stock for each quarter during the last two fiscal years and the amount of cash dividends declared per share each quarter.

	High	Low	Cash Dividend Declared
<b>2017</b>			
First Quarter	\$ 124.99	\$ 116.54	\$ 0.67
Second Quarter	129.44	118.88	0.72
Third Quarter	130.15	115.18	0.72
Fourth Quarter	136.36	123.32	0.72
<b>2016</b>			
First Quarter	\$ 117.43	\$ 102.08	\$ 0.61
Second Quarter	119.04	108.79	0.67
Third Quarter	119.29	113.71	0.67
Fourth Quarter	122.57	104.67	0.67

The Company paid cash dividends per share of \$2.83 in 2017 and \$2.62 in 2016. Future dividend decisions will be based on, and affected by, a number of factors, including the operating results and financial requirements of the Company and the impact of dividend restrictions. For information on dividends, as well as restrictions on the ability of certain of the Company's subsidiaries to transfer funds to the Company in the form of cash dividends or otherwise, see "Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations Liquidity and Capital Resources." Dividends will be paid by the Company only if declared by its Board of Directors out of funds legally available and subject to any other restrictions that may be applicable to the Company.



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**SHAREHOLDER RETURN PERFORMANCE GRAPH**

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

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- (1) The cumulative return to shareholders is a concept used to compare the performance of a company's stock over time and is the ratio of the net stock price change plus the cumulative amount of dividends over the specified time period (assuming dividend reinvestment) to the stock price at the beginning of the time period.
  - (2) Assumes \$100 invested in common shares of The Travelers Companies, Inc. on December 31, 2012.
  - (3) Companies in the S&P 500 Property & Casualty Insurance Index as of December 31, 2017 were the following: The Travelers Companies, Inc., Chubb Limited, Cincinnati Financial Corporation, The Progressive Corporation, The Allstate Corporation and XL Group Ltd.

Returns of each of the companies included in this index have been weighted according to their respective market capitalizations.

## Edgar Filing: TRAVELERS COMPANIES, INC. - Form 10-K

A long-term perspective is particularly important in the property and casualty insurance industry, where the periodic occurrences of significant catastrophes have historically produced results that can vary significantly year-to-year. Accordingly, management manages with a long-term perspective. For the ten-year period ended December 31, 2017, the Company's cumulative return to shareholders was 224% as compared to 126% for the S&P 500 Index and 157% for the S&P 500 Property & Casualty Insurance Index.

Table of Contents**ISSUER PURCHASES OF EQUITY SECURITIES**

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

<b>Period Beginning</b>	<b>Period Ending</b>	<b>Total number of shares purchased</b>	<b>Average price paid per share</b>	<b>Total number of shares purchased as part of publicly announced plans or programs</b>	<b>Approximate dollar value of shares that may yet be purchased under the plans or programs (in millions)</b>
Oct. 1, 2017	Oct. 31, 2017		\$		\$ 4,906
Nov. 1, 2017	Nov. 30, 2017	1,151,681	132.24	1,145,683	4,754
Dec. 1, 2017	Dec. 31, 2017	1,472,328	134.84	1,472,328	4,556
<b>Total</b>		2,624,009	133.69	2,618,011	4,556

The Company's Board of Directors has approved common share repurchase authorizations under which repurchases may be made from time to time in the open market, pursuant to pre-set trading plans meeting the requirements of Rule 10b5-1 under the Securities Exchange Act of 1934, in private transactions or otherwise. The authorizations do not have a stated expiration date. The timing and actual number of shares to be repurchased in the future will depend on a variety of factors, including the Company's financial position, earnings, share price, catastrophe losses, maintaining capital levels commensurate with the Company's desired ratings from independent rating agencies, funding of the Company's qualified pension plan, capital requirements of the Company's operating subsidiaries, legal requirements, regulatory constraints, other investment opportunities (including mergers and acquisitions and related financings), market conditions and other factors.

The Company acquired 5,998 shares for a total cost of approximately \$0.8 million during the three months ended December 31, 2017 that were not part of the publicly announced share repurchase authorization. These shares consisted of shares retained to cover payroll withholding taxes in connection with the vesting of restricted stock unit awards and performance share awards, and shares used by employees to cover the price of certain stock options that were exercised.

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

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

Table of Contents**Item 6. SELECTED FINANCIAL DATA**

	At and for the year ended December 31,				
	2017	2016	2015	2014	2013
	(in millions, except per share amounts)				
Total revenues	\$ 28,902	\$ 27,625	\$ 26,815	\$ 27,174	\$ 26,206
Net income	\$ 2,056	\$ 3,014	\$ 3,439	\$ 3,692	\$ 3,673
Total investments	\$ 72,502	\$ 70,488	\$ 70,470	\$ 73,261	\$ 73,160
Total assets	103,483	100,245	100,184	103,078	103,812
Claims and claim adjustment expense reserves	49,650	47,949	48,295	49,850	50,895
Total long-term debt	5,971	5,887	5,844	5,849	6,246
Total liabilities	79,752	77,024	76,586	78,242	79,016
Total shareholders' equity	23,731	23,221	23,598	24,836	24,796
<b>Net income per share</b>					
Basic	\$ 7.39	\$ 10.39	\$ 10.99	\$ 10.82	\$ 9.84
Diluted	\$ 7.33	\$ 10.28	\$ 10.88	\$ 10.70	\$ 9.74
Year-end common shares outstanding	271.4	279.6	295.9	322.2	353.5
<b>Per common share amounts</b>					
Cash dividends	\$ 2.83	\$ 2.62	\$ 2.38	\$ 2.15	\$ 1.96
Book value	\$ 87.46	\$ 83.05	\$ 79.75	\$ 77.08	\$ 70.15

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

The following is a discussion and analysis of the Company's financial condition and results of operations.

**FINANCIAL HIGHLIGHTS**

**2017 Consolidated Results of Operations**

Net income of \$2.06 billion, or \$7.39 per share basic and \$7.33 per share diluted

Net earned premiums of \$25.68 billion

Catastrophe losses of \$1.95 billion (\$1.27 billion after-tax)

Net favorable prior year reserve development of \$592 million (\$378 million after-tax)

Combined ratio of 97.9%

Net investment income of \$2.40 billion (\$1.87 billion after-tax)

Income tax expense included a net charge of \$129 million to reflect the change in tax laws and tax rates enacted in the United States on December 22, 2017 as part of the Tax Cuts and Jobs Act of 2017, resulting primarily from revaluing the Company's deferred tax assets and liabilities and the tax imposed on accumulated foreign earnings

Operating cash flows of \$3.76 billion

**2017 Consolidated Financial Condition**

Total investments of \$72.50 billion; fixed maturities and short-term securities comprise 93% of total investments

Total assets of \$103.48 billion

Total debt of \$6.57 billion, resulting in a debt-to-total capital ratio of 21.7% (22.5% excluding net unrealized investment gains, net of tax, included in shareholders' equity)

Repurchased 11.4 million common shares for total cost of \$1.44 billion and paid \$789 million of dividends to shareholders

Shareholders' equity of \$23.73 billion

Net unrealized investment gains of \$1.41 billion (\$954 million after-tax)

Book value per common share of \$87.46

Holding company liquidity of \$1.27 billion

**Realignment of Reportable Business Segments**

Effective April 1, 2017, the Company's results are reported in the following three business segments: Business Insurance, Bond & Specialty Insurance and Personal Insurance, reflecting a change in the manner in which the Company's businesses were being managed as of that date, as well as the aggregation of products and services based on the type of customer, how the business is marketed and the manner in which risks are underwritten. While the segmentation of the Company's domestic businesses was unchanged, the Company's international businesses, which were previously managed and reported in total within the Business and International Insurance segment, were disaggregated by product type among the three newly aligned reportable business segments. All prior periods presented have been reclassified to conform to this presentation. In connection with these changes, the Company revised the names and descriptions of certain businesses comprising the Company's segments and has reflected other related changes. The following discussion of segment results is based on the realigned reportable business segment structure effective April 1, 2017.

Table of Contents**CONSOLIDATED OVERVIEW****Consolidated Results of Operations**

(for the year ended December 31, in millions except per share amounts)	2017	2016	2015
<b>Revenues</b>			
Premiums	\$ 25,683	\$ 24,534	\$ 23,874
Net investment income	2,397	2,302	2,379
Fee income	447	458	460
Net realized investment gains	216	68	3
Other revenues	159	263	99
<b>Total revenues</b>	<b>28,902</b>	<b>27,625</b>	<b>26,815</b>
<b>Claims and expenses</b>			
Claims and claim adjustment expenses	17,467	15,070	13,723
Amortization of deferred acquisition costs	4,166	3,985	3,885
General and administrative expenses	4,170	4,154	4,094
Interest expense	369	363	373
<b>Total claims and expenses</b>	<b>26,172</b>	<b>23,572</b>	<b>22,075</b>
<b>Income before income taxes</b>	<b>2,730</b>	<b>4,053</b>	<b>4,740</b>
Income tax expense	674	1,039	1,301
<b>Net income</b>	<b>\$ 2,056</b>	<b>\$ 3,014</b>	<b>\$ 3,439</b>
<b>Net income per share</b>			
Basic	\$ 7.39	\$ 10.39	\$ 10.99
Diluted	\$ 7.33	\$ 10.28	\$ 10.88
<b>Combined ratio</b>			
Loss and loss adjustment expense ratio	67.2%	60.5%	56.6%
Underwriting expense ratio	30.7	31.5	31.7
<b>Combined ratio</b>	<b>97.9%</b>	<b>92.0%</b>	<b>88.3%</b>

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

*Overview*

Diluted net income per share of \$7.33 in 2017 decreased by 29% from diluted net income per share of \$10.28 in 2016. Net income of \$2.06 billion in 2017 decreased by 32% from net income of \$3.01 billion in 2016. The lower rate of decrease in diluted net income per share reflected the impact of share repurchases in recent periods. The decrease in net income primarily reflected the pre-tax impacts of (i) significantly

higher catastrophe losses, (ii) lower net favorable prior year reserve development, (iii) lower underwriting margins excluding catastrophe losses and prior year reserve development ("underlying underwriting margins") and (iv) lower other income in 2017 due to a favorable settlement of a reinsurance dispute in 2016, partially offset by (v) higher net realized investment gains and (vi) higher net investment income. Catastrophe losses in 2017 and 2016 were \$1.95 billion and \$877 million, respectively. Net favorable prior year reserve development in 2017 and 2016 was \$592 million and \$771 million, respectively. The lower underlying underwriting margins primarily resulted from the impacts of (i) loss cost trends that modestly exceeded earned pricing in



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Business Insurance, (ii) higher non-catastrophe fire-related losses in Business Insurance and (iii) higher non-catastrophe weather-related losses in Personal Insurance, partially offset by (iv) increased business volumes. Partially offsetting this net pre-tax decrease in income was a related decrease in income tax expense. Income tax expense also included a net charge of \$129 million to reflect the change in tax laws and tax rates enacted in the U.S. on December 22, 2017 as part of the Tax Cuts and Jobs Act of 2017 (TCJA), resulting primarily from revaluing the Company's deferred tax assets and liabilities and the tax imposed on accumulated foreign earnings. In addition, income tax expense in 2017 was reduced by \$39 million as a result of the resolution of prior year tax matters.

Diluted net income per share of \$10.28 in 2016 decreased by 6% from diluted net income per share of \$10.88 in 2015. Net income of \$3.01 billion in 2016 decreased by 12% from net income of \$3.44 billion in 2015. The lower rate of decrease in diluted net income per share reflected the impact of share repurchases in recent periods. The decrease in net income primarily reflected the pre-tax impacts of (i) higher catastrophe losses, (ii) lower underlying underwriting margins, (iii) lower net favorable prior year reserve development and (iv) lower net investment income, partially offset by (v) higher other revenues and (vi) higher net realized investment gains. Catastrophe losses in 2016 and 2015 were \$877 million and \$514 million, respectively. Net favorable prior year reserve development in 2016 and 2015 was \$771 million and \$941 million, respectively. The lower underlying underwriting margins primarily resulted from (i) higher loss estimates in the personal automobile product line for bodily injury liability coverages, (ii) the impact of loss cost trends that modestly exceeded earned pricing in Business Insurance and (iii) higher general and administrative expenses, partially offset by (iv) lower non-catastrophe fire-related losses and other loss activity in Business Insurance. Partially offsetting this net pre-tax decrease in income was a related decrease in income tax expense. Income tax expense in 2015 was also reduced by \$32 million as a result of the resolution of prior year tax matters.

The Company has insurance operations in Canada, the United Kingdom, the Republic of Ireland and throughout other parts of the world as a corporate member of Lloyd's, as well as in Brazil and Colombia, primarily through joint ventures. Because these operations are conducted in local currencies other than the U.S. dollar, the Company is subject to changes in foreign currency exchange rates. For the years ended December 31, 2017, 2016 and 2015, changes in foreign currency exchange rates impacted reported line items in the statement of income by insignificant amounts. The impact of these changes was not material to the Company's net income or segment income for the periods reported.

**Revenues**

*Earned Premiums*

Earned premiums in 2017 were \$25.68 billion, \$1.15 billion or 5% higher than in 2016. In Business Insurance, earned premiums in 2017 increased by 2% over 2016. In Bond & Specialty Insurance, earned premiums in 2017 increased by 2% over 2016. In Personal Insurance, earned premiums in 2017 increased by 10% over 2016. Earned premiums in 2016 were \$24.53 billion, \$660 million or 3% higher than in 2015. In Business Insurance, earned premiums in 2016 increased by 1% over 2015. In Bond & Specialty Insurance, earned premiums in 2016 were comparable to 2015. In Personal Insurance, earned premiums in 2016 increased by 6% over 2015. Factors contributing to the changes in earned premiums in each segment in 2017 and 2016 compared with the respective prior year are discussed in more detail in the segment discussions that follow.

Table of Contents*Net Investment Income*

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

<b>(for the year ended December 31, in millions)</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
Average investments(1)	\$ 71,867	\$ 70,246	\$ 70,627
Pre-tax net investment income	2,397	2,302	2,379
After-tax net investment income	1,872	1,846	1,905
Average pre-tax yield(2)	3.3%	3.3%	3.4%
Average after-tax yield(2)	2.6%	2.6%	2.7%

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

Net investment income in 2017 was \$2.40 billion, \$95 million or 4% higher than in 2016. Net investment income from fixed maturity investments in 2017 was \$1.89 billion, \$86 million lower than in 2016. The decrease primarily resulted from lower long-term reinvestment rates available in the market, partially offset by the impact of a slightly higher average level of fixed maturity investments. Net investment income from short-term securities in 2017 was \$62 million, \$33 million higher than in 2016, primarily due to higher short-term interest rates and a higher average level of short-term investments. Net investment income generated by non-fixed maturity investments in 2017 was \$478 million, \$148 million higher than in 2016, primarily due to higher returns from private equity limited partnerships.

Net investment income in 2016 was \$2.30 billion, \$77 million or 3% lower than in 2015. Net investment income from fixed maturity investments in 2016 was \$1.98 billion, \$110 million lower than in 2015. The decrease in net investment income from fixed maturity investments primarily resulted from lower long-term reinvestment rates available in the market and a modestly lower amount of fixed income investments that were impacted by the Company's \$524 million payment related to the settlement of the PPG Industries, Inc. litigation in the second quarter of 2016. Net investment income from short-term securities in 2016 was \$29 million, \$17 million higher than in 2015, primarily due to higher short-term interest rates. Net investment income generated by non-fixed maturity investments in 2016 was \$330 million, \$13 million higher than in 2015, primarily due to higher returns from private equity limited partnerships, partially offset by lower returns from real estate partnerships.

*Fee Income*

The National Accounts market in Business Insurance is the primary source of the Company's fee-based business. Fee income is described in more detail in the Business Insurance discussion that follows.

*Net Realized Investment Gains*

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

<b>(for the year ended December 31, in millions)</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
<b>Net Realized Investment Gains</b>			
Other-than-temporary impairment losses	\$ (14)	\$ (29)	\$ (52)
Other net realized investment gains	230	97	55
<b>Net realized investment gains</b>	<b>\$ 216</b>	<b>\$ 68</b>	<b>\$ 3</b>

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*Other Net Realized Investment Gains*

Other net realized investment gains in 2017 included \$236 million of net realized investment gains related to equity securities, \$10 million of net realized investment gains from real estate sales, \$4 million of net realized gains related to fixed maturity investments and \$20 million of net realized investment losses related to other investments.

Other net realized investment gains in 2016 included \$59 million of net realized gains related to fixed maturity investments, \$14 million of net realized investment gains related to equity securities, \$7 million of net realized investment gains from real estate sales and \$17 million of net realized investment gains related to other investments.

Other net realized investment gains in 2015 included \$81 million of net realized gains related to fixed maturity investments, \$6 million of net realized investment gains related to equity securities, \$2 million of net realized investment gains from real estate sales and \$34 million of net realized investment losses related to other investments. The net realized investment losses related to other investments included \$26 million of realized foreign exchange translation losses incurred in connection with the Company's increased ownership of Travelers Participações em Seguros Brasil S.A.

*Other Revenues*

Other revenues in all years presented included installment premium charges. Other revenues in 2017 also included revenues from Simply Business, which was acquired in August 2017. Other revenues in 2017 and 2016 also included gains related to the settlement of reinsurance disputes (discussed in more detail in note 16 of notes to the consolidated financial statements). Other revenues in 2016 also included proceeds from the favorable settlement of a claims-related legal matter.

**Claims and Expenses**

*Claims and Claim Adjustment Expenses*

Claims and claim adjustment expenses in 2017 were \$17.47 billion, \$2.40 billion or 16% higher than in 2016, primarily reflecting the impacts of (i) significantly higher catastrophe losses, (ii) higher volumes of insured exposures, (iii) loss cost trends, (iv) lower net favorable prior year reserve development, (v) higher non-catastrophe fire-related losses in Business Insurance and (vi) higher non-catastrophe weather-related losses in Personal Insurance. Catastrophe losses in 2017 primarily resulted from wildfires in California, Hurricanes Harvey, Irma and Maria, and several winter, wind and hail storms throughout the United States.

Claims and claim adjustment expenses in 2016 were \$15.07 billion, \$1.35 billion or 10% higher than in 2015, primarily reflecting the impacts of (i) higher volumes of insured exposures, (ii) loss cost trends, (iii) higher catastrophe losses, (iv) lower net favorable prior year reserve development and (v) higher loss estimates in the personal automobile product line for bodily injury liability coverages, partially offset by (vi) lower non-catastrophe fire-related losses and other loss activity in Business Insurance. Catastrophe losses in 2016 primarily resulted from Hurricane Matthew, wind and hail storms in several regions of the United States, flooding in the Southeast region of the United States, wildfires in Canada and Tennessee, and winter storms in the eastern United States. Catastrophe losses in 2015 primarily resulted from wildfires in California, and several winter, wind and hail storms throughout the United States.

Factors contributing to net favorable prior year reserve development during the years ended December 31, 2017, 2016 and 2015 are discussed in more detail in note 7 of notes to the consolidated financial statements.

Table of Contents*Significant Catastrophe Losses*

The Company defines a "catastrophe" as an event that:

is designated a catastrophe by internationally recognized organizations that track and report on insured losses resulting from catastrophic events, such as Property Claim Services (PCS) for events in the United States and Canada; and

the Company's estimates of its ultimate losses before reinsurance and taxes exceed a pre-established dollar threshold.

The Company's threshold for disclosing catastrophes is primarily determined at the reportable segment level. If a threshold for one segment or a combination thereof is exceeded and the other segments have losses from the same event, losses from the event are identified as catastrophe losses in the segment results and for the consolidated results of the Company. Additionally, an aggregate threshold is applied for International business across all reportable segments. The threshold for 2017 ranged from approximately \$17 million to \$30 million of losses before reinsurance and taxes.

The following table presents the amount of losses recorded by the Company for significant catastrophes that occurred in 2017, 2016 and 2015, the amount of net unfavorable (favorable) prior year reserve development recognized in 2017 and 2016 for catastrophes that occurred in 2016 and 2015, and the estimate of ultimate losses for those catastrophes at December 31, 2017, 2016 and 2015. For purposes of the table, a significant catastrophe is an event for which the Company estimates its ultimate losses will be \$100 million or more after reinsurance and before taxes.

(in millions, pre-tax and net of reinsurance)	Losses Incurred / Unfavorable (Favorable) Prior Year Reserve Development for the Year Ended December 31,			Estimated Ultimate Losses at December 31,		
	2017	2016	2015	2017	2016	2015
<b>2015</b>						
PCS Serial Number:						
68 Winter storm	\$ 3	\$ (11)	\$ 140	\$ 132	\$ 129	\$ 140
<b>2016</b>						
PCS Serial Number:						
21 Severe wind and hail storms	(2)	150	n/a	148	150	n/a
25 Severe wind and hail storms	10	168	n/a	178	168	n/a
<b>2017</b>						
PCS Serial Number:						
22 Severe wind and hail storms	111	n/a	n/a	111	n/a	n/a
32 Severe wind and hail storms	210	n/a	n/a	210	n/a	n/a
43 Hurricane Harvey	254	n/a	n/a	254	n/a	n/a
44 Hurricane Irma	187	n/a	n/a	187	n/a	n/a
48 California wildfire Tubbs fire	507	n/a	n/a	507	n/a	n/a

n/a: not applicable.

*Amortization of Deferred Acquisition Costs*

Amortization of deferred acquisition costs in 2017 was \$4.17 billion, \$181 million or 5% higher than in 2016. Amortization of deferred acquisition costs in 2016 was \$3.99 billion, \$100 million or 3% higher than in 2015. Amortization of deferred acquisition costs is discussed in more detail in the segment discussions that follow.

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*General and Administrative Expenses*

General and administrative expenses in 2017 were \$4.17 billion, comparable with 2016. General and administrative expenses in 2016 were \$4.15 billion, \$60 million or 1% higher than in 2015. General and administrative expenses are discussed in more detail in the segment discussions that follow.

*Interest Expense*

Interest expense in 2017, 2016 and 2015 was \$369 million, \$363 million and \$373 million, respectively.

*Income Tax Expense*

Income tax expense in 2017 was \$674 million, \$365 million or 35% lower than in 2016, primarily reflecting the impact of the \$1.32 billion decrease in income before income taxes in 2017 and the \$39 million reduction in income tax expense resulting from the resolution of prior year tax matters, partially offset by the net charge of \$129 million as part of the TCJA described above. Income tax expense in 2016 was \$1.04 billion, \$262 million or 20% lower than in 2015, primarily reflecting the impact of the \$687 million decrease in income before income taxes in 2016.

The Company's effective tax rate was 25%, 26% and 27% in 2017, 2016 and 2015, respectively. The effective tax rates in all years were lower than the statutory rate of 35% primarily due to the impact of tax-exempt investment income on the calculation of the Company's income tax provision. In addition, the effective tax rate in 2017 was increased by the net charge related to TCJA described above and was reduced by the impact of the resolution of prior year tax matters discussed above.

**Combined Ratio**

The combined ratio of 97.9% in 2017 was 5.9 points higher than the combined ratio of 92.0% in 2016.

The loss and loss adjustment expense ratio of 67.2% in 2017 was 6.7 points higher than the loss and loss adjustment expense ratio of 60.5% in 2016. Catastrophe losses accounted for 7.6 points and 3.6 points of the 2017 and 2016 loss and loss adjustment expense ratios, respectively. Net favorable prior year reserve development in 2017 and 2016 provided 2.3 points and 3.2 points of benefit, respectively, to the loss and loss adjustment expense ratio. The loss and loss adjustment expense ratio excluding catastrophe losses and prior year reserve development ("underlying loss and loss adjustment expense ratio") in 2017 was 1.8 points higher than the 2016 ratio on the same basis, primarily reflecting (i) loss cost trends that modestly exceeded earned pricing in Business Insurance, (ii) higher non-catastrophe fire-related losses in Business Insurance and (iii) higher non-catastrophe weather-related losses in Personal Insurance.

The underwriting expense ratio of 30.7% in 2017 was 0.8 points lower than the underwriting expense ratio of 31.5% in 2016.

The combined ratio of 92.0% in 2016 was 3.7 points higher than the combined ratio of 88.3% in 2015.

The loss and loss adjustment expense ratio of 60.5% in 2016 was 3.9 points higher than the loss and loss adjustment expense ratio of 56.6% in the same period of 2015. Catastrophe losses accounted for 3.6 points and 2.1 points of the 2016 and 2015 loss and loss adjustment expense ratios, respectively. Net favorable prior year reserve development in 2016 and 2015 provided 3.2 points and 3.9 points of benefit, respectively, to the loss and loss adjustment expense ratio. The underlying loss and loss adjustment expense ratio in 2016 was 1.7 points higher than the 2015 ratio on the same basis, primarily reflecting (i) higher loss estimates in the personal automobile product line for bodily injury liability

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coverages and (ii) the impact of loss cost trends that modestly exceeded earned pricing in Business Insurance, partially offset by (iii) lower non-catastrophe fire-related losses and other loss activity in Business Insurance.

The underwriting expense ratio of 31.5% was 0.2 points lower than the underwriting expense ratio of 31.7% in 2015.

### Written Premiums

Consolidated gross and net written premiums were as follows:

(for the year ended December 31, in millions)	Gross Written Premiums		
	2017	2016	2015
Business Insurance	\$ 15,473	\$ 15,232	\$ 15,218
Bond & Specialty Insurance	2,480	2,372	2,367
Personal Insurance	9,695	8,891	8,197
<b>Total</b>	<b>\$ 27,648</b>	<b>\$ 26,495</b>	<b>\$ 25,782</b>

(for the year ended December 31, in millions)	Net Written Premiums		
	2017	2016	2015
Business Insurance	\$ 14,270	\$ 13,900	\$ 13,774
Bond & Specialty Insurance	2,359	2,271	2,273
Personal Insurance	9,590	8,787	8,074
<b>Total</b>	<b>\$ 26,219</b>	<b>\$ 24,958</b>	<b>\$ 24,121</b>

Gross and net written premiums in 2017 increased by 4% and 5%, respectively, over 2016. Gross and net written premiums in 2016 both increased by 3% over 2015. Factors contributing to the changes in gross and net written premiums in each segment in 2017 and 2016 as compared with the respective prior year are discussed in more detail in the segment discussions that follow.

### RESULTS OF OPERATIONS BY SEGMENT

#### Business Insurance

Results of Business Insurance were as follows:

(for the year ended December 31, in millions)	2017	2016	2015
<b>Revenues:</b>			
Earned premiums	\$ 14,146	\$ 13,855	\$ 13,698
Net investment income	1,786	1,701	1,757
Fee income	430	442	445
Other revenues	69	168	17
<b>Total revenues</b>	<b>\$ 16,431</b>	<b>\$ 16,166</b>	<b>\$ 15,917</b>
<b>Total claims and expenses</b>	<b>\$ 14,370</b>	<b>\$ 13,528</b>	<b>\$ 13,096</b>

**Segment income**                                    \$    **1,613**    \$    1,982    \$    2,077

Loss and loss adjustment expense ratio        **65.9%**        61.7%        59.9%

Underwriting expense ratio                      **31.9**                      32.4                      32.1

**Combined ratio**                                    **97.8%**                      94.1%                      92.0%

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*Overview*

Segment income in 2017 was \$1.61 billion, \$369 million or 19% lower than segment income of \$1.98 billion in 2016, primarily reflecting the pre-tax impacts of (i) significantly higher catastrophe losses, (ii) lower other income due to a favorable settlement of a reinsurance dispute in 2016 and (iii) lower underlying underwriting margins, partially offset by (iv) higher net investment income. Catastrophe losses in 2017 and 2016 were \$858 million and \$463 million, respectively. Net favorable prior year reserve development in 2017 and 2016 was \$439 million and \$424 million, respectively. The lower underlying underwriting margins primarily resulted from the impacts of (i) loss cost trends that modestly exceeded earned pricing and (ii) higher non-catastrophe fire-related losses. Partially offsetting this net pre-tax decrease in segment income was a related decrease in income tax expense. In addition, income tax expense in 2017 was reduced by \$15 million as a result of the resolution of prior year tax matters.

Segment income in 2016 was \$1.98 billion, \$95 million or 5% lower than segment income of \$2.08 billion in 2015, primarily reflecting the pre-tax impacts of (i) higher catastrophe losses, (ii) lower underlying underwriting margins and (iii) lower net investment income, partially offset by (iv) higher other revenues and (v) higher net favorable prior year reserve development. Catastrophe losses in 2016 and 2015 were \$463 million and \$245 million, respectively. Net favorable prior year reserve development in 2016 and 2015 was \$424 million and \$332 million, respectively. The lower underlying underwriting margins primarily resulted from (i) the impact of loss cost trends that modestly exceeded earned pricing and (ii) higher general and administrative expenses, partially offset by (iii) lower non-catastrophe fire-related losses and other loss activity. Partially offsetting this net pre-tax decrease in segment income was a related decrease in income tax expense.

**Revenues**

*Earned Premiums*

Earned premiums of \$14.15 billion in 2017 were \$291 million or 2% higher than in 2016. Earned premiums of \$13.86 billion in 2016 were \$157 million or 1% higher than in 2015. The increase in earned premiums in both 2017 and 2016 reflected increases in net written premiums over the preceding twelve months.

*Net Investment Income*

Net investment income in 2017 was \$1.79 billion, \$85 million or 5% higher than in 2016. Net investment income in 2016 was \$1.70 billion, \$56 million or 3% lower than in 2015. Refer to the "Net Investment Income" section of the "Consolidated Results of Operations" discussion for a description of the factors contributing to the changes in the Company's consolidated net investment income in 2017 and 2016 compared with the respective prior years. In addition, refer to note 2 of notes to the consolidated financial statements for a discussion of the Company's net investment income allocation methodology.

*Fee Income*

National Accounts is the primary source of fee income due to its service businesses, which include claim and loss prevention services to large companies that choose to self-insure a portion of their insurance risks, as well as claims and policy management services to workers' compensation residual market pools. Fee income in 2017 was \$430 million, \$12 million or 3% lower than in 2016, primarily reflecting lower serviced premium volume due to the depopulation of workers' compensation residual market pools. Fee income in 2016 was \$442 million, \$3 million or 1% lower than in 2015.



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*Other Revenues*

Other revenues in all years presented included installment premium charges. Other revenues in 2017 included revenues from Simply Business, which was acquired in August 2017. Other revenues in 2017 and 2016 also included gains related to the settlement of reinsurance disputes. Additionally, other revenues in 2016 included proceeds from the favorable settlement of a claims-related legal matter.

**Claims and Expenses**

*Claims and Claim Adjustment Expenses*

Claims and claim adjustment expenses in 2017 were \$9.52 billion, \$768 million or 9% higher than in 2016, primarily reflecting the impacts of (i) significantly higher catastrophe losses, (ii) loss cost trends, (iii) higher volumes of insured exposures and (iv) higher non-catastrophe fire-related losses. Claims and claim adjustment expenses in 2016 were \$8.75 billion, \$344 million or 4% higher than in 2015, primarily reflecting the impacts of (i) loss cost trends and (ii) higher catastrophe losses, partially offset by (iii) lower non-catastrophe fire-related losses and other loss activity.

Factors contributing to net favorable prior year reserve development during the years ended December 31, 2017, 2016 and 2015 are discussed in more detail in note 7 of notes to the consolidated financial statements.

*Amortization of Deferred Acquisition Costs*

Amortization of deferred acquisition costs in 2017 was \$2.29 billion, \$65 million or 3% higher than in 2016. Amortization of deferred acquisition costs in 2016 was \$2.22 billion, \$39 million or 2% higher than in 2015. The increases in both 2017 and 2016 were generally consistent with the increases in earned premiums.

*General and Administrative Expenses*

General and administrative expenses in 2017 were \$2.56 billion, which were comparable with 2016. General and administrative expenses in 2016 were \$2.55 billion, \$49 million or 2% higher than in 2015, primarily reflecting higher employee and technology related expenses.

*Income Tax Expense*

Income tax expense in 2017 was \$448 million, \$208 million or 32% lower than in 2016, primarily reflecting the impact of the \$577 million decrease in income before income taxes in 2017 and the \$15 million reduction in income tax expense resulting from the resolution of prior year tax matters. Income tax expense in 2016 was \$656 million, \$88 million or 12% lower than in 2015, primarily reflecting the \$183 million decrease in income before income taxes in 2016.

**Combined Ratio**

The combined ratio of 97.8% in 2017 was 3.7 points higher than the combined ratio of 94.1% in 2016.

The loss and loss adjustment expense ratio of 65.9% in 2017 was 4.2 points higher than the loss and loss adjustment expense ratio of 61.7% in 2016. Catastrophe losses in 2017 and 2016 accounted for 6.0 points and 3.4 points of the loss and loss adjustment expense ratio, respectively. Net favorable prior year reserve development provided 3.1 points of benefit to the loss and loss adjustment expense ratio in both 2017 and 2016. The underlying loss and loss adjustment expense ratio in 2017 was 1.6 points higher than the 2016 ratio on the same basis, primarily reflecting the impacts of (i) loss cost trends that modestly exceeded earned pricing and (ii) higher non-catastrophe fire-related losses.

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The underwriting expense ratio of 31.9% in 2017 was 0.5 points lower than the underwriting expense ratio of 32.4% in 2016.

The combined ratio of 94.1% in 2016 was 2.1 points higher than the combined ratio of 92.0% in 2015.

The loss and loss adjustment expense ratio of 61.7% in 2016 was 1.8 points higher than the loss and loss adjustment expense ratio of 59.9% in 2015. Catastrophe losses in 2016 and 2015 accounted for 3.4 points and 1.8 points, respectively, of the loss and loss adjustment expense ratio. Net favorable prior year reserve development in 2016 and 2015 provided 3.1 points and 2.4 points of benefit, respectively, to the loss and loss adjustment expense ratio. The underlying loss and loss adjustment expense ratio in 2016 was 0.9 points higher than the 2015 ratio on the same basis.

The underwriting expense ratio of 32.4% in 2016 was 0.3 points higher than the underwriting expense ratio of 32.1% in 2015.

**Written Premiums**

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

(for the year ended December 31, in millions)	Gross Written Premiums		
	2017	2016	2015
<b>Domestic:</b>			
Select Accounts	\$ 2,817	\$ 2,792	\$ 2,773
Middle Market	8,051	7,691	7,533
National Accounts	1,556	1,683	1,725
National Property and Other	1,902	1,989	2,015
<b>Total Domestic</b>	<b>14,326</b>	<b>14,155</b>	<b>14,046</b>
International	1,147	1,077	1,172
<b>Total Business Insurance</b>	<b>\$ 15,473</b>	<b>\$ 15,232</b>	<b>\$ 15,218</b>

(for the year ended December 31, in millions)	Net Written Premiums		
	2017	2016	2015
<b>Domestic:</b>			
Select Accounts	\$ 2,800	\$ 2,729	\$ 2,716
Middle Market	7,756	7,379	7,186
National Accounts	1,010	1,058	1,048
National Property and Other	1,691	1,779	1,791
<b>Total Domestic</b>	<b>13,257</b>	<b>12,945</b>	<b>12,741</b>
International	1,013	955	1,033
<b>Total Business Insurance</b>	<b>\$ 14,270</b>	<b>\$ 13,900</b>	<b>\$ 13,774</b>

Gross written premiums in 2017 increased by 2% over 2016. Gross written premiums in 2016 were comparable with 2015. Net written premiums in 2017 and 2016 increased by 3% and 1%, respectively, over the respective prior year amounts.

*Select Accounts.* Net written premiums of \$2.80 billion in 2017 increased by 3% over 2016. Business retention rates remained strong in 2017. Renewal premium changes in 2017 remained positive but were lower than in 2016. New business premiums in 2017 increased over 2016. Net written premiums of \$2.73 billion in 2016 were comparable with 2015. Business retention rates remained strong



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in 2016. Renewal premium changes in 2016 remained positive but were lower than in 2015. New business premiums in 2016 increased over 2015.

*Middle Market.* Net written premiums of \$7.76 billion in 2017 increased by 5% over 2016. Business retention rates remained strong in 2017. Renewal premium changes in 2017 remained positive and were higher than in 2016. New business premiums in 2017 increased slightly over 2016. Net written premiums of \$7.38 billion in 2016 increased by 3% over 2015. Business retention rates remained strong in 2016. Renewal premium changes in 2016 remained positive but were slightly lower than in 2015. New business premiums in 2016 increased over 2015.

*National Accounts.* Net written premiums of \$1.01 billion in 2017 decreased by 5% from 2016. Business retention rates remained strong in 2017. Renewal premium changes in 2017 remained slightly positive but were lower than in 2016. New business premiums in 2017 decreased from 2016. Net written premiums of \$1.06 billion in 2016 increased by 1% over 2015. Business retention rates remained strong in 2016. Renewal premium changes in 2016 remained positive but were lower than in 2015. New business premiums in 2016 increased over 2015.

*National Property and Other.* Net written premiums of \$1.69 billion in 2017 decreased by 5% from 2016. Business retention rates in 2017 declined from 2016. Renewal premium changes in 2017 remained positive and were higher than in 2016. New business premiums in 2017 decreased from 2016. Net written premiums of \$1.78 billion in 2016 decreased by 1% from 2015. Business retention rates remained strong in 2016. Renewal premium changes in 2016 remained slightly positive but were lower than in 2015. New business premiums in 2016 decreased from 2015.

*International.* Net written premiums of \$1.01 billion in 2017 increased by 6% over 2016, driven by the Company's European operations, including Lloyd's, as well as premium growth in Canada. Net written premiums of \$955 million in 2016 decreased by 8% from 2015, primarily driven by the impacts of changes in foreign currency exchange rates and lower premium volume in the Company's European operations, including Lloyd's.

**Bond & Specialty Insurance**

Results of Bond & Specialty Insurance were as follows:

(for the year ended December 31, in millions)	2017	2016	2015
<b>Revenues:</b>			
Earned premiums	\$ 2,307	\$ 2,260	\$ 2,267
Net investment income	228	239	254
Other revenues	24	21	22
<b>Total revenues</b>	<b>\$ 2,559</b>	<b>\$ 2,520</b>	<b>\$ 2,543</b>
<b>Total claims and expenses</b>	<b>\$ 1,795</b>	<b>\$ 1,499</b>	<b>\$ 1,577</b>
<b>Segment income</b>	<b>\$ 556</b>	<b>\$ 712</b>	<b>\$ 683</b>
Loss and loss adjustment expense ratio	38.6%	27.4%	31.3%
Underwriting expense ratio	38.8	38.3	37.8
<b>Combined ratio</b>	<b>77.4%</b>	<b>65.7%</b>	<b>69.1%</b>

*Overview*

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Segment income in 2017 was \$556 million, \$156 million or 22% lower than segment income of \$712 million in 2016, primarily reflecting the pre-tax impacts of (i) lower net favorable prior year reserve development and (ii) lower underlying underwriting margins. Net favorable prior year reserve

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development in 2017 and 2016 was \$140 million and \$350 million, respectively. Catastrophe losses in both 2017 and 2016 were \$6 million. The lower underlying underwriting margins primarily reflected a higher level of international surety losses. Partially offsetting this net pre-tax decrease in segment income was a related decrease in income tax expense. In addition, income tax expense in 2017 was reduced by \$17 million as a result of the resolution of prior year tax matters.

Segment income in 2016 was \$712 million, \$29 million or 4% higher than segment income of \$683 million in 2015, primarily reflecting the pre-tax impact of (i) higher net favorable prior year reserve development, partially offset by (ii) lower net investment income. Net favorable prior year reserve development in 2016 and 2015 was \$350 million and \$281 million, respectively. Catastrophe losses in 2016 and 2015 were \$6 million and \$3 million, respectively. Partially offsetting this net pre-tax increase in segment income was a related increase in income tax expense.

**Revenues**

*Earned Premiums*

Earned premiums in 2017 were \$2.31 billion, \$47 million or 2% higher than in 2016, primarily reflecting an increase in net written premiums over the preceding twelve months. Earned premiums of \$2.26 billion in 2016 were comparable with 2015.

*Net Investment Income*

Net investment income in 2017 was \$228 million, \$11 million or 5% lower than in 2016. Net investment income in 2016 was \$239 million, \$15 million or 6% lower than in 2015. Included in Bond & Specialty Insurance are certain legal entities whose invested assets and related net investment income are reported exclusively in this segment and not allocated among all business segments. As a result, reported net investment income in Bond & Specialty Insurance reflects a significantly smaller proportion of allocated net investment income, including that from the Company's non-fixed maturity investments that experienced an increase in investment income in 2017 and 2016. Refer to the "Net Investment Income" section of the "Consolidated Results of Operations" discussion for a description of the factors contributing to the changes in the Company's consolidated net investment income in 2017 and 2016 compared with the respective prior years. In addition, refer to note 2 of notes to the consolidated financial statements for a discussion of the Company's net investment income allocation methodology.

**Claims and Expenses**

*Claims and Claim Adjustment Expenses*

Claims and claim adjustment expenses in 2017 were \$899 million, \$266 million or 42% higher than in 2016, primarily reflecting (i) lower net favorable prior year reserve development and (ii) a higher level of international surety losses. Claims and claim adjustment expenses in 2016 were \$633 million, \$86 million or 12% lower than in 2015, primarily reflecting higher net favorable prior year reserve development.

Factors contributing to net favorable prior year reserve development during the years ended December 31, 2017, 2016 and 2015 are discussed in more detail in note 7 of notes to the consolidated financial statements.

*Amortization of Deferred Acquisition Costs*

Amortization of deferred acquisition costs in 2017 was \$432 million, \$11 million or 3% higher than in 2016, generally consistent with the increase in earned premiums. Amortization of deferred acquisition costs in 2016 was \$421 million, \$3 million or 1% higher than in 2015.

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*General and Administrative Expenses*

General and administrative expenses in 2017 were \$464 million, \$19 million or 4% higher than in 2016, primarily reflecting higher employee and technology related expenses. General and administrative expenses in 2016 were \$445 million, \$5 million or 1% higher than in 2015.

*Income Tax Expense*

Income tax expense in 2017 was \$208 million, \$101 million or 33% lower than in 2016, primarily reflecting the impact of the \$257 million decrease in income before income taxes in 2017 and the \$17 million reduction in income tax expense resulting from the resolution of prior year tax matters. Income tax expense in 2016 was \$309 million, \$26 million or 9% higher than in 2015, primarily reflecting the impact of the \$55 million increase in income before income taxes in 2016.

**Combined Ratio**

The combined ratio of 77.4% in 2017 was 11.7 points higher than the combined ratio of 65.7% in 2016.

The loss and loss adjustment expense ratio of 38.6% in 2017 was 11.2 points higher than the loss and loss adjustment expense ratio of 27.4% in 2016. Net favorable prior year reserve development in 2017 and 2016 provided 6.1 points and 15.5 points of benefit, respectively, to the loss and loss adjustment expense ratio. Catastrophe losses in 2017 and 2016 accounted for 0.3 points of the loss and loss adjustment expense ratio in each year. The underlying loss and loss adjustment expense ratio in 2017 was 1.8 points higher than the 2016 ratio on the same basis, primarily reflecting the impact of a higher level of international surety losses.

The underwriting expense ratio of 38.8% in 2017 was 0.5 points higher than the underwriting expense ratio of 38.3% in 2016.

The combined ratio of 65.7% in 2016 was 3.4 points lower than the combined ratio of 69.1% in 2015.

The loss and loss adjustment expense ratio of 27.4% in 2016 was 3.9 points lower than the loss and loss adjustment expense ratio of 31.3% in 2015. Net favorable prior year reserve development in 2016 and 2015 provided 15.5 points and 12.4 points of benefit, respectively, to the loss and loss adjustment expense ratio. Catastrophe losses in 2016 and 2015 accounted for 0.3 points and 0.1 points, respectively, of the loss and loss adjustment expense ratio. The underlying loss and loss adjustment expense ratio in 2016 was 1.0 points lower than the 2015 ratio on the same basis.

The underwriting expense ratio of 38.3% in 2016 was 0.5 points higher than the underwriting expense ratio of 37.8% in 2015.

Table of Contents**Written Premiums**

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

(for the year ended December 31, in millions)	Gross Written Premiums		
	2017	2016	2015
<b>Domestic:</b>			
Management Liability	\$ 1,422	\$ 1,387	\$ 1,355
Surety	844	796	798
<b>Total Domestic</b>	<b>2,266</b>	2,183	2,153
International	214	189	214
<b>Total Bond &amp; Specialty Insurance</b>	<b>\$ 2,480</b>	\$ 2,372	\$ 2,367

(for the year ended December 31, in millions)	Net Written Premiums		
	2017	2016	2015
<b>Domestic:</b>			
Management Liability	\$ 1,367	\$ 1,342	\$ 1,326
Surety	793	757	755
<b>Total Domestic</b>	<b>2,160</b>	2,099	2,081
International	199	172	192
<b>Total Bond &amp; Specialty Insurance</b>	<b>\$ 2,359</b>	\$ 2,271	\$ 2,273

Gross and net written premiums in 2017 increased by 5% and 4%, respectively, over 2016. Gross and net written premiums in 2016 were comparable with 2015.

*Domestic.* Net written premiums of \$2.16 billion in 2017 increased by 3% over 2016. Excluding the surety line of business, for which the following are not relevant measures, business retention rates remained strong in 2017. Renewal premium changes in 2017 remained positive and were comparable with 2016. New business premiums in 2017 increased over 2016. Net written premiums in 2016 were \$2.10 billion, \$18 million or 1% higher than in 2015. Excluding the surety line of business, for which the following are not relevant measures, business retention rates remained strong in 2016. Renewal premium changes in 2016 remained positive but were lower than in 2015. New business premiums in 2016 increased over 2015.

*International.* Net written premiums of \$199 million in 2017 increased by 16% over 2016, driven by increases in the United Kingdom and Canada. Net written premiums in 2016 were \$172 million, \$20 million or 10% lower than in 2015, primarily driven by the impacts of changes in foreign currency exchange rates.



Table of Contents**Personal Insurance**

Results of Personal Insurance were as follows:

(for the year ended December 31, in millions)	2017	2016	2015
<b>Revenues:</b>			
Earned premiums	\$ 9,230	\$ 8,419	\$ 7,909
Net investment income	383	362	368
Fee income	17	16	15
Other revenues	60	63	54
<b>Total revenues</b>	<b>\$ 9,690</b>	<b>\$ 8,860</b>	<b>\$ 8,346</b>
<b>Total claims and expenses</b>	<b>\$ 9,606</b>	<b>\$ 8,151</b>	<b>\$ 6,998</b>
<b>Segment income</b>	<b>\$ 128</b>	<b>\$ 517</b>	<b>\$ 932</b>
Loss and loss adjustment expense ratio	76.3%	67.5%	58.1%
Underwriting expense ratio	26.8	28.3	29.3
<b>Combined ratio</b>	<b>103.1%</b>	<b>95.8%</b>	<b>87.4%</b>

*Overview*

Segment income in 2017 was \$128 million, \$389 million or 75% lower than segment income of \$517 million in 2016, primarily reflecting the pre-tax impacts of (i) significantly higher catastrophe losses, partially offset by (ii) higher net investment income, (iii) higher underlying underwriting margins and (iv) net favorable prior year reserve development as compared to net unfavorable prior year reserve development in 2016. Catastrophe losses in 2017 and 2016 were \$1.09 billion and \$408 million, respectively. Net favorable prior year reserve development in 2017 was \$13 million, compared with net unfavorable prior year reserve development of \$3 million in 2016. The higher underlying underwriting margins primarily resulted from the impacts of (i) increased business volumes and (ii) earned pricing that modestly exceeded loss cost trends, partially offset by (iii) higher non-catastrophe weather-related losses. Partially offsetting this net pre-tax decrease in segment income was a related decrease in income tax expense. In addition, income tax expense in 2017 was reduced by \$7 million as a result of the resolution of prior year tax matters.

Segment income in 2016 was \$517 million, \$415 million or 45% lower than segment income of \$932 million in 2015, primarily reflecting the pre-tax impacts of (i) net unfavorable prior year reserve development as compared to net favorable prior year reserve development in 2015, (ii) lower underlying underwriting margins and (iii) higher catastrophe losses. Net unfavorable prior year reserve development in 2016 was \$3 million, compared with net favorable prior year reserve development of \$328 million in 2015. Catastrophe losses in 2016 and 2015 were \$408 million and \$266 million, respectively. The lower underlying underwriting margins primarily resulted from higher loss estimates in the Automobile product line for bodily injury liability coverages. Partially offsetting this net pre-tax decrease in segment income was a related decrease in income tax expense.

**Revenues***Earned Premiums*

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Earned premiums in 2017 were \$9.23 billion, \$811 million or 10% higher than in 2016. Earned premiums in 2016 were \$8.42 billion, \$510 million or 6% higher than in 2015. The increase in earned premiums in both 2017 and 2016 reflected increases in net written premiums over the preceding twelve months.

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*Net Investment Income*

Net investment income in 2017 was \$383 million, \$21 million or 6% higher than in 2016. Net investment income in 2016 was \$362 million, \$6 million or 2% lower than in 2015. Refer to the "Net Investment Income" section of "Consolidated Results of Operations" for a discussion of the changes in the Company's net investment income in 2017 and 2016 as compared with the respective prior year. In addition, refer to note 2 of notes to the consolidated financial statements for a discussion of the Company's net investment income allocation methodology.

*Other Revenues*

Other revenues in all years presented included installment premium charges.

**Claims and Expenses**

*Claims and Claim Adjustment Expenses*

Claims and claim adjustment expenses in 2017 were \$7.05 billion, \$1.36 billion or 24% higher than in 2016, primarily reflecting the impacts of (i) significantly higher catastrophe losses, (ii) higher volumes of insured exposures, (iii) loss cost trends and (iv) higher non-catastrophe weather-related losses, partially offset by (v) net favorable prior year reserve development as compared with net unfavorable prior year reserve development in 2016. Claims and claim adjustment expenses in 2016 were \$5.68 billion, \$1.09 billion or 24% higher than in 2015, primarily reflecting (i) higher volumes of insured exposures, (ii) net unfavorable prior year reserve development as compared to net favorable prior year reserve development in 2015, (iii) higher catastrophe losses, (iv) higher loss estimates in the Automobile product line for bodily injury liability coverages and (v) the impact of loss cost trends.

Net prior year reserve development in 2017 and 2016 was not significant. Factors contributing to prior year reserve development during the year ended December 31, 2015 are discussed in more detail in note 7 of notes to the consolidated financial statements.

*Amortization of Deferred Acquisition Costs*

Amortization of deferred acquisition costs in 2017 was \$1.45 billion, \$105 million or 8% higher than in 2016. Amortization of deferred acquisition costs in 2016 was \$1.34 billion, \$58 million or 5% higher than in 2015. The increases in both 2017 and 2016 were generally consistent with the increases in earned premiums.

*General and Administrative Expenses*

General and administrative expenses in 2017 were \$1.11 billion, \$13 million or 1% lower than in 2016. General and administrative expenses of \$1.12 billion in 2016 were comparable with 2015.

*Income Tax Expense (Benefit)*

The income tax benefit in 2017 was \$(44) million, compared with income tax expense of \$192 million in 2016, primarily reflecting the impact of the \$625 million decrease in income before income taxes in 2017, and the \$7 million reduction in income tax expense resulting from the resolution of prior year tax matters. Income tax expense in 2016 was \$192 million, \$224 million or 54% lower than in 2015, primarily reflecting the impact of the \$639 million decrease in income before income taxes in 2016. The level of income tax expense (benefit) in all years reflected the impact of tax-exempt investment income on the calculation of the Company's tax provision.

Table of Contents**Combined Ratio**

The combined ratio of 103.1% in 2017 was 7.3 points higher than the combined ratio of 95.8% in 2016.

The loss and loss adjustment expense ratio of 76.3% in 2017 was 8.8 points higher than the loss and loss adjustment expense ratio of 67.5% in 2016. Catastrophe losses accounted for 11.7 points and 4.9 points of the loss and loss adjustment expense ratios in 2017 and 2016, respectively. Net favorable prior year reserve development in 2017 provided 0.1 points of benefit to the loss and loss adjustment expense ratio. Net unfavorable prior year reserve development in 2016 had no impact on the loss and loss adjustment expense ratio. The underlying loss and loss adjustment expense ratio in 2017 was 2.1 points higher than the 2016 ratio on the same basis, primarily reflecting the impacts of (i) higher non-catastrophe weather-related losses, (ii) the tenure impact of higher levels of new business in recent years in the Automobile product line and (iii) a higher level of automobile business relative to homeowners and other business, partially offset by (iv) earned pricing that modestly exceeded loss cost trends.

The underwriting expense ratio of 26.8% in 2017 was 1.5 points lower than the underwriting expense ratio of 28.3% in 2016, primarily reflecting the impact of higher levels of earned premiums.

The combined ratio of 95.8% in 2016 was 8.4 points higher than the combined ratio of 87.4% in 2015.

The loss and loss adjustment expense ratio of 67.5% in 2016 was 9.4 points higher than the loss and loss adjustment expense ratio of 58.1% in 2015. Net unfavorable prior year reserve development in 2016 had no impact on the loss and loss adjustment expense ratio. Net favorable prior year reserve development provided 4.2 points of benefit to the loss and loss adjustment expense ratio in 2015. Catastrophe losses accounted for 4.9 points and 3.4 points of the loss and loss adjustment expense ratios in 2016 and 2015, respectively. The underlying loss and loss adjustment expense ratio in 2016 was 3.7 points higher than the 2015 ratio on the same basis, primarily reflecting (i) higher loss estimates in the Automobile product line for bodily injury liability coverages, (ii) the tenure impact of higher levels of new business in recent years in the Automobile product line and (iii) a higher level of automobile business relative to homeowners and other business.

The underwriting expense ratio of 28.3% in 2016 was 1.0 points lower than the underwriting expense ratio of 29.3% in 2015, primarily reflecting the impact of higher levels of earned premiums.

**Written Premiums**

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

(for the year ended December 31, in millions)	Gross Written Premiums		
	2017	2016	2015
Domestic:			
Agency:			
Automobile	\$ 4,671	\$ 4,123	\$ 3,551
Homeowners and Other	4,000	3,843	3,773
<b>Total Agency</b>	<b>8,671</b>	7,966	7,324
Direct-to-Consumer	362	310	238
<b>Total Domestic</b>	<b>9,033</b>	8,276	7,562
International	662	615	635
<b>Total Personal Insurance</b>	<b>\$ 9,695</b>	\$ 8,891	\$ 8,197

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(for the year ended December 31, in millions)	Net Written Premiums		
	2017	2016	2015
Domestic:			
Agency:			
Automobile	\$ 4,646	\$ 4,103	\$ 3,534
Homeowners and Other	3,933	3,772	3,687
<b>Total Agency</b>	<b>8,579</b>	<b>7,875</b>	<b>7,221</b>
Direct-to-Consumer	361	309	236
<b>Total Domestic</b>	<b>8,940</b>	<b>8,184</b>	<b>7,457</b>
International	650	603	617
<b>Total Personal Insurance</b>	<b>\$ 9,590</b>	<b>\$ 8,787</b>	<b>\$ 8,074</b>

**Domestic Agency Written Premiums**

Personal Insurance's domestic Agency business comprises business written through agents, brokers and other intermediaries.

Domestic Agency gross and net written premiums in 2017 were both 9% higher than in 2016.

Domestic Agency Automobile net written premiums in 2017 were 13% higher than in 2016. Business retention rates remained strong in 2017. Renewal premium changes in 2017 remained positive and were higher than in 2016. New business premiums in 2017 decreased from 2016.

Domestic Agency Homeowners and Other net written premiums in 2017 were 4% higher than in 2016. Business retention rates remained strong in 2017. Renewal premium changes in 2017 remained positive but were lower than in 2016. New business premiums in 2017 increased over 2016.

Domestic Agency gross and net written premiums in 2016 were both 9% higher than in 2015.

Domestic Agency Automobile net written premiums in 2016 were 16% higher than in 2015. Business retention rates remained strong in 2016. Renewal premium changes in 2016 remained positive and were higher than in 2015. New business premiums in 2016 increased over 2015.

Domestic Agency Homeowners and Other net written premiums in 2016 were 2% higher than in 2015. Business retention rates remained strong in 2016. Renewal premium changes in 2016 remained positive but were lower than in 2015. New business premiums in 2016 increased over 2015.

For its domestic Agency business, Personal Insurance had approximately 6.9 million and 6.6 million active policies at December 31, 2017 and 2016, respectively.

**Direct-to-Consumer and International Written Premiums**

Direct-to-Consumer net written premiums in 2017 were 17% higher than in 2016. Direct-to-Consumer net written premiums in 2016 were 31% higher than in 2015. The increases in both 2017 and 2016 were primarily driven by growth in automobile net written premiums.

International net written premiums in 2017 were 8% higher than in 2016, primarily driven by growth in automobile net written premiums and the impact of changes in foreign currency exchange rates. International net written premiums in 2016 were 2% lower than in 2015, primarily driven by the impact of changes in foreign currency exchange rates.

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For its international and direct-to-consumer business, Personal Insurance had approximately 878,000 and 860,000 active policies at December 31, 2017 and 2016, respectively.

Table of Contents**Interest Expense and Other**

(for the year ended December 31, in millions)	2017	2016	2015
Income (loss)	\$ (254)	\$ (244)	\$ (255)

The Income (loss) for Interest Expense and Other in 2017 was \$10 million higher than in 2016. The Income (loss) for Interest Expense and Other in 2016 was \$11 million lower than in 2015. After-tax interest expense in 2017, 2016 and 2015 was \$240 million, \$236 million and \$242 million, respectively.

**ASBESTOS CLAIMS AND LITIGATION**

The Company believes that the property and casualty insurance industry has suffered from court decisions and other trends that have expanded insurance coverage for asbestos claims far beyond the original intent of insurers and policyholders. The Company has received and continues to receive a significant number of asbestos claims from the Company's policyholders (which includes others seeking coverage under a policy). 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. In addition to contributing to the overall number of claims, bankruptcy proceedings may increase the volatility of asbestos-related losses by initially delaying the reporting of claims and later by significantly accelerating and increasing loss payments by insurers, including the Company. The bankruptcy of many traditional defendants has also caused increased settlement demands against those policyholders who are not in bankruptcy but remain in the tort system. Currently, in many jurisdictions, those who allege very serious injury and who can present credible medical evidence of their injuries are receiving priority trial settings in the courts, while those who have not shown any credible disease manifestation are having their hearing dates delayed or placed on an inactive docket. Prioritizing claims involving credible evidence of injuries, along with the focus on defendants who were not traditionally primary targets of asbestos litigation, contributes to the claims and claim adjustment expense payment patterns experienced by the Company. The Company's asbestos-related claims and claim adjustment expense experience also has been impacted by the unavailability of other insurance sources potentially available to policyholders, whether through exhaustion of policy limits or through the insolvency of other participating insurers.

The Company continues to be involved in 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 other Company defenses are not successful, the Company's 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 the Company has seen a reduction in the overall risk associated with these lawsuits, it remains difficult to predict the ultimate cost of these claims.

Many coverage disputes with policyholders are only resolved through settlement agreements. Because many policyholders make exaggerated demands, it is difficult to predict the outcome of settlement negotiations. Settlements involving bankrupt policyholders may include extensive releases which are favorable to the Company but which could result in settlements for larger amounts than originally anticipated. There also may be instances where a court may not approve a proposed

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settlement, which may result in additional litigation and potentially less beneficial outcomes for the Company. As in the past, the Company will continue to pursue settlement opportunities.

In addition to claims against policyholders, proceedings have been launched directly against insurers, including the Company, by individuals challenging insurers' conduct with respect to the handling of past asbestos claims and by individuals seeking damages arising from alleged asbestos-related bodily injuries. Travelers Property Casualty Corp. (TPC) had previously entered into settlement agreements in connection with a number of these direct action claims (Direct Action Settlements). The Company had been involved in litigation concerning whether all of the conditions of the Direct Action Settlements had been satisfied. On July 22, 2014, the United States Court of Appeals for the Second Circuit ruled that all of the conditions of the Direct Action Settlements had been satisfied. On January 15, 2015, the bankruptcy court entered an order directing the Company to pay \$579 million to the plaintiffs, comprised of the \$502 million settlement amounts, plus pre- and post-judgment interest of \$77 million, which the Company paid in 2015. It is possible that the filing of other direct actions against insurers, including the Company, could be made in the future. It is difficult to predict the outcome of these proceedings, including whether the plaintiffs would be able to sustain these actions against insurers based on novel legal theories of liability. The Company believes it has meritorious defenses to any such claims and has received favorable rulings in certain jurisdictions.

On January 29, 2009, the Company and PPG Industries, Inc. (PPG), along with approximately 30 other insurers of PPG, agreed in principle to settle asbestos-related coverage litigation under insurance policies issued to PPG (the "Agreement"). The Agreement was incorporated into the Modified Third Amended Plan of Reorganization ("Amended Plan") proposed as part of the Pittsburgh Corning Corp. (PCC, which is 50% owned by PPG) bankruptcy proceeding. Pursuant to the Amended Plan, which was filed on January 30, 2009, PCC, along with enumerated other companies (including PPG as well as the Company as a participating insurer), receive protections afforded by Section 524(g) of the Bankruptcy Code from certain asbestos-related bodily injury claims. Under the Agreement, the Company had the option to make a series of payments over 20 years totaling approximately \$620 million to the trust created under the Amended Plan, or it could elect to make a discounted payment. On January 7, 2016, the remaining objections to the Amended Plan were dismissed. On April 27, 2016, the Amended Plan became effective and all the remaining conditions to the Agreement were satisfied. The Company fully satisfied its obligation under the Agreement by making a discounted payment in the second quarter of 2016. The Company's payment totaled \$524 million, of which \$518 million was related to asbestos reserves. The Company's obligations under the Agreement were included in its claims and claim adjustment expense reserves at December 31, 2015.

Because each policyholder presents different liability and coverage issues, the Company generally reviews the exposure presented by each policyholder at least annually. Among the factors which the Company may consider in the course of this review are: available insurance coverage, including the role of any umbrella or excess insurance the Company has issued to the policyholder; limits and deductibles; an analysis of the policyholder's potential liability; the jurisdictions involved; past and anticipated future claim activity and loss development on pending claims; past settlement values of similar claims; allocated claim adjustment expense; potential role of other insurance; the role, if any, of non-asbestos claims or potential non-asbestos claims in any resolution process; and applicable coverage defenses or determinations, if any, including the determination as to whether or not an asbestos claim is a products/completed operation claim subject to an aggregate limit and the available coverage, if any, for that claim.



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In the third quarter of 2017, the Company completed its annual in-depth asbestos claim review, including a review of active policyholders and litigation cases for potential product and "non-product" liability, and noted the continuation of the following trends:

a high level of litigation activity in certain jurisdictions involving individuals alleging serious asbestos-related illness, primarily involving mesothelioma claims;

while overall payment patterns have been generally stable, there has been an increase in severity for certain policyholders due to a high level of litigation activity; and

a moderate level of asbestos-related bankruptcy activity.

In the Home Office and Field Office category, which accounts for the vast majority of policyholders with active asbestos-related claims, the number of policyholders tendering asbestos claims for the first time and the number of policyholders with open asbestos claims declined slightly when compared to 2016 while gross asbestos-related payments were higher. Payments on behalf of policyholders in this category continue to be influenced by a high level of litigation activity in a limited number of jurisdictions where individuals alleging serious asbestos-related injury, primarily mesothelioma, continue to target defendants who were not traditionally primary targets of asbestos litigation.

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

The completion of these reviews and analyses in 2017, 2016 and 2015 resulted in \$225 million, \$225 million and \$224 million increases, respectively, in the Company's net asbestos reserves. In each year, the reserve increases were primarily driven by increases in the Company's estimate of projected settlement and defense costs related to a broad number of policyholders in the Home Office category due to a higher than previously anticipated level of litigation activity surrounding mesothelioma claims. This increase in the estimate of projected settlement and defense costs resulted from payment trends that continue to be higher than previously anticipated due to the impact of the current litigation environment discussed above. Over the past decade, the property and casualty insurance industry, including the Company, has experienced net unfavorable prior year reserve development with regard to asbestos reserves, but the Company believes that over that period there has been a reduction in the volatility associated with the Company's overall asbestos exposure as the overall asbestos environment has evolved from one dominated by exposure to significant litigation risks, particularly coverage disputes relating to policyholders in bankruptcy who were asserting that their claims were not subject to the aggregate limits contained in their policies, to an environment primarily driven by a frequency of litigation related to individuals with mesothelioma. The Company's overall view of the current underlying asbestos environment is essentially unchanged from recent periods and there remains a high degree of uncertainty with respect to future exposure to asbestos claims.

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The Company categorizes its asbestos reserves as follows:

(at and for the year ended December 31, \$ in millions)	Number of Policyholders		Total Net Paid		Net Asbestos Reserves	
	2017	2016	2017	2016	2017	2016
Policyholders with settlement agreements	10	11	\$ 12	\$ 488	\$ 32	\$ 39
Home office and field office	1,558	1,599	218	204	1,097	1,118
Assumed reinsurance and other			41	16	152	169
<b>Total</b>	<b>1,568</b>	<b>1,610</b>	<b>\$ 271</b>	<b>\$ 708</b>	<b>\$ 1,281</b>	<b>\$ 1,326</b>

The Policyholders with Settlement Agreements category includes structured settlements, coverage in place arrangements and, with respect to TPC, Wellington accounts (as discussed below). Reserves are based on the expected payout for each policyholder under the applicable agreement. Structured settlements are arrangements under which policyholders and/or plaintiffs agree to fixed financial amounts to be paid at scheduled times. Coverage in place arrangements represent agreements with policyholders on specified amounts of coverage to be provided. Payment obligations may be subject to annual maximums and are only made when valid claims are presented. Wellington accounts refer to the 35 defendants that are parties to a 1985 agreement settling certain disputes concerning insurance coverage for their asbestos claims. Many of the aspects of the Wellington agreement are similar to those of coverage in place arrangements in which the parties have agreed on specific amounts of coverage and the terms under which the coverage can be accessed. In 2016, the Company paid the \$518 million settlement related to asbestos-related coverage litigation under insurance policies issued to PPG, as described above.

The Home Office and Field Office category relates to all other policyholders and also includes IBNR reserves and reserves for the costs of defending asbestos-related coverage litigation. IBNR reserves in the Home Office and Field Office category include amounts for new claims and adverse development on existing Home Office and Field Office policyholders, as well as reserves for claims from policyholders reporting asbestos claims for the first time and for policyholders for which there is, or may be, litigation. Policyholders are identified for the annual home office review based upon, among other factors: a combination of past payments and current case reserves in excess of a specified threshold (currently \$100,000), perceived level of exposure, number of reported claims, products/completed operations and potential "non-product" exposures, size of policyholder and geographic distribution of products or services sold by the policyholder. The Assumed Reinsurance and Other category primarily consists of reinsurance of excess coverage, including various pool participations.

Net asbestos paid loss and loss expenses in 2017, 2016 and 2015 were \$271 million, \$708 million and \$770 million, respectively. Net payments in 2016 included the \$458 million payment related to the PPG settlement, as described above. Net payments in 2015 included the \$502 million payment related to the Direct Action Settlements as described above. Approximately 4%, 69% and 69% of total net paid losses in 2017, 2016 and 2015, respectively, related to policyholders with whom the Company had entered into settlement agreements limiting the Company's liability.

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

(at and for the year ended December 31, in millions)	2017	2016	2015
<b>Beginning reserves:</b>			
Gross	\$ 1,512	\$ 1,989	\$ 2,520
Ceded	(186)	(179)	(163)
Net	1,326	1,810	2,357
<b>Incurred losses and loss expenses:</b>			
Gross	340	355	313
Ceded	(115)	(130)	(89)
Net	225	225	224
<b>Paid loss and loss expenses:</b>			
Gross	315	831	843
Ceded	(44)	(123)	(73)
Net	271	708	770
<b>Foreign exchange and other:</b>			
Gross	1	(1)	(1)
Ceded			
Net	1	(1)	(1)
<b>Ending reserves:</b>			
Gross	1,538	1,512	1,989
Ceded	(257)	(186)	(179)
Net	\$ 1,281	\$ 1,326	\$ 1,810

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See

" Uncertainty Regarding Adequacy of Asbestos and Environmental Reserves."

## ENVIRONMENTAL CLAIMS AND LITIGATION

The Company has received and continues to receive claims from policyholders who allege that they are liable for injury or damage arising out of their alleged disposition of toxic substances. Mostly, these claims are due to 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 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 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 often pertain to insurance policies that were issued by the Company prior to the mid-1980s. These decisions continue to be inconsistent and vary from jurisdiction to jurisdiction. Environmental claims, when submitted, rarely indicate the monetary amount being sought by the claimant from the policyholder, and the Company does not keep track of the monetary amount being sought in those few claims which indicate a monetary amount.

The resolution of environmental exposures by the Company generally occurs through settlements with policyholders as opposed to claimants. Generally, the Company strives to extinguish any

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obligations it may have under any policy issued to the policyholder for past, present and future environmental liabilities and extinguish any pending coverage litigation dispute with the policyholder. This form of settlement is commonly referred to as a "buy-back" of policies for future environmental liability. In addition, many of the agreements have also extinguished any insurance obligation which the Company may have for other claims, including, but not limited to, asbestos and other cumulative injury claims. The Company and its policyholders may also agree to settlements which extinguish any liability arising from known specified sites or claims. Where appropriate, these agreements also include indemnities and hold harmless provisions to protect the Company. The Company's general purpose in executing these agreements is to reduce the Company's potential environmental exposure and eliminate the risks presented by coverage litigation with the policyholder and related costs.

In establishing environmental reserves, the Company evaluates the exposure presented by each policyholder and the anticipated cost of resolution, if any. In the course of this analysis, the Company generally considers the probable liability, available coverage and relevant judicial interpretations. In addition, the Company considers the many variables presented, such as: the nature of the alleged activities of the policyholder at each site; the number of sites; the total number of potentially responsible parties at each site; the nature of the alleged environmental harm and the corresponding remedy at each site; the nature of government enforcement activities at each site; the ownership and general use of each site; the overall nature of the insurance relationship between the Company and the policyholder, including the role of any umbrella or excess insurance the Company has issued to the policyholder; the involvement of other insurers; the potential for other available coverage, including the number of years of coverage; the role, if any, of non-environmental claims or potential non-environmental claims in any resolution process; and the applicable law in each jurisdiction. The evaluation of the exposure presented by a policyholder can change as information concerning that policyholder and the many variables presented is developed. Conventional actuarial methods are not used to estimate these reserves.

In its review of environmental reserves, the Company considers: past settlement payments; changing judicial and legislative trends; its reserves for the costs of litigating environmental coverage matters; the potential for policyholders with smaller exposures to be named in new clean-up actions for both on-and off-site waste disposal activities; the potential for adverse development; the potential for additional new claims beyond previous expectations; and the potential higher costs for new settlements.

The duration of the Company's investigation and review of these claims and the time necessary to determine an appropriate estimate, if any, of the value of the claim to the Company vary significantly and are dependent upon a number of factors. These factors include, but are not limited to, the cooperation of the policyholder in providing claim information, the pace of underlying litigation or claim processes, the pace of coverage litigation between the policyholder and the Company and the willingness of the policyholder and the Company to negotiate, if appropriate, a resolution of any dispute pertaining to these claims. Because these factors vary from claim-to-claim and policyholder-by-policyholder, the Company cannot provide a meaningful average of the duration of an environmental claim. However, based upon the Company's experience in resolving these claims, the duration may vary from months to several years.

The Company continues to receive notices from policyholders tendering claims for the first time, frequently under policies issued prior to the mid-1980s. These policyholders continue to present smaller exposures, have fewer sites and are lower tier defendants. Further, in many instances, clean-up costs have been reduced because regulatory agencies are willing to accept risk-based site analyses and more efficient clean-up technologies. Over the past several years, the Company has experienced generally favorable trends in the number of new policyholders tendering environmental claims for the first time and in the number of pending declaratory judgment actions relating to environmental matters. However, the degree to which those favorable trends have continued has been less than anticipated. In addition, reserve development on existing environmental claims has been greater than anticipated,

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driven by claims and legal developments in a limited number of jurisdictions. As a result of these factors, in 2017, 2016 and 2015, the Company increased its net environmental reserves by \$65 million, \$82 million and \$72 million, respectively.

Net environmental paid loss and loss expenses were \$88 million, \$61 million and \$55 million in 2017, 2016 and 2015, respectively. At December 31, 2017, approximately 94% of the net environmental reserve (approximately \$340 million) was carried in a bulk reserve and included unresolved environmental claims, incurred but not reported environmental claims and the anticipated cost of coverage litigation disputes relating to these claims. The bulk reserve the Company carries is established and adjusted based upon the aggregate volume of in-process environmental claims and the Company's experience in resolving those claims. The balance, approximately 6% of the net environmental reserve (approximately \$20 million), consists of case reserves.

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

(at and for the year ended December 31, in millions)	2017	2016	2015
<b>Beginning reserves:</b>			
Gross	\$ 395	\$ 375	\$ 353
Ceded	(13)	(14)	(7)
Net	382	361	346
<b>Incurred losses and loss expenses:</b>			
Gross	74	87	81
Ceded	(9)	(5)	(9)
Net	65	82	72
<b>Paid loss and loss expenses:</b>			
Gross	97	67	56
Ceded	(9)	(6)	(1)
Net	88	61	55
<b>Foreign exchange and other:</b>			
Gross	1		(3)
Ceded			1
Net	1		(2)
<b>Ending reserves:</b>			
Gross	373	395	375
Ceded	(13)	(13)	(14)
Net	\$ 360	\$ 382	\$ 361

**UNCERTAINTY REGARDING ADEQUACY OF ASBESTOS AND ENVIRONMENTAL RESERVES**

As a result of the processes and procedures discussed above, management believes that the reserves carried for asbestos and environmental claims are appropriately established based upon known facts, current law and management's judgment. However, the uncertainties surrounding the final resolution of these claims continue, and it is difficult to determine the ultimate exposure for asbestos and environmental claims and related litigation. As a result, these reserves are subject to revision as new information becomes available and as claims develop. The continuing uncertainties include, without limitation, the risks and lack of predictability inherent in complex litigation, any impact from the bankruptcy protection sought by various asbestos producers and other asbestos defendants, a further increase or decrease 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



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anticipated as a result of extended life expectancies resulting from medical advances and lifestyle improvements, the role of any umbrella or excess policies the Company has issued, the resolution or adjudication of disputes pertaining to the amount of available coverage for asbestos and environmental claims in a manner inconsistent with the Company's previous assessment of these claims, the number and outcome of direct actions against the Company, future developments pertaining to the Company's ability to recover reinsurance for asbestos and environmental claims and the unavailability of other insurance sources potentially available to policyholders, whether through exhaustion of policy limits or through the insolvency of other participating insurers. In addition, uncertainties arise from the insolvency or bankruptcy of policyholders and other defendants. 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. As part of its continuing analysis of asbestos and environmental reserves, the Company continues to study the implications of these and other developments.

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

**INVESTMENT PORTFOLIO**

The Company's invested assets at December 31, 2017 were \$72.50 billion, of which 93% was invested in fixed maturity and short-term investments, 1% in equity securities, 1% in real estate investments and 5% in other investments. Because the primary purpose of the investment portfolio is to fund future claims payments, the Company employs a conservative investment philosophy. A significant majority of funds available for investment are deployed in a widely diversified portfolio of high quality, liquid, taxable U.S. government, tax-exempt U.S. municipal and taxable corporate and U.S. agency mortgage-backed bonds.

The carrying value of the Company's fixed maturity portfolio at December 31, 2017 was \$62.69 billion. The Company closely monitors the duration of its fixed maturity investments, and investment purchases and sales are executed with the objective of having adequate funds available to satisfy the Company's insurance and debt obligations. The weighted average credit quality of the Company's fixed maturity portfolio, both including and excluding U.S. Treasury securities, was "Aa2" at both December 31, 2017 and 2016. Below investment grade securities represented 2.7% and 2.9% of the total fixed maturity investment portfolio at December 31, 2017 and 2016, respectively. The weighted average effective duration of fixed maturities and short-term securities was 4.0 (4.3 excluding short-term securities) at December 31, 2017 and 4.2 (4.5 excluding short-term securities) at December 31, 2016.



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The carrying values of investments in fixed maturities classified as available for sale at December 31, 2017 and 2016 were as follows:

(at December 31, in millions)	2017 Carrying Value	2017 Weighted Average Credit Quality(1)	2016 Carrying Value	2016 Weighted Average Credit Quality(1)
U.S. Treasury securities and obligations of U.S. government and government agencies and authorities	\$ 2,076	Aaa/Aa1	\$ 2,035	Aaa/Aa1
Obligations of states, municipalities and political subdivisions:				
Local general obligation	13,906	Aaa/Aa1	14,044	Aaa/Aa1
Revenue	11,626	Aaa/Aa1	10,978	Aaa/Aa1
State general obligation	1,484	Aaa/Aa1	1,731	Aaa/Aa1
Pre-refunded	3,899	Aaa/Aa1	5,157	Aaa/Aa1
Total obligations of states, municipalities and political subdivisions	30,915		31,910	
Debt securities issued by foreign governments	1,509	Aaa/Aa1	1,662	Aaa/Aa1
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities	2,410	Aa1	1,708	Aa2
All other corporate bonds and redeemable preferred stock:				
Financial:				
Bank	3,132	A2	2,606	A1
Insurance	752	A1	678	A1
Finance/leasing	25	B1	35	Ba3
Brokerage and asset management	60	A2	32	A1
Total financial	3,969		3,351	
Industrial	15,136	A3	14,067	A3
Public utility	2,610	A2	2,370	A2
Canadian municipal securities	1,207	Aa2	1,093	Aa1
Sovereign corporate securities(2)	605	Aaa	552	Aaa
Commercial mortgage-backed securities and project loans(3)	1,168	Aaa	938	Aaa
Asset-backed and other	1,089	Aa2	829	Aa2
Total all other corporate bonds and redeemable preferred stock	25,784		23,200	
Total fixed maturities	\$ 62,694	Aa2	\$ 60,515	Aa2

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

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

(3) Included in commercial mortgage-backed securities and project loans at December 31, 2017 and 2016 were \$471 million and \$285 million of securities guaranteed by the U.S. government, respectively, and \$4 million and \$5 million of securities guaranteed by government sponsored enterprises, respectively.



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

(at December 31, 2017, in millions)	Carrying Value	Percent of Total Carrying Value
Quality Rating:		
Aaa	\$ 26,682	42.6%
Aa	16,828	26.8
A	9,786	15.6
Baa	7,731	12.3
Total investment grade	61,027	97.3
Below investment grade	1,667	2.7
Total fixed maturities	\$ 62,694	100.0%

The amortized cost and fair value of fixed maturities by contractual maturity follow. Actual maturities will differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

(at December 31, 2017, in millions)	Amortized Cost	Fair Value
Due in one year or less	\$ 4,720	\$ 4,749
Due after 1 year through 2 years	4,579	4,663
Due after 2 years through 3 years	3,610	3,684
Due after 3 years through 4 years	4,377	4,494
Due after 4 years through 5 years	4,382	4,442
Due after 5 years through 10 years	14,545	14,859
Due after 10 years	22,769	23,393
	58,982	60,284
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities	2,334	2,410
Total	\$ 61,316	\$ 62,694

*Obligations of States, Municipalities and Political Subdivisions*

The Company's fixed maturity investment portfolio at December 31, 2017 and 2016 included \$30.92 billion and \$31.91 billion, respectively, of securities which are obligations of states, municipalities and political subdivisions (collectively referred to as the municipal bond portfolio). The municipal bond portfolio is diversified across the United States, the District of Columbia and Puerto Rico and includes general obligation and revenue bonds issued by states, cities, counties, school districts and similar issuers. Included in the municipal bond portfolio at December 31, 2017 and 2016 were \$3.90 billion and \$5.16 billion, respectively, of pre-refunded bonds, which are bonds for which states or municipalities have established irrevocable trusts, almost exclusively comprised of U.S. Treasury securities and obligations of U.S. government and government agencies and authorities. These trusts were created to fund the payment of principal and interest due under the bonds. The irrevocable trusts are verified as to their sufficiency by an independent verification agent of the underwriter, issuer or trustee. All of the Company's holdings of securities issued by Puerto Rico and related entities have been pre-refunded and therefore are defeased by U.S. Treasury securities.

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The following table shows the geographic distribution of the \$27.02 billion of municipal bonds at December 31, 2017 that were not pre-refunded.

(at December 31, 2017, in millions)	State General Obligation	Local General Obligation	Revenue	Total Carrying Value	Weighted Average Credit Quality(1)
State:					
Texas	\$ 68	\$ 2,439	\$ 1,160	\$ 3,667	Aaa
Washington	115	1,100	521	1,736	Aa1
Virginia	68	759	837	1,664	Aaa/Aa1
Minnesota	129	990	338	1,457	Aaa/Aa1
North Carolina	68	709	549	1,326	Aaa/Aa1
California	1	751	488	1,240	Aaa/Aa1
Massachusetts	61	60	1,051	1,172	Aaa/Aa1
Colorado		663	281	944	Aa1
Maryland	52	631	188	871	Aaa/Aa1
New York	8	72	734	814	Aaa/Aa1
Georgia	85	549	168	802	Aaa/Aa1
Illinois	6	321	402	729	Aaa/Aa1
South Carolina	52	533	97	682	Aa1
Wisconsin	169	335	177	681	Aa1
All others(2)	602	3,994	4,635	9,231	Aaa/Aa1
<b>Total</b>	<b>\$ 1,484</b>	<b>\$ 13,906</b>	<b>\$ 11,626</b>	<b>\$ 27,016</b>	<b>Aaa/Aa1</b>

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

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

The following table displays the funding sources for the \$11.63 billion of municipal bonds identified as revenue bonds in the foregoing table at December 31, 2017.

(at December 31, 2017, in millions)	Carrying Value	Weighted Average Credit Quality(1)
Source:		
Water and sewer	\$ 4,372	Aaa/Aa1
Higher education	3,121	Aaa/Aa1
Transportation	799	Aa1
Power utilities	797	Aa1
Special tax	539	Aa1
Industrial	485	Aa1
Health care	213	Aa2
Housing	60	Aaa/Aa1
Lease	24	Aa2
Property tax	12	Aa2
Other revenue sources	1,204	Aaa/Aa1

<b>Total</b>	<b>\$ 11,626</b>	<b>Aaa/Aa1</b>
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(1)

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

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The Company bases its investment decision on the underlying credit characteristics of the municipal security. The weighted average credit rating of the municipal bond portfolio was "Aa1" at December 31, 2017.

*Debt Securities Issued by Foreign Governments*

The following table shows the geographic distribution of the Company's long-term fixed maturity investments in debt securities issued by foreign governments at December 31, 2017.

(at December 31, 2017, in millions)	Carrying Value	Weighted Average Credit Quality(1)
<b>Foreign Government:</b>		
Canada	\$ 968	Aaa
United Kingdom	495	Aa2
All Others(2)(3)	46	A2
<b>Total</b>	<b>\$ 1,509</b>	<b>Aaa/Aa1</b>

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

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

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

The following table shows the Company's Eurozone exposure at December 31, 2017 to all debt securities issued by foreign governments, financial companies, sovereign corporations (including sovereign banks) whose securities are backed by the respective country's government and all other corporate securities (comprised of industrial corporations and utility companies) which could be affected if economic conditions deteriorated due to a prolonged recession.

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(at December 31, 2017, in millions)	Debt Securities Issued by Foreign Governments				Corporate Securities			
	Financial		Sovereign Corporates		All Other			
	Carrying Value	Weighted Average Credit Quality(1)	Carrying Value	Weighted Average Credit Quality(1)	Carrying Value	Weighted Average Credit Quality(1)	Carrying Value	Weighted Average Credit Quality(1)
<b>Eurozone Periphery</b>								
Spain	\$		\$ 88	A2	\$		\$ 22	Baa2
Ireland							99	Baa2
Greece								
Italy								
Portugal								
Subtotal			88				121	
<b>Eurozone Non-Periphery</b>								
Germany			13	Baa2	210	Aaa/Aa1	379	A3
France			11	A1			425	A2
Netherlands			130	A1	76	Aaa/Aa1	415	A2
Austria					100	Aa2		
Finland	2	Aa1						
Belgium							165	Baa1
Luxembourg								
Subtotal	2		154		386		1,384	
<b>Total</b>	<b>\$ 2</b>		<b>\$ 242</b>		<b>\$ 386</b>		<b>\$ 1,505</b>	

(1) Rated using external rating agencies or by the Company when a public rating does not exist. The table includes \$335 million of short-term securities which have the highest ratings issued by external rating agencies for short-term issuances. For purposes of this table, the short-term securities, which are rated "A-1+" and/or "P-1," are included as "Aaa" rated securities.

In addition to fixed maturities noted in the foregoing table, the Company has exposure totaling \$153 million to private equity limited partnerships and real estate partnerships (both of which are included in other investments in the Company's consolidated balance sheet) whose primary investing focus is across Europe. The Company has unfunded commitments totaling \$134 million to these partnerships. The Company has no non-redeemable preferred stock issued by companies in the Eurozone.

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

The Company's fixed maturity investment portfolio at December 31, 2017 and 2016 included \$2.41 billion and \$1.71 billion, respectively, of residential mortgage-backed securities, including pass-through-securities and collateralized mortgage obligations (CMOs), all of which are subject to prepayment risk (either shortening or lengthening of duration). While prepayment risk for securities and its effect on income cannot be fully controlled, particularly when interest rates move dramatically, the Company's investment strategy generally favors securities that reduce this risk within expected interest rate ranges. The Company makes investments in residential CMOs that are either guaranteed by GNMA, FNMA or FHLMC, or if not guaranteed, are senior or super-senior positions within their respective securitizations. Both guaranteed and non-guaranteed residential CMOs allocate the distribution of payments from the underlying mortgages among different classes of bondholders. In addition, non-guaranteed residential CMOs provide structures that allocate the impact of credit losses to different classes of bondholders. Senior and super-senior CMOs are protected, to varying degrees,





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from credit losses as those losses are initially allocated to subordinated bondholders. The Company's investment strategy is to purchase CMO tranches that are expected to offer the most favorable return given the Company's assessment of associated risks. The Company does not purchase residual interests in CMOs. For more information regarding the Company's investments in residential mortgage-backed securities, see note 3 of notes to the consolidated financial statements.

*Alternative Documentation Mortgages and Sub-Prime Mortgages*

At December 31, 2017 and 2016, the Company's fixed maturity investment portfolio included CMOs backed by alternative documentation mortgages and asset-backed securities collateralized by sub-prime mortgages with a collective fair value of \$111 million and \$142 million, respectively (comprising less than 1% of the Company's total fixed maturity investments at both dates). The Company defines sub-prime mortgage-backed securities as investments in which the underlying loans primarily exhibit one or more of the following characteristics: low FICO scores, above-prime interest rates, high loan-to-value ratios or high debt-to-income ratios. Alternative documentation securitizations are those in which the underlying loans primarily meet the government-sponsored entities' requirements for credit score but do not meet the government-sponsored entities' guidelines for documentation, property type, debt and loan-to-value ratios. The weighted average credit rating on these securities and obligations held by the Company was "B1" and "Ba3" at December 31, 2017 and 2016, respectively. The Company does not believe this portfolio exposes it to a material adverse impact on its results of operations, financial position or liquidity, due to the portfolio's relatively small size.

*Commercial Mortgage-Backed Securities and Project Loans*

At December 31, 2017 and 2016, the Company held commercial mortgage-backed securities (including FHA project loans) of \$1.17 billion and \$938 million, respectively. The Company does not believe this portfolio exposes it to a material adverse impact on its results of operations, financial position or liquidity, due to the portfolio's relatively small size and the underlying credit strength of these securities. For more information regarding the Company's investments in commercial mortgage-backed securities, see note 3 of notes to the consolidated financial statements.

*Equity Securities Available for Sale, Real Estate and Short-Term Investments*

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

*Other Investments*

The Company also invests in private equity limited partnerships, hedge funds and real estate partnerships. Also included in other investments are non-public common and preferred equities and derivatives. These asset classes have historically provided a higher return than fixed maturities but are subject to more volatility. At December 31, 2017 and 2016, the carrying value of the Company's other investments was \$3.53 billion and \$3.45 billion, respectively.

*Securities Lending*

The Company has, from time to time, engaged in securities lending activities from which it generates net investment income by lending certain of its investments to other institutions for short periods of time. At December 31, 2017 and 2016, the Company had \$304 million and \$286 million of securities on loan, respectively, as part of a tri-party lending agreement. The average monthly balance of securities on loan during 2017 and 2016 was \$318 million and \$346 million, respectively. Borrowers of these securities provide collateral equal to at least 102% of the market value of the loaned securities

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plus accrued interest. The Company has not incurred any investment losses in its securities lending program for the years ended December 31, 2017, 2016 and 2015.

*Lloyd's Trust Deposits*

The Company meets its capital requirements to support its underwriting at Lloyd's using a combination of trust deposits and uncollateralized letters of credit. Securities with a fair value of approximately \$37 million and \$97 million held by a wholly-owned subsidiary at December 31, 2017 and 2016, respectively, and \$33 million held by TRV at December 31, 2017, were pledged into Lloyd's trust accounts to provide a portion of the Lloyd's capital requirements. For more information regarding the Company's utilization of uncollateralized letters of credit, see "Liquidity and Capital Resources" herein.

*Net Unrealized Investment Gains*

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

(at December 31, in millions)	2017	2016	2015
Fixed maturities	\$ 1,378	\$ 865	\$ 1,780
Equity securities	13	228	177
Other investments	23	19	17
Unrealized investment gains before tax	1,414	1,112	1,974
Tax expense	460	382	685
Net unrealized investment gains included in accumulated other comprehensive income at year end	954	730	1,289
Tax effect of TCJA	158		
Net unrealized investment gains included in shareholders' equity at end of year	\$ 1,112	\$ 730	\$ 1,289

Net unrealized investment gains included in shareholders' equity at December 31, 2017 increased from the prior year-end, primarily reflecting the impact of a decrease in market interest rates in 2017 and the tax effect of the TCJA. Net unrealized investment gains included in shareholders' equity at December 31, 2016 decreased from the prior year-end, primarily reflecting the impact of an increase in market interest rates in 2016.

At December 31, 2017, the amount of gross unrealized losses for all fixed maturity and equity investments reported at fair value for which fair value was less than 80% of amortized cost for fixed maturity investments and cost for equity investments was not significant.

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

At December 31, 2017 and 2016, below investment grade securities comprised 2.7% and 2.9%, respectively, of the Company's fixed maturity investment portfolio. Included in below investment grade securities at December 31, 2017 were securities in an unrealized loss position that, in the aggregate, had an amortized cost of \$313 million and a fair value of \$305 million, resulting in a net pre-tax unrealized investment loss of \$8 million. These securities in an unrealized loss position represented approximately 0.5% of the total amortized cost and 0.5% of the fair value of the fixed maturity portfolio at December 31, 2017 and accounted for 4.5% of the total gross pre-tax unrealized investment loss in the fixed maturity portfolio at December 31, 2017.

Table of Contents*Impairment Charges*

Impairment charges included in net realized investment gains in the consolidated statement of income were as follows:

(for the year ended December 31, in millions)	2017	2016	2015
<b>Fixed maturities</b>			
U.S. Treasury securities and obligations of U.S. government and government agencies and authorities	\$	\$	\$
Obligations of states, municipalities and political subdivisions			
Debt securities issued by foreign governments			
Mortgage-backed securities, collateralized mortgage obligations and pass-through securities			
All other corporate bonds	4	15	13
Redeemable preferred stock			
<b>Total fixed maturities</b>	<b>4</b>	<b>15</b>	<b>13</b>
<b>Equity securities</b>			
Public common stock	9	9	37
Non-redeemable preferred stock		3	
<b>Total equity securities</b>	<b>9</b>	<b>12</b>	<b>37</b>
<b>Other investments</b>	<b>1</b>	<b>2</b>	<b>2</b>
<b>Total</b>	<b>\$ 14</b>	<b>\$ 29</b>	<b>\$ 52</b>

Following are the pre-tax realized losses on investments sold during the year ended December 31, 2017:

(for the year ended December 31, 2017, in millions)	Loss	Fair Value
Fixed maturities	\$ 38	\$ 957
Equity securities	3	54
<b>Total</b>	<b>\$ 41</b>	<b>\$ 1,011</b>

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

**CATASTROPHE MODELING**

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. There are no industry-standard methodologies or assumptions for projecting catastrophe exposure. Accordingly, catastrophe estimates provided by different insurers may not be comparable.

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

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The tables below set forth the probabilities that estimated losses, comprising claims and allocated claim adjustment expenses (but excluding unallocated claim adjustment expenses), from a single event occurring in a one-year timeframe will equal or exceed the indicated loss amounts (expressed in dollars, net of tax at the newly enacted federal tax rate of 21%, and as a percentage of the Company's common equity), based on the proprietary and third-party computer models utilized by the Company at December 31, 2017. For example, on the basis described below the tables, the Company estimates that there is a one percent chance that the Company's loss from a single U.S. and Canadian hurricane in a one-year timeframe would equal or exceed \$1.6 billion, or 7% of the Company's common equity at December 31, 2017.

Likelihood of Exceedance(1)	Dollars (in billions)	
	Single U.S. and Canadian Hurricane	Single U.S. and Canadian Earthquake
2.0% (1-in-50)	\$ 1.2	\$ 0.5
1.0% (1-in-100)	\$ 1.6	\$ 0.8
0.4% (1-in-250)	\$ 2.2	\$ 1.2
0.1% (1-in-1,000)	\$ 4.6	\$ 1.9

Likelihood of Exceedance	Percentage of Common Equity(2)	
	Single U.S. and Canadian Hurricane	Single U.S. and Canadian Earthquake
2.0% (1-in-50)	5%	2%
1.0% (1-in-100)	7%	3%
0.4% (1-in-250)	10%	5%
0.1% (1-in-1,000)	21%	9%

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

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

The threshold loss amounts in the tables above, which are based on the Company's in-force portfolio at December 31, 2017 and catastrophe reinsurance program at January 1, 2018, are net of reinsurance, after-tax and exclude unallocated claim adjustment expenses, which historically have been less than 10% of loss estimates. For further information regarding the Company's reinsurance, see "Item 1 Reinsurance." The amounts for hurricanes reflect U.S. and Canadian exposures and include property exposures, property residual market exposures and an adjustment for certain non-property exposures. The hurricane loss amounts are based on the Company's catastrophe risk model estimates and include losses from the hurricane hazards of wind and storm surge. The amounts for earthquakes

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reflect U.S. and Canadian property and workers' compensation exposures. The Company does not believe that the inclusion of hurricane or earthquake losses arising from other geographical areas or other exposures would materially change the estimated threshold loss amounts.

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

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

For more information about the Company's exposure to catastrophe losses, see "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" and "Item 1A Risk Factors We may be adversely affected if our pricing and capital models provide materially different indications than actual results."

**CHANGING CLIMATE CONDITIONS**

Severe weather events over the last two decades have underscored the unpredictability of future climate trends and created uncertainty regarding insurers' exposures to financial loss as a result of catastrophes and other weather-related events. For example, hurricane and storm surge activity have impacted areas further inland than previously experienced, and demographic changes have resulted in larger populations in coastal areas which historically have been subject to severe storms, thus expanding the Company's 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. Accordingly, the Company may be subject to increased losses from catastrophes and other weather-related events. Demographic changes in areas prone to wildfires have also expanded the Company's potential for losses from wildfires. Additionally, the Company's catastrophe models may be less reliable due to the increased unpredictability in frequency and severity of severe weather events or other emerging trends in climate conditions.

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

Increasingly unpredictable and severe weather conditions could result in increased frequency and severity of claims under policies issued by the Company. See "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" and " Outlook Underwriting Gain/Loss."

Changing climate conditions could also impact the creditworthiness of issuers of securities in which the Company invests. For example, water supply adequacy could impact the

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creditworthiness of bond issuers in the Southwestern United States, and more frequent and/or severe hurricanes could impact the creditworthiness of issuers in the Southeastern United States, among other areas. See "Risk Factors Our investment portfolio is subject to credit and interest rate risk, and may suffer reduced returns or material realized or unrealized losses."

Increased regulation adopted in response to potential changes in climate conditions may impact the Company and its customers. For example, state insurance regulation could impact the Company's ability to manage property exposures in areas vulnerable to significant climate driven losses. If the Company is unable to implement risk based pricing, modify policy terms or reduce exposures to the extent necessary to address rising losses related to catastrophes and smaller scale weather events (should those increased losses occur), its business may be adversely affected. See "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." In addition, climate change regulation could increase the Company's customers' costs of doing business. For example, insureds faced with carbon management regulatory requirements may have less available capital for investment in loss prevention and safety features which may, over time, increase loss exposures. Increased regulation may also result in reduced economic activity, which would decrease the amount of insurable assets and businesses.

The full range of potential liability exposures related to changing climate conditions continues to evolve. Through the Company's Emerging Issues Committee and its Committee on Climate, Energy and the Environment, the Company works with its business units and corporate groups, as appropriate, to identify and try to assess climate change-related liability issues, which are continually evolving and often hard to fully evaluate. The Company regularly reviews emerging issues, including changing climate conditions, to consider potential changes to its modeling and the use of such modeling, as well as to help determine the need for new underwriting strategies, coverage modifications or new products. See "Risk Factors The effects of emerging claim and coverage issues on our business are uncertain."

**REINSURANCE RECOVERABLES**

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

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

(at December 31, in millions)	2017	2016
Gross reinsurance recoverables on paid and unpaid claims and claim adjustment expenses	\$ 3,303	\$ 3,181
Allowance for uncollectible reinsurance	(111)	(116)
<b>Net reinsurance recoverables</b>	<b>3,192</b>	<b>3,065</b>
Mandatory pools and associations	2,011	2,054
Structured settlements	3,106	3,168
<b>Total reinsurance recoverables</b>	<b>\$ 8,309</b>	<b>\$ 8,287</b>

The \$127 million increase in net reinsurance recoverables over December 31, 2016 primarily reflected the impacts of catastrophe losses and the asbestos reserve increase in 2017, partially offset by cash collections in 2017, including the settlement of certain disputes as discussed in more detail in note 16 of notes to the consolidated financial statements.

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The following table presents the Company's top five reinsurer groups by reinsurance recoverable at December 31, 2017 (in millions). Also included is the A.M. Best rating of each reinsurer group at February 15, 2018:

Reinsurer Group	Reinsurance Recoverable	A.M. Best Rating of Group's Predominant Reinsurer
Swiss Re Group	\$ 429	A+ second highest of 16 ratings
Berkshire Hathaway	271	A++ highest of 16 ratings
Munich Re Group	256	A+ second highest of 16 ratings
Sompo Japan Nipponkoa Group	199	A+ second highest of 16 ratings
XL Capital Group	164	A third highest of 16 ratings

At December 31, 2017, the Company held \$972 million of collateral in the form of letters of credit, funds and trust agreements held to fully or partially collateralize certain reinsurance recoverables.

Included in reinsurance recoverables are amounts related to structured settlements, which are annuities purchased from various life insurance companies to settle certain personal physical injury claims, of which workers' compensation claims comprise a significant portion. In cases where the Company did not receive a release from the claimant, the amount due from the life insurance company related to the structured settlement is included in the Company's consolidated balance sheet as a reinsurance recoverable and the related claim cost is included in the liability for claims and claim adjustment expense reserves, as the Company retains the contingent liability to the claimant. If it is expected that the life insurance company is not able to pay, the Company would recognize an impairment of the related reinsurance recoverable if, and to the extent, the purchased annuities are not covered by state guaranty associations. In the event that the life insurance company fails to make the required annuity payments, the Company would be required to make such payments. The following table presents the Company's top five groups by structured settlements at December 31, 2017 (in millions). Also included is the A.M. Best rating of the Company's predominant insurer from each insurer group at February 15, 2018:

Group	Structured Settlements	A.M. Best Rating of Group's Predominant Insurer
Fidelity & Guaranty Life Group(1)	\$ 855	B++ fifth highest of 16 ratings
Genworth Financial Group(2)	367	B+ sixth highest of 16 ratings
John Hancock Group	286	A+ second highest of 16 ratings
Brighthouse Financial, Inc.	280	A third highest of 16 ratings
Symetra Financial Corporation	258	A third highest of 16 ratings

(1) On November 30, 2017, CF Corporation acquired Fidelity & Guaranty Life and changed its name to FGL Holdings.

(2) On October 23, 2016, Genworth Financial (Genworth) announced that they have entered into a definitive agreement under which China Oceanwide Holdings Group Co., Ltd. (China Oceanwide) agreed to acquire all of the outstanding shares of Genworth. On March 7, 2017, Genworth stockholders adopted the merger agreement, and the acquisition is pending the receipt of required regulatory approvals. China Oceanwide is a privately held, family-owned international financial holding group headquartered in Beijing, China. On February 12, 2018, A.M. Best downgraded the financial strength rating of Genworth Life & Annuity Insurance Company to B+ (Good) from B++ (Good), and downgraded Genworth Life Insurance Company and Genworth Life Insurance Company of New York to B (Fair) from B (Fair) and has maintained the under-review status of all ratings and revised the implications to developing from negative. The parties to the transaction agreed to extend the closing deadline for the transaction until April 1, 2018.

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

**OUTLOOK**

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

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

Overall, the Company expects retention levels (the amount of expiring premium that renews, before the impact of renewal premium changes) will remain strong by historical standards during 2018. In Business Insurance, the Company expects that domestic renewal premium changes during 2018 will remain positive and will be higher than the levels attained in 2017. In Bond & Specialty Insurance, the Company expects that renewal premium changes with respect to domestic management liability business during 2018 will remain positive and will be broadly consistent with the levels attained in 2017. With respect to domestic surety business within Bond & Specialty Insurance, the Company expects that net written premium volume during 2018 will be slightly higher than in 2017. In Personal Insurance, the Company expects that domestic Agency Auto renewal premium changes will be positive and broadly consistent with the levels attained in 2017. The Company expects domestic Agency Auto renewal premium changes will be higher in the first half of 2018 and lower in the second half of 2018 compared with the same periods of 2017. The Company expects that domestic Agency Homeowners and Other renewal premium changes during 2018 will remain positive and will be slightly higher than the levels attained in 2017. The need for state regulatory approval for changes to personal property and casualty insurance prices, as well as competitive market conditions, may impact the timing and extent of renewal premium changes. Given the relatively smaller amount of premium that the Company generates from outside the United States and the transactional nature of some of those markets, particularly Lloyd's, international renewal premium changes in each segment during 2018 could be somewhat higher, broadly consistent with or somewhat lower than the levels attained in 2017.

Property and casualty insurance market conditions are expected to remain competitive during 2018 for new business. In each of the Company's business segments, new business generally has less of an impact on underwriting profitability than renewal business, given the volume of new business relative to renewal business. However, in periods of meaningful increases in new business, despite its positive impact on underwriting gains over time, the impact of higher new business levels may negatively impact the combined ratio for a period of time.

Economic conditions in the United States and elsewhere could change, due to a variety of factors, including the political and regulatory environment, the U.S. Federal budget and further potential changes in tax laws in the United States, the repeal, replacement or modification of the Affordable Care Act, the imposition of tariffs or other barriers to international trade, the United Kingdom's



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withdrawal from the European Union, rapid changes in commodity prices and fluctuations in interest rates and foreign currency exchange rates. The resulting changes in levels of economic activity could positively or negatively impact exposure changes at renewal and the Company's ability to write business at acceptable rates. Additionally, changes in levels of economic activity could positively or negatively impact audit premium adjustments, policy endorsements and mid-term cancellations after policies are written. All of the foregoing, in turn, could positively or negatively impact net written premiums during 2018, and because earned premiums are a function of net written premiums, earned premiums could be impacted on a lagging basis.

*Underwriting Gain/Loss.* The Company's underwriting gain/loss can be significantly impacted by catastrophe losses and net favorable or unfavorable prior year reserve development, as well as underlying underwriting margins.

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

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

It is possible that changes in economic conditions could lead to higher inflation than the Company had anticipated, which could in turn lead to an increase in the Company's loss costs and the need to strengthen claims and claim adjustment expense reserves. These impacts of inflation on loss costs and claims and claim adjustment expense reserves could be more pronounced for those lines of business that require a relatively longer period of time to finalize and settle claims for a given accident year and, accordingly, are relatively more inflation sensitive. For a further discussion, see "Part I Item 1A Risk Factors If actual claims exceed our claims and claim adjustment expense reserves, or if changes in the estimated level of claims and claim adjustment expense reserves are necessary, including as a result of, among other things, changes in the legal, regulatory and economic environments in which the Company operates, our financial results could be materially and adversely affected."

In Business Insurance, the Company expects underlying underwriting margins in 2018 will be higher than in 2017, and the underlying combined ratio will be slightly lower than in 2017, assuming lower (and more normalized) levels of non-catastrophe weather-related losses and other loss activity.

In Bond & Specialty Insurance, the Company expects that underlying underwriting margins and the underlying combined ratio for the first nine months of 2018 will be broadly consistent with the same period of 2017, and in the last quarter of 2018, the Company expects that underlying underwriting margins will be higher and the underlying combined ratio will be lower than in the same period of 2017.

In Personal Insurance, the Company expects underlying underwriting margins in 2018 will be higher than in 2017, and the underlying combined ratio will be slightly lower than in 2017. In Agency Automobile, the Company expects that underlying underwriting margins and the underlying combined ratio will improve during 2018 compared with 2017, reflecting actions taken to improve profitability. In Agency Homeowners and Other, the Company expects that underlying underwriting margins and the underlying combined ratio in 2018 will be broadly consistent with 2017, assuming lower (and more normalized) levels of non-catastrophe weather-related losses and other loss activity.

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*Income Taxes.* As a result of the decrease in the corporate federal income tax rate from 35% to 21% due to the enactment of the Tax Cuts and Jobs Act (TCJA) in December 2017, the Company's effective tax rate will decline in 2018. The Company expects its 2018 results of operations will benefit from the impact of that rate change. Under current GAAP reporting guidance, there is potential variability in the Company's effective tax rate due to the manner in which changes in corporate tax rates are reported on items reported in accumulated other comprehensive income (AOCI), particularly the tax related to unrealized gains and losses on fixed maturity securities. In February 2018, the FASB issued new accounting guidance to address the effects of the change in tax rates in the TCJA on items reported in AOCI; however, the new guidance is only applicable to changes resulting from the enactment of the TCJA and does not apply to future changes in tax laws and rates.

*Investment Portfolio.* The Company expects to continue to focus its investment strategy on maintaining a high-quality investment portfolio and a relatively short average eff