HANOVER INSURANCE GROUP, INC.
Form 10-K
February 22, 2019

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from: to

Commission file number: 1-13754

THE HANOVER INSURANCE GROUP, INC.

(Exact name of registrant as specified in its charter)

Delaware	04-3263626
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

440 Lincoln Street, Worcester, Massachusetts 01653

(Address of principal executive offices) (Zip Code)

(508) 855-1000

(Registrant's telephone number, including area code)

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

Title of each class	Name of each exchange on which registered
Common Stock, $.01 par value	New York Stock Exchange
7 5/8% Senior Debentures due 2025	New York Stock Exchange
6.35% Subordinated Debentures due 2053	New York Stock Exchange

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

NONE

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months. 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 the 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 Exchange Act.

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

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

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

Based on the closing sales price of June 29, 2018, the aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant was $5,058,103,806.

The number of shares outstanding of the registrant’s common stock, $0.01 par value, was 40,573,500 shares as of February 15, 2019.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of The Hanover Insurance Group, Inc.’s Proxy Statement to be filed pursuant to Regulation 14A relating to the 2019 Annual Meeting of Shareholders to be held May 14, 2019 are incorporated by reference in Part III.

Table of Contents

THE HANOVER INSURANCE GROUP, INC.

ANNUAL REPORT ON FORM 10-K

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2018

TABLE OF CONTENTS

PART I

ITEM 1 — BUSINESS

ORGANIZATION

The Hanover Insurance Group, Inc. ("THG") is a holding company organized as a Delaware corporation in 1995. We trace our roots to as early as 1852, when the Hanover Fire Insurance Company was founded. Our primary business operations are property and casualty insurance products and services. We market our products and services through independent agents and brokers in the United States ("U.S."). Our consolidated financial statements include the accounts of THG; The Hanover Insurance Company ("Hanover Insurance") and Citizens Insurance Company of America ("Citizens"), which are our principal property and casualty subsidiaries; and other insurance and non-insurance subsidiaries. Our results of operations also include the results of our discontinued operations, consisting primarily of our former Chaucer international business, as well as our former accident and health, and life insurance businesses. As discussed further in "Discontinued Operations" below, on December 28, 2018, we completed the sale of Chaucer Holdings Limited, the major portion of our Lloyd's international specialty business, to China Reinsurance (Group) Corporation ("China Re"). We subsequently completed the sale of our Chaucer-related Irish entity on February 14, 2019. The sale of the Australian entities is pending, subject only to local regulatory approval, and is expected to close in the first quarter of 2019.

INFORMATION ABOUT OPERATING SEGMENTS

We conduct our business operations through three operating segments. These segments are Commercial Lines, Personal Lines, and Other. We report interest expense related to our corporate debt separately from the earnings of our operating segments.

Information with respect to each of our segments is included in "Results of Operations - Segments" in Management's Discussion and Analysis of Financial Condition and in Note 14 – "Segment Information" in the Notes to Consolidated Financial Statements.

Information with respect to geographic concentrations is included in "Marketing and Distribution" below in Part 1 – Item 1 and in Note 14 – "Segment Information" in the Notes to Consolidated Financial Statements.

The following is a discussion of our operating segments.

GENERAL

In our Commercial Lines and Personal Lines segments, we underwrite commercial and personal property and casualty insurance through Hanover Insurance, Citizens and other THG subsidiaries, through an independent agent and broker network concentrated in the Northeast, Midwest and Southeast U.S. We also continue to actively grow our Commercial Lines' presence in the Western region of the U.S., particularly in California, which now is our largest state for Commercial Lines as measured by net premiums written. Included in our Other segment are Opus Investment Management, Inc. ("Opus"), a wholly owned subsidiary of THG, which provides investment management services to our insurance and non-insurance companies, as well as to unaffiliated institutions, pension funds and other organizations; earnings on holding company assets; holding company and other expenses, including certain costs associated with retirement benefits due to former life insurance employees and agents; and a run-off voluntary pools business.

Our business strategy focuses on providing our agents and customers with competitive insurance products delivered with clear and consistent underwriting and pricing expectations, while prudently growing and diversifying our product and geographical business mix. We conduct our business with an emphasis on disciplined underwriting, pricing, quality claim handling, and customer service. In 2018, we wrote approximately $4.8 billion in gross premiums. Agency relationships and active agency management are core to our strategy. Based on net premiums written, we rank among the top 25 property and casualty insurers in the United States.

RISKS

The industry's and our profitability are each significantly affected by numerous factors, including price; competition; volatile and unpredictable developments, such as extreme weather conditions, catastrophes and other disasters; legal and regulatory developments affecting pricing, underwriting, policy coverage and other aspects of doing business, as well as insurer and insureds' liability; extra-contractual liability; increased attorney involvement; size of jury awards; acts of terrorism; fluctuations in interest rates or the value of investments; and other general economic conditions and trends, such as inflationary pressure or unemployment, that may affect the adequacy of reserves or the demand for insurance products. Our investment portfolio and its future returns are impacted by the capital markets and current economic conditions, which affect our liquidity, realized losses and impairments, credit default levels, our ability to hold such investments until recovery and other factors. Additionally, the economic conditions in geographic locations where we conduct business, especially those locations where our business is concentrated, affect the growth and profitability of our business. The regulatory environments in those locations, including any pricing, underwriting or product controls, shared market mechanisms or mandatory pooling arrangements, and other conditions, such as our agency relationships, affect the growth and profitability of our business. Our loss and loss adjustment expense ("LAE") reserves are based on estimates, principally involving case assessments and actuarial projections, at a given time, of what we expect the ultimate settlement and administration of claims will cost based on facts and circumstances then known, predictions of future events, estimates of future trends in claims frequency and severity and judicial

Table of Contents

theories of liability, costs of repairs and replacement, legislative activity and other factors. We regularly reassess our estimate of loss reserves and LAE, both for current and past years, and resulting changes have and will affect our reported profitability and financial position.

Reference is also made to "Risk Factors" in Part 1 – Item 1A.

LINES OF BUSINESS

Commercial Lines

Our Commercial Lines segment generated $2.7 billion, or 60.3%, of consolidated operating revenues and $2.6 billion, or 59.5%, of net premiums written, for the year ended December 31, 2018.

The following table provides net premiums written by line of business for our Commercial Lines segment.

YEAR ENDED DECEMBER 31, 2018	Net Premiums Written	% of Total
(in millions, except ratios)		
Commercial multiple peril	$ 861.4	33.0 %
Commercial automobile	344.8	13.2
Workers' compensation	317.1	12.1
Other commercial lines:		
Inland marine	268.2	10.3
Management and professional liability	229.9	8.8
AIX program business	223.2	8.5
Surety	72.5	2.8
Specialty property	64.1	2.5
Other	229.5	8.8
Total	$ 2,610.7	100.0%

Our Commercial Lines product suite provides agents and customers with products designed for small, middle and specialized markets.

Commercial Lines coverages include:

Commercial multiple peril coverage insures businesses against third-party general liability from accidents occurring on their premises or arising out of their operations, such as injuries sustained from products sold. It also insures business property for damage, such as that caused by fire, wind, hail, water damage (which may include flood), theft and vandalism.

Commercial automobile coverage insures 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 property.

Commercial automobile policies are often written in conjunction with other commercial policies.

Workers' compensation coverage insures employers against employee medical and indemnity claims resulting from injuries related to work. Workers' compensation policies are often written in conjunction with other commercial policies.

Other commercial lines is comprised of:

- inland marine coverage insures businesses against physical losses to property, such as contractor's equipment, builders' risk and goods in transit, and also covers jewelers block, fine art and other valuables;
- management and professional liability coverage provides protection for directors and officers of companies that may be sued in connection with their performance, and errors and omissions protection to companies and individuals against negligence or bad faith, as well as protection for employment practices liability and fidelity and crime;
- AIX program business provides coverage to markets where there are specialty coverage or risk management needs related to groups of similar businesses, including commercial multiple peril, workers' compensation, commercial automobile, general liability and other commercial coverages;
- surety provides businesses with contract surety coverage in the event of performance or non-payment claims, and commercial surety coverage related to fiduciary or regulatory obligations;
- specialty property provides insurance to small and medium-sized chemical, paint, solvent and other manufacturing and distribution companies; and

Table of Contents

- other commercial lines coverages include umbrella, healthcare, miscellaneous commercial property, and monoline general liability. Our healthcare coverage includes product liability, medical professional liability and general liability coverages for selected portions of the healthcare industry, including eldercare providers, durable medical equipment suppliers, podiatrists and behavioral health specialists.

Our strategy in Commercial Lines focuses on building deep relationships with partner independent agents through differentiated product offerings, industry segmentation, and franchise value through limited distribution. We continue to make enhancements to our products and technology platforms that are intended to drive more total account placements in our small commercial and middle market business, while delivering enhanced margins in our specialty businesses. This aligns with our focus of delivering the capabilities that will help expand the depth and breadth of our partnerships with a limited number of agents.

Our small commercial, middle market and specialty businesses each constitute approximately one-third of our total Commercial Lines business. Small commercial offerings, which generally include premiums of $50,000 or less, deliver value through product expertise, local presence, and ease of doing business. Middle market accounts, with premiums generally in the range of $50,000 to $250,000, require greater claim and underwriting expertise, as well as a focus on industry segments where we can deliver differentiation in the market and value to agents and customers. Small and middle market accounts comprise approximately $1.7 billion of the Commercial Lines segment net premiums written. Our specialty lines of business include inland marine, management and professional liability, AIX program business, surety and specialty property.

In our small commercial and middle market businesses, we offer coverages and capabilities in several key industries including technology, schools, and human services organizations, such as non-profit youth and community service organizations. We also provide further segmentation in our core middle market commercial products, including real estate, hospitality, manufacturing, contractors and wholesale distributors.

Part of our strategy is to expand our specialty lines offerings in order to provide our agents and policyholders with a broader product portfolio and to increase our market share of our partner agents’ total business. We have over time acquired various specialized businesses aimed at further diversifying and growing our specialty lines. We used these acquisitions as platforms to expand our product offerings and grow through our existing agency and broker distribution network.

We believe our small commercial capabilities, distinctiveness in the middle market, and continued development of specialty business provides us with a more diversified portfolio of products and enables us to deliver significant value to our agents and policyholders. We believe these efforts will enable us to continue to improve the overall mix of our business and ultimately our underwriting profitability.

Personal Lines

Our Personal Lines segment generated $1.8 billion, or 39.4%, of consolidated operating revenues and $1.8 billion, or 40.5%, of net premiums written, for the year ended December 31, 2018.

The following table provides net premiums written by line of business for our Personal Lines segment.

	Net Premiums

YEAR ENDED DECEMBER 31, 2018 (in millions, except ratios)	Written	% of Total
Personal automobile	$ 1,127.5	63.6 %
Homeowners	604.0	34.0
Other	42.6	2.4
Total	$ 1,774.1	100.0%

Personal Lines coverages include:

Personal automobile coverage insures individuals 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.

Homeowners coverage insures individuals for losses to their residences and personal property, such as those caused by fire, wind, hail, water damage (excluding flood), theft and vandalism, and against third-party liability claims.

Other personal lines are comprised of personal inland marine (jewelry, art, etc.), umbrella, fire, personal watercraft, earthquake and other miscellaneous coverages.

Our strategy in Personal Lines is to provide account–oriented business (i.e., writing both an insured's automobile and homeowners insurance) through our partner agencies, with a focus on increasing geographic diversification. The market for our Personal Lines business is very competitive, with continued pressure on independent agents from direct writers, as well as from the increased usage of real time comparative rating tools and increasingly sophisticated rating and pricing tools. We maintain a focus on partnering with high quality, value-added agencies that stress the importance of consultative selling and account rounding (the conversion of single policy customers to accounts with multiple policies and/or additional coverages). We are focused on making investments that are intended to help us maintain profitability, build a distinctive position in the market, and provide us with profitable growth opportunities. We continue to refine our products and to work closely with these high potential agents to increase the percentage of business they place with us and to ensure that it is consistent with our preferred mix of business. Additionally, we remain focused on further diversifying our state mix beyond the largest historical core states of Michigan, Massachusetts and New York. We expect these efforts to decrease our risk concentrations and our dependency on these three states, as well as to contribute to improved profitability over time.

Other

The Other segment consists of: Opus, which provides investment advisory services to affiliates and also manages approximately $3.1 billion of assets for unaffiliated institutions such as insurance companies, retirement plans and foundations, including $1.6 billion of funds managed for Chaucer subsequent to the completion of the sale. We anticipate that we will continue to manage these assets in connection with a new investment management arrangement. The Other segment also includes earnings on holding company assets; holding company and other expenses, including certain costs associated with retirement benefits due to former life insurance employees and agents; and our run-off voluntary pools business.

MARKETING AND DISTRIBUTION

We serve a variety of standard, specialty and targeted industry markets. Consistent with our objective to diversify our underwriting risks on a geographic and line of business basis, we currently have a split of approximately 40% Personal Lines, 40% core Commercial Lines, and 20% specialty lines. Commercial Lines, including our small, middle market and specialty businesses, and Personal Lines segments distribute our products primarily through an independent agent network.

Commercial and Personal Lines

Our Commercial and Personal Lines agency distribution and field structure are designed to maintain a strong focus on local markets and the flexibility to respond to specific market conditions. During 2018, we wrote 20.5% of our Commercial and Personal Lines business in Michigan and 9.6% in Massachusetts. Our structure is a key factor in the establishment and maintenance of productive, long-term relationships with well-established independent agencies. We maintain 41 local offices across 28 states. The majority of processing support for these locations is provided from Worcester, Massachusetts; Howell, Michigan; Salem, Virginia; and Windsor, Connecticut.

Independent agents account for substantially all of the sales of our Commercial and Personal Lines property and casualty products. Agencies are appointed based on profitability, track record, financial stability, professionalism, and business strategy. Once appointed, we monitor their performance and, subject to legal and regulatory requirements, may take actions as necessary to change these business relationships, such as discontinuing the authority of the agent to underwrite certain products or revising commissions or bonus opportunities. We compensate agents primarily through base commissions and bonus plans that are tied to an agency’s written premium, growth and profitability.

We are licensed to sell property and casualty insurance in all fifty states in the U.S., as well as in the District of Columbia. Throughout the U.S., we actively market Commercial Lines policies in 37 states and Personal Lines policies in 18 states.

Table of Contents

The following table provides our top Commercial and Personal Lines geographical markets based on total net premiums written in the state in 2018.

YEAR ENDED DECEMBER 31, 2018 (in millions, except ratios)	Commercial Lines Net Premiums Written	% of Total	Personal Lines Net Premiums Written	% of Total	Total Commercial and Personal Lines Net Premiums Written	% of Total
Michigan	$133.7	5.1 %	$766.5	43.2 %	$900.2	20.5 %
Massachusetts	186.6	7.1	234.8	13.2	421.4	9.6
New York	229.9	8.8	128.1	7.2	358.0	8.2
California	317.2	12.1	—	—	317.2	7.2
Illinois	119.1	4.6	96.3	5.4	215.4	4.9
Texas	207.0	7.9	—	—	207.0	4.7
New Jersey	138.1	5.3	57.1	3.2	195.2	4.5
Connecticut	58.8	2.3	89.8	5.1	148.6	3.4
Georgia	80.7	3.1	54.1	3.0	134.8	3.1
Maine	63.4	2.4	49.3	2.8	112.7	2.6
Virginia	74.4	2.8	36.2	2.0	110.6	2.5
Indiana	51.7	2.0	36.5	2.1	88.2	2.0
Florida	86.6	3.3	(0.1)	—	86.5	2.0
Tennessee	50.1	1.9	35.0	2.0	85.1	1.9
Wisconsin	48.3	1.9	35.5	2.0	83.8	1.9
New Hampshire	42.2	1.6	33.8	1.9	76.0	1.7
Louisiana	39.3	1.5	35.6	2.0	74.9	1.7
North Carolina	66.4	2.5	2.8	0.2	69.2	1.6
Minnesota	68.7	2.6	—	—	68.7	1.6
Pennsylvania	60.0	2.3	8.7	0.5	68.7	1.6
Other	488.5	18.9	74.1	4.2	562.6	12.8
Total	$2,610.7	100.0%	$1,774.1	100.0%	$4,384.8	100.0%

We manage our Commercial Lines portfolio, which includes our core and specialty businesses, with a focus on growth from the most profitable industry segments within our underwriting expertise. Our core business is generally comprised of several coordinated commercial lines of business, including small and middle market accounts, which include targeted industry segments. Such business is split between small accounts, generally having less than $50,000 in premium, and middle market accounts, those with premium over $50,000, with most middle market accounts having less than $250,000 of premium. Additionally, we have multiple specialty lines of business, which include inland marine, management and professional liability, AIX program business, surety and specialty property. The Commercial Lines segment seeks to maintain strong agency relationships as an approach to secure and retain our agents' best business. We monitor quality of business written through ongoing quality reviews, accountability for which is shared at the local, regional and corporate levels.

We manage Personal Lines business with a focus on acquiring and retaining preferred accounts. Currently, approximately 84% of our policies in force are account business. Approximately 56% of our Personal Lines net premium written is generated in the combined states of Michigan and Massachusetts. In Michigan, based upon direct premiums written for 2018, we underwrite approximately 6% of the state's total market.

Approximately 68% of our Michigan Personal Lines business is in the personal automobile line and 31% is in the homeowners line. Michigan business represents approximately 46% of our total personal automobile net premiums written and approximately 39% of our total homeowners net premiums written. In Michigan, we are a principal market for many of our appointed agencies, with approximately $2.0 million of total direct premiums written per agency in 2018.

Approximately 69% of our Massachusetts Personal Lines business is in the personal automobile line and 29% is in the homeowners line. Massachusetts business represents approximately 14% of our total personal automobile net premiums written and approximately 11% of our total homeowners net premiums written.

We sponsor local and national agent advisory councils to gain the benefit of our agents' insight and enhance our relationships. These councils provide feedback, input on the development of products and services, guidance on marketing efforts, support for our strategies, and assist us in enhancing our local market presence.

Table of Contents

Other

With respect to our Other segment business, we market our investment advisory services directly through Opus.

PRICING AND COMPETITION

The property and casualty industry is a very competitive market. Our competitors include national, international, regional and local companies that sell insurance through various distribution channels, including independent agencies, captive agency forces, brokers and direct to consumers through the internet or otherwise. They also include mutual insurance companies, reciprocals and exchanges. In the Commercial and Personal Lines segments, we market through independent agents and brokers and compete for business on the basis of product, price, agency and customer service, local relationships, ratings, and effective claims handling, among other things. We believe that our emphasis on maintaining strong agency relationships and a local presence in our markets, coupled with investments in products, operating efficiency, technology and effective claims handling, enable us to compete effectively. Our broad product offerings in Commercial Lines and total account strategy in Personal Lines are instrumental to our ability to capitalize on these relationships and improve profitability.

We seek to achieve targeted combined ratios in each of our product lines. Targets vary by product and geography and change with market conditions. The targeted combined ratios reflect competitive market conditions, investment yield expectations, our loss payout patterns, and target returns on equity. This approach is intended to enable us to achieve measured growth and consistent profitability.

For all major product lines in the Commercial and Personal Lines segments, we employ pricing teams which produce exposure and experience-based rating models to support underwriting and pricing decisions. In addition, we seek to utilize our understanding of local markets to achieve superior underwriting results. We rely on market information provided by our local agents and on the knowledge of staff in the local branch offices. Since we maintain a strong regional focus and a significant market share in a number of states, we can better apply our knowledge and experience in making underwriting and rate setting decisions. Also, we seek to gather objective and verifiable information at a policy level during the underwriting process, including prior loss experience, past driving records and, where permitted, credit histories.

CLAIMS MANAGEMENT

Claims management includes the receipt of initial loss notifications, generation of appropriate responses to claim reports, loss appraisals, identification and handling of coverage issues, determination of whether further investigation is required, retention of legal representation where appropriate, establishment of case reserves, approval of loss payments and notification to reinsurers. Part of our strategy focuses on efficient, timely, and fair claim settlements to meet customer service expectations and maintain valuable independent agent relationships. Additionally, effective claims management is important to our business since claim payments and related loss adjustment expenses are our single largest expenditures.

We utilize experienced claims adjusters, appraisers, medical specialists, managers and attorneys to manage our claims. Our U.S. property and casualty operations have field claims adjusters located throughout the states and regions in which we do business. Claims field staff members work closely with the independent agents who bound the policies under which coverage is claimed. Claims office adjusting staff is supported by general adjusters for large property and large casualty losses, by automobile and heavy equipment damage appraisers for automobile material damage losses, and by medical specialists whose principal concentration is on workers' compensation and automobile injury cases.

Additionally, the claims offices are supported by staff attorneys, both in the home office and in regional locations, who specialize in litigation defense and claim settlements. We have a catastrophe response team to assist policyholders impacted by severe weather events. This team mobilizes quickly to impacted regions, often in advance for a large tracked storm, to support our local claims adjusters and facilitate a timely response to resulting claims. We also maintain a special unit that investigates suspected insurance fraud and abuse. We utilize claims processing technology which allows most of the smaller and more routine Personal Lines claims to be processed at centralized locations.

CATASTROPHES

We are subject to claims arising out of catastrophes, which historically have had a significant impact on our results of operations and financial condition. Coverage for such events is a core part of our business, and we expect to experience catastrophe losses in the future, which could have a material adverse impact on our financial results and position. Catastrophes can be caused by various events, including, among others, hurricanes, tornadoes and other windstorms, earthquakes, hail, severe winter weather, fire, explosions, and terrorism. The incidence and severity of catastrophes are volatile and difficult to predict.

We endeavor to manage our catastrophe risks through underwriting procedures, including the use of deductibles and specific exclusions for floods and earthquakes, subject to regulatory restrictions and competitive pressures, and through geographic exposure management and reinsurance. The catastrophe reinsurance program is structured to protect us on a per-occurrence and aggregate excess basis. We monitor geographic location and coverage concentrations in order to manage corporate exposure to catastrophic events. Although catastrophes can cause losses in a variety of property and casualty lines, commercial multiple peril and homeowners property coverages have, in the past, generated the majority of catastrophe-related claims.

Table of Contents

REINSURANCE

Reinsurance Program Overview

We maintain ceded reinsurance programs designed to protect against large or unusual loss and LAE activity. We utilize a variety of proportional and non-proportional reinsurance agreements, which are intended to control our individual policy and aggregate exposure to large property and casualty losses, stabilize earnings and protect capital resources. These programs include facultative reinsurance (to limit exposure on a specified policy); specific excess and proportional treaty reinsurance (to limit exposure on individual policies or risks within specified classes of business); and catastrophe excess of loss reinsurance (to limit exposure to any one event that might impact more than one individual contract). Our proportional reinsurance consists of quota share reinsurance agreements and our non-proportional reinsurance includes excess of loss and stop loss reinsurance agreements.

Catastrophe reinsurance protects us, as the ceding insurer, from significant losses arising from a single event including, among others, hurricanes, tornadoes and other windstorms, earthquakes, hail, severe winter weather, fire, explosions and terrorism. We determine the appropriate amount of reinsurance based upon our evaluation of the risks insured, exposure analyses prepared by consultants, our risk appetite and on market conditions, including the availability and pricing of reinsurance. Although we believe our catastrophe reinsurance program, including our retention and co-participation amounts for 2019, is appropriate given our surplus level and the current reinsurance pricing environment, there can be no assurance that our reinsurance program will provide coverage levels that will prove adequate should we experience losses from one significant or several large catastrophes during 2019. Additionally, as a result of the current economic environment, as well as losses incurred by reinsurers in the past several years, the availability and pricing of appropriate reinsurance programs may be adversely affected in future renewal periods. We may not be able to pass these costs on to policyholders in the form of higher premiums or assessments.

We cede to reinsurers a portion of our risk based upon insurance policies subject to such reinsurance. Reinsurance contracts do not relieve us from our obligations to policyholders. Failure of reinsurers to honor their obligations could result in losses to us. We believe that the terms of our reinsurance contracts are consistent with industry practice in that they contain standard terms with respect to lines of business covered, limit and retention, arbitration and occurrence. We believe our reinsurers are financially sound, based upon our ongoing review of the financial strength ratings assigned to them by rating agencies, their reputations in the reinsurance marketplace, our collections history, advice from third parties, and the analysis and guidance of our reinsurance advisors.

Although we exclude coverage of nuclear, chemical or biological events from the Personal Lines and Commercial Lines policies we write in the U.S., we are statutorily required to provide this coverage in our workers' compensation policies. We have workers' compensation reinsurance coverage under our casualty reinsurance treaty of approximately $80 million for terrorism losses, limited to approximately $10 million for losses that result from nuclear, chemical or biological events. All other U.S.-based exposure or treaties exclude such coverage. Further, under The Terrorism Risk Insurance Program Reauthorization Act of 2015 ("TRIPRA"), our share of U.S. domestic losses in 2018 from such events, if deemed certified terrorist events, is limited to 18% of losses in excess of an approximate $412 million deductible, up to a combined annual aggregate limit for the federal government and all insurers of $100 billion. Such events could be material to our financial position or results of operations. See also "Terrorism" below for additional information.

Reference is made to Note 16 — "Reinsurance" in the Notes to Consolidated Financial Statements. Reference is also made to "Involuntary Residual Markets".

Our 2019 reinsurance program for our Commercial Lines and Personal Lines segments is substantially consistent with our 2018 program design. The following discussion summarizes both our 2018 and 2019 reinsurance programs for our Commercial Lines and Personal Lines segments (excluding coverage available under the U.S. federal terrorism program which is described under "Terrorism"), but does not purport to be a complete description of the program or the various restrictions or limitations which may apply:

- Our Commercial Lines and Personal Lines segments are primarily protected by a property catastrophe occurrence treaty, a property per risk excess of loss treaty, as well as a casualty excess of loss treaty, with retentions of $200 million, $2 million, and $2 million, respectively. We have lower retentions in place for certain lines, as discussed below.
- The property catastrophe occurrence treaty provides coverage, on an occurrence basis, up to $1.1 billion countrywide, less a $200 million retention, with no co-participation, for all defined perils. Effective July 1, 2018, we added a top and aggregate feature which provides for up to $75 million of coverage in excess of $300 million in aggregate domestic losses, or against a single extreme event on the top of our $1.1 billion reinsurance treaty. The domestic catastrophe losses subject to the aggregate feature are limited only to those events that exceed $7.5 million of incurred losses.
- The property per risk excess of loss treaty provides coverage, on a per risk basis, up to $100 million, less a $2 million retention, with a co-participation for the second half of 2018 and the first half of 2019 of 25% for reinsurance placed in the $2 million to $3 million layer and no co-participation for reinsurance placed in the $3 million to $100 million layer.

Table of Contents

- The casualty excess of loss treaty provides coverage, on a per occurrence basis for each loss, up to $75 million less a $2 million retention, with no co-participation. Umbrella and excess liability lines share coverage with casualty lines within the $2 million to $10 million layers, subject to a maximum umbrella limit of $5 million. There is also separate umbrella and excess liability only coverage that provides protection for the $5 million to $25 million layer. The casualty program provides coverage for management liability and healthcare lines in a $1 million to $2 million layer, with co-participations ranging from 45% to 65%.
- For 2018 and 2019, Commercial Lines segments are further protected by excess of loss treaty agreements for specific lines of business. For example, the surety and fidelity bond excess of loss treaty provides coverage, on a per principal basis, up to $40 million, less a $5 million retention, with co-participations of 50% for the $5 million to $10 million layer and no co-participation for the $10 million to $40 million layer.
- In addition to certain layers of coverage from our Commercial and Personal Lines segment reinsurance program as described above, the Commercial Lines AIX Holdings, Inc. ("AIX") program business also includes surplus share, quota share, excess of loss, stop loss, facultative and other forms of reinsurance that cover the writings from AIX specialty and proprietary programs. There are approximately 55 different AIX programs, and the reinsurance structure is customized to fit the exposure profile for each program.

Our intention is to renew the surety and fidelity bond treaty, the property per risk excess of loss treaty and the property catastrophe treaty in July 2019 with the same or similar terms and conditions, but there can be no assurance that we will be able to maintain our current levels of reinsurance, pricing and terms and conditions. Our 2019 casualty excess of loss treaty is effective January 1, 2019 for a twelve month period.

Reinsurance Recoverables

We share insurance risk of the primary underlying contracts with various insurance entities through the use of reinsurance contracts. As a result, when we experience loss events that are subject to a reinsurance contract, reinsurance recoveries are recorded. The amount of the reinsurance recoverable can vary based on the size of the individual loss or the aggregate amount of all losses in a particular line, book of business or an aggregate amount associated with a particular accident year. The valuation of losses recoverable depends on whether the underlying loss is a reported loss, or an incurred but not reported loss. For reported losses, we value reinsurance recoverables at the time the underlying loss is recognized, in accordance with contract terms. For incurred but not reported losses, we estimate the amount of reinsurance recoverable based on the terms of the reinsurance contracts and historical reinsurance recovery information and apply that information to the gross loss reserve estimates. The most significant assumption we use is the average size of the individual losses that will exceed our reinsurance retentions for those claims that have occurred but have not yet been reported to us. The reinsurance recoverable is based on what we believe are reasonable estimates and is disclosed separately on the financial statements. However, the ultimate amount of the reinsurance recoverable is not known until all losses are settled.

Other than our investment portfolio, the single largest asset class is our reinsurance receivables, which consist of our estimate of amounts recoverable from reinsurers with respect to losses incurred to date (including losses incurred but not reported) and unearned premiums, net of amounts estimated to be uncollectible. These estimates are expected to be revised at each reporting period and such revisions, which could be material, affect our results of operations and financial position. Reinsurance recoverables include amounts due from state mandatory reinsurance or other involuntary risk sharing mechanisms, and private reinsurers to whom we have voluntarily ceded business.

We are subject to concentration of risk with respect to reinsurance ceded to various mandatory residual markets, facilities and pooling mechanisms. As a condition to conduct business in various states, we are required to participate in residual market mechanisms, facilities and pooling arrangements which usually are designed to provide insurance coverages to individuals or other entities that are otherwise unable to purchase such coverage voluntarily or at rates deemed reasonable. These market mechanisms, facilities and pooling arrangements comprise $990.9 million of our total reinsurance recoverables on paid and unpaid losses and unearned premiums at December 31, 2018, $977.1 million of which is attributable to the Michigan Catastrophic Claims Association ("MCCA").

The MCCA is a mandatory reinsurance association which reinsures claims under Michigan's unlimited personal injury protection coverage which is required under all Michigan automobile insurance policies. The MCCA reinsures all such claims in excess of a statutorily established company retention, currently $555,000. Funding for MCCA comes from assessments against automobile insurers based upon their share of insured automobiles in the state. Insurers are allowed to pass along this cost to Michigan automobile policyholders. This recoverable accounted for 64% and 63% of our total personal automobile gross reserves at December 31, 2018 and 2017, respectively. Reinsurance recoverables related to MCCA were $977.1 million and $930.6 million at December 31, 2018 and 2017, respectively. Because the MCCA is supported by assessments permitted by statute, and there have been no significant uncollectible balances from MCCA identified during the three years ending December 31, 2018, we believe that we have no significant exposure to uncollectible reinsurance balances from this entity.

Table of Contents

In addition to the reinsurance ceded to various residual market mechanisms, facilities, and pooling arrangements we have $655.9 million of reinsurance assets due from traditional reinsurers as of December 31, 2018. These amounts are due principally from highly-rated reinsurers, defined as rated A- or higher by A.M. Best or other equivalent rating agency. The following table displays balances recoverable from our ten largest reinsurance groups at December 31, 2018, along with the A.M. Best rating for each group's ultimate parent or lead rating unit. Reinsurance recoverables are comprised of paid losses recoverable, outstanding losses recoverable, incurred but not reported losses recoverable, and ceded unearned premium.

REINSURERS (in millions)	A.M. Best Rating	Reinsurance Recoverable
HDI Group (Hannover Ruckversicherungs AG)	A	$ 105.0
Lloyd's Syndicates	A	79.4
Alleghany Corporation (Transatlantic Reinsurance Co.)	A	61.9
Munich Reinsurance Companies	A+	56.5
Toa Reinsurance Company Ltd.	A	55.1
Swiss Re Ltd.	A+	48.7
Axis Capital Holding Ltd.	A+	27.4
EXOR N.V. (Partner Reinsurance Company of the U.S.)	A	19.8
Tokio Marine Holdings Inc.	A+	15.1
Berkshire Hathaway Inc.	A++	14.7
Subtotal		483.6
All other reinsurers		172.3
Residual markets, facilities, and pooling arrangements		990.9
Total		$ 1,646.8

Reinsurance recoverable balances in the table above are shown before consideration of balances owed to reinsurers and any potential rights of offset, including collateral held by us, and are net of an allowance for uncollectible recoverables. Reinsurance treaties are generally purchased on an annual basis. Treaties typically contain provisions that allow us to demand that a reinsurer post letters of credit or assets as security if a reinsurer is an unauthorized reinsurer under applicable regulations or if its rating falls below a predetermined contractual level. In regards to reinsurance recoverables due from Lloyd's Syndicates, as part of the Lloyd's "chain of security" afforded to all of its policyholders, recourse is available to the Lloyd's Central Fund in the event of the failure of an individual syndicate and its capital providers.

Although reinsurance makes the reinsurer liable to us to the extent the risk is transferred or ceded to the reinsurer, ceded reinsurance arrangements do not eliminate our obligation to pay claims to our policyholders. Accordingly, we bear credit risk with respect to our reinsurers. Specifically, our reinsurers may not pay claims made by us on a timely basis, or they may not pay some or all of these claims. In addition, from time to time insurers and reinsurers may disagree on the scope of the reinsurance or on the underlying insured risks. Any of these events would increase our costs and could have a material adverse effect on our business.

We have established a reserve for uncollectible reinsurance of $3.9 million as of December 31, 2018, or 0.2% of the total reinsurance recoverable balance, which was determined by considering reinsurer specific default risk on paid and unpaid recoverables as indicated by their financial strength ratings, any ongoing solvency issues, any current risk of dispute on paid recoverables, and our past collection experience. There have been no significant balances determined to be uncollectible and thus no significant charges recorded during 2018 for uncollectible reinsurance recoverables.

Our exposure to credit risk from any one reinsurer is managed through diversification by reinsuring with a number of different reinsurers, principally in the United States and European reinsurance markets. When reinsurance for our Commercial and Personal Lines segments is placed, our standards of acceptability generally require that a reinsurer must have a minimum policyholder surplus of $500 million, a rating from A.M. Best and/or S&P of "A" or better, or an equivalent financial strength if not rated. In addition, for lower rated reinsurers, certain reinsurers for our insurance operations that have not been granted authorized status by an insurance company's state of domicile, and in certain other circumstances, reinsurers must generally provide collateral equal to 100% of estimated reinsurance recoverables. The collateral can serve to mitigate credit risk.

ANALYSIS OF LOSS AND LOSS ADJUSTMENT EXPENSE RESERVE DEVELOPMENT

Information regarding loss and LAE reserve development appears in Note 17 – "Liabilities For Outstanding Claims, Losses and Loss Adjustment Expenses" in the Notes to Consolidated Financial Statements. Additionally, see "Reserve for Losses and Loss Adjustment Expenses" in Management's Discussion and Analysis of Financial Condition for discussion of prior year development.

Table of Contents

TERRORISM

As a result of the continuing threat of terrorist attacks, the insurance industry maintains a high level of focus with respect to the potential for losses caused by terrorist acts. Insured losses may encompass people, property and business operations covered under workers' compensation, commercial multiple peril and other Commercial Lines policies, as well as Personal Lines policies. In certain cases, we are not able to exclude coverage for these losses, either because of regulatory requirements or competitive pressures. We continually evaluate the potential effect of these low frequency, but potentially high severity events in our overall pricing and underwriting plans, especially for policies written in major metropolitan areas.

Although certain terrorism-related risks embedded in our Commercial and Personal Lines are covered under the existing Catastrophe, Property per Risk and Casualty Excess of Loss corporate reinsurance treaties (see "Reinsurance" for additional information), private sector catastrophe reinsurance is limited and generally unavailable for losses attributed to acts of terrorism, particularly those involving nuclear, biological, chemical and/or radiological events. As a result, the industry's primary reinsurance protection against large-scale terrorist attacks in the U.S. is provided through a Federal program that provides compensation for insured losses resulting from acts of terrorism.

The Terrorism Risk Insurance Act of 2002 first established the Terrorism Risk Insurance Program (the "Program"). Coverage under the Program applies to workers' compensation, commercial multiple peril, and certain other Commercial Lines policies for direct written policies. TRIPRA extended the Program through December 31, 2020. All commercial property and casualty insurers participate in the program. Under the program, a participating issuer, in exchange for making terrorism insurance available, may be entitled to be reimbursed by the Federal government for a portion of its aggregate losses. The Program does not cover losses in surety, Personal Lines or certain other lines of business. Losses caused by terrorist acts are not excluded from homeowners or personal automobile policies.

As required by the current Program, we offer policyholders in specific lines of commercial insurance the option to elect terrorism coverage. In order for a loss to be reinsured under the Program, the loss must meet aggregate industry loss minimums and must be the result of an act of terrorism as certified by the Secretary of the Treasury in consultation with the Secretary of Homeland Security and the U.S. Attorney General. Losses from acts which do not qualify or are not so certified will not receive the benefit of the Program and in fact, may be deemed covered losses whether or not terrorism coverage was purchased. The current Program requires insurance carriers to retain 19% of any claims from a certified terrorist event in excess of the federally mandated deductible in 2019, subject to an annual industry-wide cap of $100 billion. This retention will increase to 20% in 2020. The federally mandated deductible represents 20% of direct earned premium for the covered lines of business of the prior year. In 2018, our deductible was $412 million, which represents 19.9% of year-end 2017 statutory policyholder surplus of our insurers, and is estimated to be $431 million in 2019, representing 19.8% of 2018 year-end statutory policyholder surplus.

Given the unpredictability of terrorism losses, future losses from acts of terrorism could be material to our operating results, financial position, and/or liquidity. We attempt to manage our exposures on an individual line of business basis and in the aggregate by one-half square mile grids in major metropolitan areas.

REGULATION

Our property and casualty insurance subsidiaries are subject to extensive regulation in the states in which they transact business and are supervised by the individual state insurance departments. Numerous aspects of our business are subject to regulation, including premium rates, mandatory covered risks, limitations on the ability to non-renew or reject business, prohibited exclusions, licensing and appointment of agents, 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, investments and capital, policy forms and coverages, advertising, and other conduct, including restrictions on the use of credit information and other factors in underwriting, as well as other underwriting and claims practices. States also regulate various aspects of the contractual relationships between insurers and independent agents.

Such laws, rules and regulations are usually overseen and enforced by the various state insurance departments, as well as through private rights of action and by state attorneys general. Such regulations or enforcement actions are often responsive to current consumer and political sensitivities, such as automobile and homeowners insurance rates and coverage forms, or which may arise after a major event. Such rules and regulations may result in rate suppression, limit our ability to manage our exposure to unprofitable or volatile risks, or lead to fines, premium refunds or other adverse consequences. The federal government also may regulate aspects of our businesses, such as the use of insurance (credit) scores in underwriting and the protection of confidential information.

In addition, as a condition to writing business in certain states, insurers are required to participate in various pools or risk sharing mechanisms or to accept certain classes of risk, regardless of whether such risks meet their underwriting requirements for voluntary business. Some states also limit or impose restrictions on the ability of an insurer to withdraw from certain classes of business. For example, Massachusetts, New York and California each impose material restrictions on a company’s ability to materially reduce its exposures or to withdraw from certain lines of business in their respective states. The state insurance departments can impose significant charges on an insurer in connection with a market withdrawal or refuse to approve withdrawal plans on the grounds that they could lead to market disruption. Laws and regulations that limit cancellation and non-renewal of policies or that subject withdrawal plans to prior approval requirements may significantly restrict our ability to exit unprofitable markets. Such actions and related regulatory restrictions may limit our ability to reduce our potential exposure to hurricane-related losses.

Table of Contents

The insurance laws of many states subject property and casualty insurers doing business in those states to statutory property and casualty guaranty fund assessments. The purpose of a guaranty fund is to protect policyholders by requiring that solvent property and casualty insurers pay the insurance claims of insolvent insurers. These guaranty associations generally pay these claims by assessing solvent insurers proportionately based on each insurer's share of voluntary premiums written in the state. While most guaranty associations provide for recovery of assessments through subsequent rate increases, surcharges or premium tax credits, there is no assurance that insurers will ultimately recover these assessments, which could be material, particularly following a large catastrophe or in markets which become disrupted.

We are subject to periodic financial and market conduct examinations conducted by state insurance departments. We are also required to file annual and other reports with state insurance departments relating to the financial condition of our insurance subsidiaries and other matters. The National Association of Insurance Commissioners ("NAIC") and the Federal Insurance Office are each actively engaged in reviewing and considering proposed insurer risk-based capital standards, risk analysis, solvency assessments and other regulatory initiatives.

INVOLUNTARY RESIDUAL MARKETS

As noted above, as a condition of our license to write business in various states, we are required to participate in mandatory property and casualty residual market mechanisms which provide insurance coverages where such coverage may not otherwise be available at rates deemed reasonable. Such mechanisms provide coverage primarily for personal and commercial property, personal and commercial automobile, and workers' compensation, and include assigned risk plans, reinsurance facilities and involuntary pools, joint underwriting associations, fair access to insurance requirements ("FAIR") plans, and commercial automobile insurance plans.

For example, since most states compel the purchase of a minimal level of automobile liability insurance, states have developed shared market mechanisms to provide the required coverages and in many cases, optional coverages, to those drivers who, because of their driving records or other factors, cannot find insurers who will insure them voluntarily. Also, FAIR plans and other similar property insurance shared market mechanisms increase the availability of property insurance in circumstances where homeowners are unable to obtain insurance at rates deemed reasonable, such as in coastal areas or in areas subject to other hazards. Licensed insurers writing business in such states are often required to pay assessments to cover reserve deficiencies generated by such plans.

With respect to FAIR plans and other similar property insurance shared market mechanisms that have significant exposures, it is difficult to accurately estimate our potential financial exposure for future events. Assessments following a large coastal event, particularly one affecting Massachusetts, Texas, New York, or North Carolina, or a large wildfire event affecting California, could be material to our results of operations. Our participation in such shared markets or pooling mechanisms is generally proportional to our direct writings for the type of coverage written by the specific pooling mechanism in the applicable state or other jurisdiction. For example, we are subject to mandatory participation in the Michigan Assigned Claims ("MAC") facility. MAC is an assigned claim plan covering people injured in uninsured motor vehicle accidents. Our participation in the MAC facility is based on our share of personal and commercial automobile direct written premium in the state and resulted in underwriting losses of $14.3 million in 2018. There were no other mandatory residual market mechanisms that were significant to our 2018.

RESERVE FOR UNPAID LOSSES AND LOSS ADJUSTMENT EXPENSES

Reference is made to "Results of Operations - Segments – Reserve for Losses and Loss Adjustment Expenses" of Management's Discussion and Analysis of Financial Condition. See also Note 17 – "Liabilities for Outstanding Claims, Losses and Loss Adjustment Expenses” in the Notes to Consolidated Financial Statements.

The following table reconciles reserves determined in accordance with accounting practices prescribed or permitted by insurance statutory authorities (“Statutory”) to reserves determined in accordance with generally accepted accounting principles (“GAAP”). The primary difference between the Statutory reserves and our GAAP reserves is the requirement, on a GAAP basis, to present reinsurance recoverables as an asset, whereas Statutory guidance provides that reserves are reflected net of the corresponding reinsurance recoverables. We do not use discounting techniques in establishing GAAP reserves for property and casualty losses and LAE, nor have we participated in any loss portfolio transfers or other similar transactions.

DECEMBER 31 (in millions)	2018	2017	2016
Statutory reserve for losses and LAE	$3,935.6	$3,717.8	$3,402.1
GAAP adjustments:			
Reinsurance recoverables on unpaid losses of our insurance subsidiaries	1,472.6	1,455.0	1,349.2
Statutory reserves for discontinued accident and health business	(112.4)	(122.4)	(97.8)
Other	8.3	8.1	6.5
GAAP reserve for losses and LAE	$5,304.1	$5,058.5	$4,660.0

Table of Contents

Reserves for discontinued accident and health business of our insurance subsidiaries are included in liabilities of discontinued operations for GAAP and loss and loss adjustment expenses for Statutory reporting.

DISCONTINUED OPERATIONS

Discontinued operations primarily include our former Chaucer operations and our discontinued accident and health business.

Chaucer

The Chaucer business sold property and casualty insurance products internationally through a wholly-owned subsidiary, Chaucer Holdings Limited (“Chaucer”), which operates through the Society and Corporation of Lloyd’s (“Lloyd’s”) and is domiciled in the United Kingdom. During the third quarter of 2018, all of our Chaucer business was classified as discontinued operations. On December 28, 2018, we completed the sale of Chaucer, the major portion of our Lloyd’s international specialty business, to China Re. As part of the sale, we entered into certain transition arrangements and agreed to indemnify China Re for litigation and other regulatory matters that existed as of the closing of the sale. (See also “Risk Factors” in Part I – Item 1A). We subsequently completed the sale of our Chaucer-related Irish entity on February 14, 2019. The sale of the Australian entities is pending, subject only to local regulatory approval, and is expected to close in the first quarter of 2019. We received $28 million of additional consideration for the Irish entity, and we expect to receive $13 million of additional consideration related to the Australian entities. At December 31, 2018, assets and liabilities associated with the Chaucer-related Irish and Australian entities are reflected as assets and liabilities held-for-sale.

The result of operations of the Chaucer business through December 28, 2018 is included in our results of discontinued operations. During 2018, the Chaucer business generated $850.0 million of net earned premium and $20.0 million of income. See the “Discontinued Chaucer Business” section in our Management’s Discussion and Analysis of Financial Condition and Note 2 – “Discontinued Operations” in the Notes to Consolidated Financial Statements.

Prior to its sale to China Re, Chaucer, as a non-U.S. subsidiary of THG, was permitted to engage in certain transactions with Iran prior to President Donald Trump’s decision to withdraw from the Joint Comprehensive Plan of Action Regarding Iran’s Nuclear Program (the “JCPOA”). As a result of such activity, the following disclosure is provided pursuant to Section 13(r) of the Securities Exchange Act of 1934, as amended:

During the applicable reporting period, January 1 through December 31, 2018, and pursuant to General License H which was then in effect at all relevant times under the JCPOA, a Chaucer syndicate maintained a 5% participation in an aviation reinsurance arrangement to reinsure Bimeh Iran (“Iran Insurance Company”), an insurer wholly-owned by the Government of Iran. The arrangement reinsured the hull, liability and cargo risks incurred by the underlying insured, Iran Air. Bimeh Markazi, another insurer wholly-owned by the Government of Iran, was an additional reinsured. This reinsurance arrangement, which was in effect for the period June 22, 2017 through June 21, 2018, was compliant with General License H and contained a “sanctions exclusion” clause which terminated coverage in the event Chaucer was no longer legally permitted to provide coverage under applicable law. Estimated total gross revenues from this arrangement were approximately $275,000, and total revenues, net of brokerage expenses and estimated retrocession costs, were approximately $179,500. It is not possible at this time to determine the net profit from the arrangement, although as of December 31, 2018, no claims were paid by the Chaucer syndicate to either of the reinsureds. The agreement expired on June 21, 2018 and was not renewed.

Accident and Health and Life Businesses

The discontinued accident and health business includes interests in 24 accident and health reinsurance pools and arrangements that we retained subsequent to the sale of First Allmerica Financial Life Insurance Company ("FAFLIC") in 2009. We ceased writing new premiums in this business in 1999, subject to certain contractual obligations. The reinsurance pool business consists primarily of long-term care, the medical and disability portions of workers' compensation risks, assumed personal accident, individual medical, long-term disability, and special risk business. This business also includes residual health insurance policies. Total reserves for the assumed accident and health business were $113.2 million at December 31, 2018. The long-term care pool accounts for approximately 69% of our reserves as of December 31, 2018. Reserves for the long-term care pool, individual medical, and residual health insurance policies are discounted. Reserves for all other assumed accident and health business are undiscounted. Assets and liabilities related to the discontinued accident and health business are reflected as assets and liabilities of discontinued life business.

Loss estimates associated with substantially all of the discontinued accident and health business are provided by managers of each pool. We adopt reserve estimates for this business that consider this information, expected returns on assets assigned to this business and other facts. We update these reserves as new information becomes available and further events occur that may affect the ultimate resolution of unsettled claims. Based on information provided to us by the pool managers, we believe that the reserves recorded related to this business are adequate. However, since reserve and claim cost estimates related to the discontinued accident and health business are dependent on several assumptions, including, but not limited to, morbidity, lapses, future premium rates, future health care costs, persistency of medical care inflation and investment performance, and these assumptions can be impacted by technical developments and advancements in the medical field and other factors, there can be no assurance that the reserves established for this business will prove sufficient. Revisions to these reserves could have a material adverse effect on our results of operations for a particular quarterly or annual period or on our financial position. See also "Risk Factors" in Part I – Item 1A.

Our long-term care pool accounts for the majority of our remaining reinsurance pool business. The potential risk and exposure of our long-term care pool is based upon expected estimated claims and payment patterns, using assumptions for, among other things, morbidity, lapses, future premium rates, and the interest rate used for discounting the future projected cash flows. The long-term exposure of this pool depends upon how our actual experience compares with these future cash flow projection assumptions.

Our former life insurance businesses, which are also included in discontinued operations, include activities that were not significant to our 2018, 2017 or 2016 results.

INVESTMENT PORTFOLIO

Our wholly-owned subsidiary, Opus, is responsible for managing our investment portfolio. Opus directly manages our entire fixed income portfolio and certain other assets which together constitute approximately 92% of our entire investment portfolio. Opus is also responsible for the selection and monitoring of external asset managers for our commercial mortgage loan participations and certain other investments. We select and monitor external managers based on investment style, performance and corporate governance.

Our investments are generally of high quality and our fixed maturities and equities are broadly diversified across sectors of the fixed income and equity markets. Our overall investment strategy is intended to balance investment income with credit and interest rate risk, while maintaining sufficient liquidity and providing the opportunity for capital growth. The asset allocation process takes into consideration the types of business written and the level of surplus required to support our different businesses and the risk return profiles of the underlying asset classes. We look to balance the goals of capital preservation, net investment income stability, liquidity and total return.

The majority of our assets are invested in the fixed income markets. Through fundamental research and credit analysis, with a focus on value investing, Opus seeks to identify a portfolio of stable income-producing higher quality U.S. government, foreign government, municipal, corporate, residential and commercial mortgage-backed securities and asset-backed securities. We have a general policy of diversifying investments both within and across major investment and industry sectors to mitigate credit and interest rate risk. We monitor the credit quality of our investments and our exposure to individual markets, borrowers, industries, sectors and, in the case of commercial mortgage-backed securities and commercial mortgage loan participations, property types and geographic locations.

Investments held by our insurance subsidiaries are subject to diversification requirements under state insurance laws. Investment considerations include asset/liability profile, including duration, convexity and other characteristics within specified risk tolerances. The investment portfolio duration is approximately 4.5 years. We seek to maintain sufficient liquidity to support our cash flow requirements by monitoring the cash requirements associated with our insurance and corporate liabilities, laddering the maturities within the portfolio, closely monitoring our investment durations, holding high quality liquid public securities and managing the purchases and sales of assets.

Reference is made to “Investments” in Management’s Discussion and Analysis of Financial Condition.

RATING AGENCIES

Insurance companies are rated by financial strength rating agencies to provide both industry participants and insurance consumers information on specific insurance companies. Higher ratings generally indicate the rating agencies’ opinion regarding financial stability and a stronger ability to pay claims.

Strong ratings are important factors in marketing our products to our agents and customers, since rating information is broadly disseminated and generally used throughout the industry. We believe that a rating of “A-” or higher from A.M. Best Co. is particularly important for our business. Insurance company financial strength ratings are assigned to an insurer based upon factors deemed by the rating agencies to be relevant to policyholders and are not directed toward protection of investors. Such ratings are neither a rating of securities nor a recommendation to buy, hold or sell any security.

EMPLOYEES

As of December 31, 2018, we had approximately 4,200 employees, substantially all of whom are located in the United States. We believe our relations with employees are good.

EXECUTIVE OFFICERS OF THE REGISTRANT

Reference is made to “Directors and Executive Officers of the Registrant” in Part III - Item 10.

Table of Contents

AVAILABLE INFORMATION

We file our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, our definitive proxy statement on Schedule 14A, and other required information with the Securities and Exchange Commission ("SEC"). Shareholders may obtain reports, proxy and information statements, and other information with respect to our filings, at the SEC's website, https://www.sec.gov.

Our website address is https://www.hanover.com. We make available, free of charge, on or through our website, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Sections 13(a) or 15(d) of the Securities Exchange Act of 1934, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Additionally, our Code of Conduct is available, free of charge, on our website. Our Corporate Governance Guidelines and the charters of our Audit Committee, Compensation Committee, Committee of Independent Directors and Nominating and Corporate Governance Committee, are available on our website. All documents are also available in print to any shareholder who requests them. Unless specifically incorporated by reference, information on our website is not part of this Annual Report on Form 10-K.

Table of Contents

ITEM 1A–RISK FACTORS

RISK FACTORS AND FORWARD LOOKING STATEMENTS

We wish to caution readers that the following important factors, among others, in some cases have affected, and in the future could affect, our actual results and could cause our actual results to differ materially from historical results and from those expressed in any forward-looking statements made from time to time by us on the basis of our then-current expectations. The words "believes", "anticipates", "expects", "projections", "outlook", "should", "could", "plan", "guidance", " track to", "targeted" and similar expressions are intended to identify forward-looking statements. Our businesses are in rapidly changing and competitive markets and involve a high degree of risk and unpredictability. Forward-looking projections are subject to these risks and unpredictability.

Our results may fluctuate as a result of cyclical or non-cyclical changes in the property and casualty insurance industry.

The property and casualty insurance industry historically has been subject to significant fluctuations and uncertainties. Our profitability is affected significantly by the following items:

- increases in costs, particularly increases occurring after the time our insurance products are priced, including construction, automobile repair, and medical and rehabilitation costs. This includes inflation, rises in the cost of products due to tariffs or other factors and "cost shifting" from health insurers to casualty and liability insurers (whether as a result of an increasing number of injured parties without health insurance, coverage changes in health policies to make such coverage secondary to casualty policies, the further implementation or the repeal of national healthcare legislation, lower reimbursement rates for the same procedures by health insurers or government-sponsored insurance, or the implementation of the Medicare Secondary Payer Act, which imposes reporting and other requirements with respect to medical and related claims paid for Medicare eligible individuals). As it relates to construction, there are often temporary increases in the cost of building supplies and construction labor after a significant event (for example, so called "demand surge" that causes the cost of labor, construction materials and other items to increase in a geographic area affected by a catastrophe). In addition, we are limited in our ability to negotiate and manage reimbursable expenses incurred by our policyholders;
- competitive and regulatory pressures, which affect the prices of our products and the nature of the risks covered;
- volatile and unpredictable developments, including severe weather, catastrophes, wildfires and terrorist actions;
- legal, regulatory and socio-economic developments, such as new theories of insured and insurer liability and related claims and extra-contractual awards such as punitive damages, financed litigation, where a third party unrelated to a lawsuit provides capital to a plaintiff in return for a portion of any financial recovery from the lawsuit, and increases in the size of jury awards or changes in applicable laws and regulations (such as changes in the thresholds affecting "no fault" liability or when non-economic damages are recoverable for bodily injury claims or coverage requirements);
- fluctuations in interest rates, as a result of a change in monetary policy or otherwise, inflationary pressures, default rates, commodity prices, foreign exchange rates and other factors that affect net income, including with respect to investment returns and operating results for certain of our lines of business; and
- other general economic conditions and trends that may affect the adequacy of reserves.

The demand for property and casualty insurance can also vary significantly based on general economic conditions (either nationally or regionally), rising as the overall level of economic activity increases and falling as such activity decreases. Loss patterns also tend to vary inversely with local economic conditions, increasing during difficult or unstable economic times and moderating during economic upswings or periods of stability. The fluctuations in demand and competition could produce unpredictable underwriting results.

Actual losses from claims against our property and casualty insurance subsidiaries may exceed their reserves for claims.

Our property and casualty insurance subsidiaries maintain reserves to cover their estimated ultimate liability for losses and loss adjustment expenses with respect to reported and unreported claims incurred as of the end of each accounting period. Reserves do not represent an exact calculation of liability. Rather, reserves represent estimates, involving actuarial projections and judgments at a given time, of what we expect the ultimate settlement and administration of incurred claims will cost based on facts and circumstances then known, predictions of future events, estimates of future trends in claims frequency and severity and judicial theories of liability, costs of repair and replacement, legislative activity and myriad other factors.

The inherent uncertainties of estimating reserves are greater for certain types of property and casualty insurance lines. These include automobile bodily injury liability, automobile personal injury protection, general liability, and workers' compensation, where a longer period of time may elapse before a definitive determination of ultimate liability may be made, environmental liability, where the technological, judicial and political climates involving these types of claims are continuously evolving, and casualty coverages such as professional liability. There is also greater uncertainty in establishing reserves with respect to new business, particularly new business that is generated with respect to newer product lines, such as our management and professional liability, healthcare, and cyber-risk lines, by newly appointed agents, or in geographies where we have less experience in conducting business. In these cases, there is less historical experience or knowledge and less data that the actuaries can rely on. Estimating reserves is further complicated by unexpected claims or unintended coverages that emerge due to changing conditions. These emerging issues may increase the size or number of claims beyond our underwriting intent and may not become apparent for many years after a policy is issued, such as was the case for the industry with respect to environmental, asbestos, and certain product liability claims. These losses are reflected as prior year reserve development. Although we undertake underwriting actions designed to limit losses once emerging issues are identified, we remain subject to losses on policies issued during those years preceding the underwriting actions.

Additionally, the introduction of new Commercial Lines products and the development of new niche and specialty lines present new risks. Certain specialty products, such as the human services program, non-profit directors and officers liability and employment practices liability policies, lawyers and other professional liability policies, healthcare lines and directors and officers coverage may also require a longer period of time (the so-called "tail") to determine the ultimate liability associated with the claims and may produce more volatility in our results and less certainty in our accident year reserves. Some lines of business, such as surety, are less susceptible to establishing reserves based on actuarial or historical experience and losses may be episodic, depending on economic and other factors. Changes in laws, such as so-called "reviver" statutes that retrospectively change the statutes of limitations for certain claims, such as sexual molestation claims, add further uncertainty to the adequacy of prior estimates.

We regularly review our reserving techniques, reinsurance and the overall adequacy of our reserves based upon, among other things:

- our review of historical data, legislative enactments, judicial decisions, legal developments in imposition of damages, changes in political attitudes and trends in general economic conditions;
- our review of per claim information;
- historical loss experience of our property and casualty insurance subsidiaries and the industry as a whole; and
- the terms of our property and casualty insurance policies.

Underwriting results and operating income could be adversely affected by further changes in our net loss and LAE estimates related to significant events or emerging risks, such as risks related to attacks on or breaches of cloud-based data information storage or computer network systems ("cyber-risks"), privacy regulations or disruptions caused by major power grid failures or widespread electrical and electronic equipment failure due to aging infrastructure, natural factors like hurricanes, earthquakes, wildfires, solar flares and pandemic or man-made factors like terrorism.

Estimating losses following any major catastrophe or with respect to emerging claims is an inherently uncertain process. Factors that add to the complexity of estimating losses from these events include the legal and regulatory uncertainty, the complexity of factors contributing to the losses, delays in claim reporting, and with respect to areas with significant property damage, the impact of "demand surge" and a slower pace of recovery resulting from the extent of damage sustained in the affected areas due, in part, to the availability and cost of resources to effect repairs. Emerging claims issues may involve complex coverage, liability and other costs which could significantly affect LAE.

As a result, there can be no assurance that our ultimate costs associated with these events or issues will not be substantially different from current estimates (for example, actual losses arising from an event could have varied widely depending on the interpretation of various policy provisions). Investors should consider the risks and uncertainties in our business that may affect net loss and LAE reserve estimates and future performance, including the difficulties in arriving at such estimates.

Anticipated losses associated with business interruption exposure, the impact of wind versus water as the cause of loss, disputes over the extent of damage caused by hail storms (particularly with respect to roof damage claims), supplemental payments on previously closed claims caused by the development of latent damages or new theories of liability and inflationary pressures leading to claims cost escalation could also have a negative impact on future loss reserve development. Many states permit insureds to simply sign-over their claims to contractors or others (so-called “assignment of benefits”), which frequently generate higher claim demands. Other states permit filing of suits without prior discussions, which has a similar effect and also increases loss adjustment costs.

Because of the inherent uncertainties involved in setting reserves and establishing current and prior-year “loss picks,” including those related to catastrophes, we cannot provide assurance that the existing reserves or future reserves established by our property and casualty insurance subsidiaries will prove adequate in light of subsequent events. Our results of operations and financial condition have in the past been, and in the future could be, materially affected by adverse loss development for events that we insured in prior periods.

Table of Contents

Due to geographical concentration in our property and casualty business, changes in economic, regulatory and other conditions in the regions where we operate could have a significant negative impact on our business as a whole. Geographic concentrations also expose us to losses that are potentially disproportionate to our market share in the event of natural or other catastrophes.

We generate a significant portion of our property and casualty insurance net premiums written and earnings in Michigan, Massachusetts and other states in the Northeast, including New York. In addition, a significant amount of Commercial Lines' net written premium is generated in California. For the year ended December 31, 2018, approximately 20.5% and 9.6% of our net premiums written in our property and casualty business were generated in the states of Michigan and Massachusetts, respectively. Many states in which we do business impose significant rate control and residual market charges, and restrict an insurer's ability to exit such markets. The revenues and profitability of our property and casualty insurance subsidiaries are subject to prevailing economic, regulatory, demographic and other conditions, including adverse weather in Michigan and the Northeast. Because of our geographic concentration in certain regions, our business as a whole could be significantly affected by changes in the economic, regulatory and other conditions in such areas.

Further, certain new catastrophe models assume an increase in frequency and severity of certain weather or other events, such as fires, whether as a result of global climate change or otherwise. Financial strength rating agencies emphasize capital and reinsurance adequacy for insurers with geographic concentrations of risk that may be subject to disproportionate risk of loss. These factors also may result in insurers seeking to diversify their geographic exposure, which could result in increased regulatory restrictions in those markets where insurers seek to exit or reduce coverage, as well as an increase in competitive pressures in less weather-exposed markets.

Our profitability may be adversely affected if our pricing models differ materially from actual results.

The profitability of our business depends on the extent to which our actual claims experience is consistent with the assumptions we use in pricing our policies. We price our business in a manner that is intended to be consistent, over time, with actual results and return objectives. Our estimates and models, and/or the assumptions behind them, may differ materially from actual results.

If we fail to appropriately price the risks we insure, fail to change or are slow to change our pricing model to appropriately reflect our current 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.

Limitations on the ability to predict the potential impact of weather events and catastrophes may impact our future profits and cash flows.

Our business is subject to claims arising out of catastrophes that may have a significant impact on our results of operations and financial condition. We may experience catastrophe losses that could have a material adverse impact on our business. Catastrophes can be caused by various events, including hurricanes, floods, earthquakes, tornadoes, wind, hail, fires, drought, severe winter weather, volcanic eruptions, tropical storms, tsunamis, sabotage, terrorist actions, explosions, nuclear accidents, solar flares, and power outages. The frequency and severity of catastrophes are inherently unpredictable.

The extent of gross losses from a catastrophe is a function of the total amount of insured exposure in the area affected by the event and the severity of the event. The extent of net losses depends on the amount and collectability of reinsurance.

Additionally, the severity of certain catastrophes could be so significant that it impacts the ability of certain locations to recover their economic viability in the near term. And, repeated catastrophes or the threat of catastrophes could undermine the long-term economic viability of certain locations like coastal or wildfire-exposed communities, which could have a significant negative impact on our business.

Although catastrophes can cause losses in a variety of property and casualty lines, homeowners and commercial multiple peril property insurance have, in the past, generated the vast majority of our catastrophe-related claims. Our catastrophe losses have historically been principally weather-related, particularly from hurricanes, as well as snow and ice damage from winter storms.

Although the insurance industry and rating agencies have developed various models intended to help estimate potential insured losses under thousands of scenarios, there is no reliable way of predicting the probability of such events or the magnitude of such losses before a specific event occurs. We utilize various models and other techniques in an attempt to measure and manage potential catastrophe losses within various income and capital risk appetites. However, such models and techniques have many limitations. In addition, due to historical concentrations of business, regulatory restrictions and other factors, our ability to manage such concentrations is limited, particularly in the Northeast and in the state of Michigan.

We purchase catastrophe reinsurance as protection against catastrophe losses. Based upon an ongoing review of our reinsurers' financial strength ratings assigned to them by rating agencies, their reputations in the reinsurance marketplace, our collections history with them and the analysis and guidance of our reinsurance advisors, we believe that the financial condition of our reinsurers is sound. However, reinsurance is subject to counterparty risks, including those resulting from over-concentration of exposures within the industry. In setting our retention levels and coverage limits, we also consider our level of statutory surplus and exposures, as well as the current reinsurance pricing environment. Should we experience losses from one significant or several large catastrophes, there can be no assurance that our reinsurance program will provide adequate coverage levels.

Our business is dependent on our ability to manage risk, and the failure of the risk mitigation strategies we utilize could have a material adverse effect on our financial condition or results of operations.

Our business performance is highly dependent on our ability to manage operational risks that arise from a large number of day-to-day business activities, including insurance underwriting, claims processing, servicing, investment, financial and tax reporting, compliance with regulatory requirements and other activities. We utilize a number of strategies to mitigate our insurance risk exposure, including: underwriting; setting exposure limits, deductibles and exclusions to mitigate policy risk; updating and reviewing the terms and conditions of our policies; managing risk aggregation by product line, geography, industry type, credit exposure and other bases; and ceding insurance risk. We seek to monitor and control our exposure to risks arising out of these activities through an enterprise-wide risk management framework. However, there are inherent limitations in all of these tactics, and no assurance can be given that these processes and procedures will effectively control all known risks or effectively identify unforeseen risks or that an event or series of events will not result in loss levels in excess of our probable maximum loss models, which could have a material adverse effect on our financial condition or results of operations. It is also possible that losses could manifest themselves in ways that we do not anticipate and that our risk mitigation strategies are not designed to address. Such a manifestation of losses could have a material adverse effect on our financial condition or results of operations. These risks may be heightened during times of challenging macro economic conditions.

We cannot guarantee the adequacy of or ability to maintain our current level of reinsurance coverage.

Similar to insurance companies, reinsurance companies can also be adversely impacted when catastrophes occur. There can be no assurance that we will be able to maintain our current levels of reinsurance coverage. In particular, and as discussed under "Reinsurance Program Overview", not all of our 2019 reinsurance programs for the Commercial and Personal Lines are fully placed. Reinsurance is a significant factor in our overall cost of providing primary insurance. However, unlike primary insurers, reinsurers are not subject to rate or other restrictions requiring them to continue availability of reinsurance or limiting cost increases or mandating coverage forms. Future catastrophic events and other changes in the reinsurance marketplace, including as a result of investment losses or disruptions due to challenges in the financial markets that have occurred or could occur in the future, may adversely affect our ability to obtain such coverages, as well as adversely affect the cost of obtaining that coverage.

Additionally, the availability, scope of coverage, cost, and creditworthiness of reinsurance could continue to be adversely affected as a result of not only new catastrophes, but also terrorist attacks and the perceived risks associated with future terrorist activities, global conflicts, including the threat of nuclear conflict, and the changing legal and regulatory environment (including changes which could create new insured risks). Federal reinsurance for terrorism risks coverage offered by insurers is available under TRIPRA, but it only applies to certified events of terrorism (as defined in TRIPRA) and contains certain caps and deductibles. Although TRIPRA coverage is in effect through December 31, 2020, should this program not be renewed or should it be modified unfavorably by the government in the future, private reinsurance for events of terrorism may not be available to us or available at reasonable or acceptable rates.

Although we monitor their financial soundness, we cannot be sure that our reinsurers will pay in a timely fashion, if at all.

We purchase reinsurance by transferring part of the risk that we have assumed (known as ceding) to reinsurance companies in exchange for part of the premium we receive in connection with the risk. As of December 31, 2018, our reinsurance receivable (including from the MCCA) amounted to approximately $1.6 billion. Although reinsurance makes the reinsurer liable to us to the extent the risk is transferred or ceded to the reinsurer, it does not relieve us (the reinsured) of our liability to our policyholders. Accordingly, we bear counterparty risk with respect to our reinsurers. Although we monitor the credit quality of our reinsurers, we cannot be sure that they will pay the reinsurance recoverables owed to us currently or in the future or that they will pay such recoverables on a timely basis. The contractual obligations under reinsurance agreements are typically with individual subsidiaries of the group and are not typically guaranteed by other group members. In certain circumstances, reinsurers must generally provide collateral equal to 100% of estimated reinsurance recoverables. The collateral can serve to mitigate credit risk. In the event of losses, we may look to 'draw-down' on this collateral to satisfy reinsurance recoveries due to us, but if the collateral held is insufficient to meet those recoveries, we will be exposed to losses.

Climate change may adversely impact our results of operations.

There are concerns that the increased frequency and severity of weather-related catastrophes and other losses, such as from wildfires, incurred by the industry in 2018 and in prior years is indicative of changing weather patterns, whether as a result of climate-warming trends ("global climate change") caused by human activities or otherwise, which could cause such events to persist. Increased weather-related catastrophes would lead to higher overall losses, which we may not be able to recoup, particularly in a highly regulated and competitive environment, and higher reinsurance costs. As noted above, certain catastrophe models assume an increase in frequency and severity of certain weather or other events, which could result in a disproportionate impact on insurers with certain geographic concentrations of risk. This would also likely increase the risks of writing property insurance in coastal areas or areas susceptible to wildfires or flooding, particularly in jurisdictions that restrict pricing and underwriting flexibility. The threat of rising seas or other catastrophe losses as a result of global climate change may also cause property values in coastal or such other communities to decrease, reducing the total amount of insurance coverage that is required.

In addition, global climate change could have an impact on assets in which we invest, resulting in realized and unrealized losses in future periods that could have a material adverse impact on our results of operations and/or financial position. It is not possible to foresee which, if any, assets, industries or markets will be materially and adversely affected, nor is it possible to foresee the magnitude of such effect.

We may incur financial losses resulting from our participation in shared market mechanisms, mandatory reinsurance programs and mandatory and voluntary pooling arrangements.

In most of the jurisdictions in which we operate, our property and casualty insurance subsidiaries are required to participate in mandatory property and casualty shared market mechanisms, government-sponsored reinsurance programs or pooling arrangements. These arrangements are designed to provide various insurance coverages to individuals or other entities that are otherwise unable to purchase such coverage or to support the costs of uninsured motorist claims in a particular state or region. We cannot predict whether our participation in these shared market mechanisms or pooling arrangements will provide underwriting profits or losses to us. For the year ended December 31, 2018, we experienced an underwriting loss of $23.2 million from participation in these mechanisms and pooling arrangements, compared to underwriting losses of $13.6 million and $12.7 million in 2017 and 2016, respectively. We may face similar or more significant earnings fluctuations in the future.

Additionally, increases in the number of participants or insureds in state-sponsored reinsurance pools, FAIR Plans or other residual market mechanisms, particularly in the states of Massachusetts, Texas, California, New York, or North Carolina, combined with regulatory restrictions on the ability to adequately price, underwrite, or non-renew business, as well as new legislation, or changes in existing case law, could expose us to significant exposures and risks of increased assessments from these residual market mechanisms. There could also be a significant adverse impact as a result of losses incurred in those states due to hurricane or other high loss exposures, as well as the declining number of carriers providing coverage in those regions. We are unable to predict the likelihood or impact of such potential assessments or other actions.

We also have credit risk associated with certain mandatory reinsurance programs such as the MCCA. The MCCA was created to fund Michigan's unique unlimited personal injury protection benefit. As of December 31, 2018, our estimated reinsurance recoverable from the MCCA was $977.1 million. In most years, the MCCA operates with a balance sheet deficit, which may fluctuate significantly based on investment returns, discount rates, incurred claims, annual assessments and other factors, although historically its annual operations have been cash flow positive.

In addition, we may be adversely affected by liabilities resulting from our previous participation in certain voluntary property and casualty assumed reinsurance pools. We have terminated our participation in virtually all property and casualty voluntary pools, but we remain subject to claims related to the periods during which we participated. The property and casualty industry's assumed reinsurance businesses have suffered substantial losses during the past several years, particularly related to environmental and asbestos exposure for property and casualty coverages, in some cases resulting from incidents alleged to have occurred decades ago. Due to the inherent volatility in these businesses, possible issues related to the enforceability of reinsurance treaties in the industry and the continuing history of increased losses, we cannot provide assurance that our current reserves are adequate or that we will not incur losses in the future. Our operating results and financial position may be adversely affected by liabilities resulting from any such claims in excess of our loss estimates. As of December 31, 2018, our reserves totaled $37.5 million for these legacy voluntary property and casualty assumed reinsurance pools, with the largest being the Excess Casualty Reinsurance Association (ECRA) pool.

Table of Contents

Our businesses are heavily regulated, and changes in regulation may reduce our profitability.

Our insurance businesses are subject to supervision and regulation by the state insurance authority in each state where we transact business. This system of supervision and regulation relates to numerous aspects of an insurance company's business and financial condition, including limitations on the authorization of lines of business, underwriting limitations, the ability to utilize credit-based insurance scores or other factors in underwriting, the ability to terminate agents, supervisory and liability responsibilities for agents, the setting of premium rates, the requirement to write certain classes of business that we might otherwise avoid or charge different premium rates, restrictions on the ability to withdraw from certain lines of business or terminate policies or classes of policyholders, the establishment of standards of solvency, the licensing of insurers and agents, compensation of and contractual arrangements with, independent agents, concentration of investments, levels of reserves, the payment of dividends, transactions with affiliates, changes of control, protection of private information of our agents, policyholders, claimants and others (which may include highly sensitive financial or medical information or other private information such as social security numbers, driving records, driver's license numbers, etc.) and the approval of policy forms. From time to time, various states and Congress have proposed to prohibit or otherwise restrict the use of credit-based insurance scores in underwriting or rating our Personal Lines business. The elimination of the use of credit-based insurance scores could cause significant disruption to our business and our confidence in our pricing and underwriting. Most insurance regulations are designed to protect the interests of policyholders rather than stockholders and other investors.

Legislative and regulatory restrictions are constantly evolving and are subject to then current political pressures. For example, following major events, states have considered, and in some cases adopted, proposals such as homeowners' "Bill of Rights," restrictions on storm deductibles, additional mandatory claim handling guidelines and mandatory coverages. More recently, the California Insurance Commissioner requested that all insurers operating in California voluntarily divest from any investments they may have in thermal coal, and the New York Department of Financial Services and regulatory agencies in other states have enacted comprehensive cybersecurity regulations. Such actions also occur at the federal level, such as the U.S. Department of Housing and Urban Development's proposal that may increase the legal risk of providing homeowners and commercial residential property insurance by imposing liability for discrimination on the basis of a disparate-impact theory even without evidence of discriminatory intent. Some states are also considering mandating owners of firearms to purchase liability insurance and various other states strictly scrutinize first party coverages under such policies.

In addition, The Dodd-Frank Wall Street Reform and Consumer Protection Act provides for enhanced regulation for the financial services industry through initiatives including, but not limited to, the creation of a Federal Insurance Office and several federal oversight agencies, the requiring of more transparency, accountability and focus in protecting investors and businesses, input of shareholders regarding executive compensation, and enhanced empowerment of regulators to pursue those who engage in financial fraud and unethical business practices. The SEC adopted regulations designed to encourage, reward, and protect "whistleblowers", whether or not they first report the potential infraction to the company for correction or remedial action.

Also, the federal Medicare, Medicaid and State Children's Health Insurance Program Extension Act mandates reporting and other requirements applicable to property and casualty insurance companies that make payments to or on behalf of claimants who are eligible for Medicare benefits. These requirements have made bodily injury claim resolutions more difficult, particularly for complex matters or for injuries requiring treatment over an extended period, and impose significant penalties for non-compliance and reporting errors. These requirements also have increased the circumstances under which the federal government may seek to recover from insurers amounts paid to claimants in circumstances where the government had previously paid benefits. In January 2013, the Strengthening Medicare and Repaying Taxpayers Act was signed into law and provided for implementation over a staggered period of time. We are continuing to monitor the effect of this law on our ability to settle cases and our exposure to federal recoupment claims.

State regulatory oversight and various proposals at the federal level may in the future adversely affect our ability to sustain adequate returns in certain lines of business or in some cases, operate lines profitably. In recent years, the state insurance regulatory framework has come under increased federal scrutiny, and certain state legislatures have considered or enacted laws that alter and, in many cases, increase state authority to regulate insurance companies and insurance holding company systems.

Our business could be negatively impacted by adverse state and federal legislation or regulation, or judicial developments, including those resulting in:

- decreases in rates, including for example, recent regulatory or bureau actions to mandate reduced premiums for workers' compensation insurance;
- limitations on premium levels;
- coverage and benefit mandates;
- limitations on the ability to manage care and utilization or other claim costs;
- requirements to write certain classes of business or in certain geographies;

- restrictions on underwriting, on methods of compensating independent producers, or on our ability to cancel or renew certain business (which negatively affects our ability to reduce concentrations of property risks);
- higher liability exposures for our insureds;
- increased assessments or higher premium or other taxes; and
- enhanced ability to pierce “no fault” thresholds, recover non-economic damages (such as “pain and suffering”), or pierce policy limits.

These regulations serve to protect the customers and other third parties who deal with us and are heavily influenced by the then current political environment. If we are found to have violated an applicable regulation, administrative or judicial proceedings may be initiated against us that could result in censures, fines, civil penalties (including punitive damages), the issuance of cease-and-desist orders, premium refunds or the reopening of closed claim files, among other consequences. These actions could have a material adverse effect on our financial position and results of operations.

From time to time, Congress, as well as state and local governments, also consider legislation that could increase or modify our tax costs. For example, on December 22, 2017, the Tax Cuts and Jobs Act (“TCJA”) was enacted and included reductions in the U.S. corporate income tax rate, changes to the cost of related party reinsurance for foreign-owned insurers, and changes to the tax base, that impacted our effective tax rate in 2018 and will continue to have an impact in future years. The TCJA also reduced the carrying value of our net deferred tax asset upon implementation. Although we have estimated the effect that the TCJA will have on our current deferred tax position, there can be no assurance that these estimates won’t change based on new interpretations of the TCJA or in the event that new information related to our current tax position becomes known. Although we believe that the TCJA will continue to result in a lower effective tax rate in future years as compared to years prior to enactment, competitive and state regulatory pressures may force us to enact rate and pricing decreases for our insurance products, which may reduce the net benefit of the tax reduction or significantly limit our ability to realize this benefit beyond the short term.

In addition, we are reliant upon independent agents and brokers to market our products. Changes in regulations related to insurance agents and brokers that materially impact the profitability of the agent and broker business or that restrict the ability of agents and brokers to market and sell insurance products would have a material adverse effect on our business.

Further, as we continue to expand our business into new regions, either organically or through acquisition, we become subject to the regulations and different regulatory bodies governing such business in those locales.

From time to time, we are also involved in investigations and proceedings by federal, state, and other governmental and self-regulatory agencies. We cannot provide assurance that these investigations, proceedings and inquiries will not result in actions that would adversely affect our results of operations or financial condition.

We are subject to litigation risks, including risks relating to the application and interpretation of contracts, and adverse outcomes in litigation and legal proceedings could adversely affect our results of operations and financial condition.

We are subject to litigation risks, including risks relating to the application and interpretation of insurance and reinsurance contracts and our handling of claim matters (which can lead to bad faith and other forms of extra-contractual liability), and are routinely involved in litigation that challenges specific terms and language incorporated into property and casualty contracts, such as claims reimbursements, covered perils and exclusion clauses, among others, or the interpretation or administration of such contracts. We are also involved in legal actions that do not arise in the ordinary course of business, some of which assert claims for substantial amounts. Adverse outcomes could materially affect our results of operations and financial condition.

We are subject to mandatory assessments by state guaranty funds; an increase in these assessments could adversely affect our results of operations and financial condition.

All fifty U.S. states and the District of Columbia have insurance guaranty fund laws requiring property and casualty insurance companies doing business within the state to participate in guaranty associations. These associations are organized to pay contractual obligations under insurance policies issued by impaired or insolvent insurance companies. The associations levy assessments, up to prescribed limits, on all member insurers in a particular state on the basis of the proportionate share of the premiums written by member insurers in the lines of business in which the impaired or insolvent insurer is engaged. Although mandatory assessments by state guaranty funds that are used to cover losses to policyholders of insolvent or rehabilitated companies can be substantially recovered over time through policyholder surcharges or a reduction in future premium taxes in many states (provided the collecting insurer continues to write business in such state), there can be no assurance that all funds will be recoupable in the future. During 2018, we had a total assessment of $3.9 million levied against us, with refunds of $0.4 million received in 2018 for a total net assessment of $3.5 million. As of December 31, 2018, we have $0.5 million of reserves related to guaranty fund assessments. In the future, these assessments may increase above levels experienced in prior years. Future increases in these assessments depend upon the rate of insolvencies of insurance companies. An increase in assessments could adversely affect our results of operations and financial condition.

If we are unable to attract and retain qualified personnel, or if we experience the loss or retirement of key executives or other key employees, we may not be able to compete effectively and our operations could be impacted significantly.

Our future success will be affected by our continued ability to attract, develop and retain qualified executives and other key employees, particularly those experienced in the property and casualty industry.

Our profitability could be adversely affected by our relationships with our agencies.

We distribute our products exclusively through independent agents and brokers who have the principal relationships with policyholders. Agents and brokers generally own the “renewal rights,” and thus our business model is dependent on our relationships with, and the success of, the agents and brokers with whom we do business.

We periodically review the agencies, including managing general agencies, with whom we do business, to identify those that do not meet our profitability standards or are not aligned with our business objectives. Following these periodic reviews, we may restrict such agencies’ access to certain types of policies or terminate our relationship with them, subject to applicable contractual and regulatory requirements that limit our ability to terminate agents or require us to renew policies. We may not achieve the desired results from these measures, and our failure to do so could negatively affect our operating results and financial position.

Because we rely on independent agents as our sales channel, any deterioration in the relationships with our independent agents or failure to provide competitive compensation to our independent agents could lead agents to place more premium with other carriers and less premium with us. In addition, we could be adversely affected if the agencies, including managing general agencies, with whom we do business exceed the authority that we have given them, fail to transfer premium to us or breach the obligations that they owe to us. Although we routinely monitor our agency relationships, such actions could expose us to liability and have a negative impact on our results of operations and financial condition.

Also, if agency consolidation continues at its current pace or increases in the future and more agencies are consolidated into larger agencies or managing general agencies, our sales channel could be materially affected in a number of ways, including loss of market access or market share in certain geographic areas if an acquirer is not one of our appointed agencies, loss of agency talent as the people most knowledgeable about our products and with whom we have developed strong working relationships exit the business following a disposition of an agency, increases in our commission costs as larger agencies acquire more negotiating leverage over their fees, and interfere with the core agency business of selling insurance due to integration or distraction. Any such disruption that materially affects our sales channel could have a negative impact on our results of operations and financial condition.

As the speed of digitization accelerates, we are subject to risks associated with both our agents’ and our ability to keep pace. In an increasingly digital world, agents who cannot provide a digital or technology-driven experience risk losing customers who demand such an experience, and such customers may choose to utilize more technology-driven agents or abandon the independent agency channel altogether. Additionally, if we are not able to keep pace with competitors’ digital offerings, we may not be able to meet the demand from our agents or their customers, which could lead to a loss of customers, agents or both. A loss of agents or customers could negatively affect our operating results and financial position.

We may be affected by disruptions caused by the introduction of new products, related technology changes, and new operating models in Commercial Lines, Personal Lines and Specialty businesses and recent or future acquisitions, and expansion into new geographic areas.

There are increased underwriting risks associated with premium growth and the introduction of new products or programs in our Commercial Lines, Personal Lines and Specialty businesses. Additionally, there are increased underwriting risks associated with the appointment of new agencies and managing general agencies and with the expansion into new geographical areas.

The introduction of new Commercial Lines products and the development of new niche and specialty lines, presents new risks. Certain new specialty products may present longer "tail" risks and increased volatility in profitability. Our expansion into western states, including California, presents additional underwriting risks since the regulatory, geographic, natural risk, legal environment, demographic, business, economic and other characteristics of these states present challenges different from those in the states where we historically have conducted business. In addition, our agency relationships in these new geographies are not as developed.

Our Personal Lines production and earnings may be unfavorably affected by the continued introduction of new products, expanded risk appetites and our focus on account business (i.e., policyholders who have both automobile and homeowner insurance with us) that we believe, despite pricing discounts, will ultimately be more profitable business. We may also experience adverse selection, which occurs when insureds purchase our products because of under-pricing, operational difficulties or implementation impediments with independent agents or the inability to grow new markets after the introduction of new products or the appointment of new agents.

As we enter new states or regions or grow business, there can be no assurance that we won't experience higher loss trends than anticipated.

Table of Contents

We may experience difficulties with technology, data security and/or outsourcing relationships, which could have a negative impact on our ability to conduct our business.

We use computer systems to store, retrieve, evaluate and utilize customer and company data and information. Our computer, information technology and telecommunications systems, in turn, interface with and rely upon third-party systems, including cloud-based data storage. Our business is highly dependent on our ability, and the ability of certain third parties, to access these systems to perform necessary business functions, including, without limitation, providing insurance quotes, processing premium payments, making changes to existing policies, filing and paying claims, providing customer support and managing investment portfolios. Systems attacks, failures or outages could compromise our ability to perform these functions in a timely manner, which could harm our ability to conduct business and hurt our relationships with our business partners and customers. In the event of a disaster such as a natural catastrophe, an industrial accident, a blackout, a computer virus, a cyber security attack, a terrorist attack or war, or interference from solar flares, our systems or the external systems that we rely on may be inaccessible to our employees, customers or business partners for an extended period of time. Even if our employees are able to report to work, they may be unable to perform their duties for an extended period of time if our data or the systems that we rely on are disabled or destroyed or if our disaster recovery plans are inadequate or suffer from unforeseen consequences. This could result in a materially adverse effect on our business results and liquidity.

In addition, we outsource certain technology and business process functions and data storage to third parties and may do so increasingly in the future. If we do not effectively develop, implement and monitor our outsourcing strategies, third-party providers do not perform as anticipated or we experience technological or other problems with a transition, we may not realize productivity improvements or cost efficiencies and may experience operational difficulties, increased costs and a loss of business. Our outsourcing of certain technology, data storage and business process functions to third parties may expose us to enhanced risk related to data security, which could result in monetary and reputational damages. In addition, our ability to receive services from third-party providers outside of the United States might be impacted by cultural differences, political instability, regulatory requirements or policies inside or outside of the United States. As a result, our ability to conduct our business might be adversely affected.

Data security incidents, including, but not limited to, those resulting from a malicious cyber security attack on us or our business partners and service providers, could disrupt or otherwise negatively impact our business.

Our systems and the systems that we rely on, like others in the financial services industry, are vulnerable to cyber security risks, and we are subject to disruption and other adverse effects caused by such activities. Large corporations such as ours are subject to daily attacks on their systems and other vulnerabilities to data security incidents. These attacks and incidents have included, or may in the future include: unauthorized access, viruses, malware or other malicious code, ransomware, deceptive social engineering campaigns (also known as “phishing” or “spoofing”), loss or theft of assets, employee errors or malfeasance, third-party errors or malfeasance, as well as system failures and other security events. Such attacks may have various goals, from seeking confidential information or the misdirection of payments, to causing operational disruption. Such activities could result in material disruptions to our operations, financial loss or material damage to our reputation. Like other companies, we have from time to time experienced, and are likely to continue to experience, security events, and while none of these events to date have had a material adverse effect on our business, no assurances can be made that such attacks or security events will not have a material adverse effect on our business in the future. As the breadth and complexity of cyber security attacks and other data security events become more prevalent and the methods used to perpetrate them evolve, we may be required to devote additional personnel, or financial or systems resources, to protecting our data security or investigating or remediating vulnerabilities as a result of data security incidents. Such resources could be costly in time and expenses, and could detract from resources spent on our core property and casualty insurance operations. In addition, we may not be able to detect an incident, assess its severity or impact, or appropriately respond in a timely manner, which could increase our exposure to an incident.

The third parties with whom we work are also subject to these same risks, and we are vulnerable if a cyber security attack or other data security incident involves a third party vendor or service provider. Such an event could threaten to disrupt our business if the third party's operations are compromised, or provide attackers an avenue to pivot and attack our systems by exploiting the relationships that we have with our trusted business partners. While we take measures to protect against such events (e.g., utilizing secure transmission capabilities with third-party vendors and others with whom we do business when possible), review and assess our third party providers' cybersecurity controls, as appropriate, and make changes to our business processes to manage these risks, we cannot assure that our efforts will always be successful.

Any failure to protect the confidentiality of customer information could adversely affect our reputation or expose us to fines, penalties or litigation, which could have a material adverse effect on our business, financial condition and results of operations.

We are required to safeguard the confidential personal information of our customers and applicants and are subject to an increasing number of federal, state, local and international laws and regulations regarding privacy and data security, as well as contractual commitments. These laws and regulations are rapidly evolving, complex, vary significantly from jurisdiction to jurisdiction, and sometimes conflict. We could be subject to governmental enforcement actions and fines, penalties, litigation, or public statements against us by consumer advocacy groups or others if confidential customer information is misappropriated from our computer systems, those of our vendors or others with whom we do business, or otherwise. Despite the security measures that may be in place, any such systems may be vulnerable to the types of attacks and security incidents described above. Any well-publicized compromise of security could deter people from entering into transactions that involve transmitting confidential information, or damage our reputation, which could have a material adverse effect on our business.

Integration of acquired businesses involves a number of risks.

There can be no assurance that we will be able to successfully integrate future acquisitions or that we will not assume unknown liabilities and reserve deficiencies in connection with such acquisitions. If we are unable to successfully integrate new businesses, then we could be impeded from realizing the benefits of an acquisition. The integration process could disrupt our business, and a failure to successfully integrate newer businesses could have a material adverse effect on our business, financial condition and results of operations. The difficulties of integrating an acquisition and risks to our business include, among others:

- unanticipated issues in integrating information, communications and other system or unknown vulnerabilities or inadequacies of an acquired company’s systems;
- assumption of unknown and unrecorded liabilities;
- unanticipated incompatibility of logistics, marketing and administration methods;
- maintaining employee morale and retaining key employees;
- integrating the business cultures of different companies;
- preserving important strategic, reinsurance and other relationships;
- integrating legal and financial controls in multiple jurisdictions;
- consolidating corporate and administrative infrastructures and eliminating duplicative operations;
- the diversion of management’s attention from ongoing business concerns;
- integrating geographically separate organizations;
- unexpected or overlapping concentrations of risk where one event or series of events can affect many insured parties;
- significant transaction costs;
- risks and uncertainties in our ability to increase the investment yield on the investment portfolio;
- uncertainties in our ability to decrease leverage as a result of adding future earnings to our capital base;
- risks and uncertainties regarding the volatility of underwriting results in a combined entity;
- the ability to more efficiently manage capital;
- the ability to improve renewal rates and increase new property and casualty policy counts;
- the ability to increase or maintain certain property and casualty insurance rates;
- complying with laws, rules and regulations in multiple jurisdictions, including new and multiple employment regulations, and regulations relating to the conduct of business activities such as tax,

privacy, information security, and environmental-related laws; and

- the impact of new product or line of business introductions and our ability to meet projected return on capital targets.

In addition, even if we are able to successfully integrate future acquisitions, we may not realize the full benefits of such acquisitions, including the synergies, cost savings or underwriting or growth opportunities that we expect. It is possible that these benefits may not be achieved within the anticipated time frame, or at all.

Table of Contents

Intense competition could negatively affect our ability to maintain or increase our profitability, particularly in light of the various competitive, financial, strategic, structural, informational and resource advantages that our competitors have.

We compete, and will continue to compete, with a large number of companies, including international, national and regional insurers, specialty insurance companies, so called “off-shore” companies which enjoy certain tax advantages, underwriting agencies and financial services institutions. We also compete with mutual insurance companies, reciprocal and exchange companies that may not have shareholders and may have different profitability targets than publicly or privately owned companies. In recent years, there has been substantial consolidation and convergence among companies in the financial services industry, resulting in increased competition from large, well-capitalized financial services firms. Many of our competitors have greater financial, technical and operating resources than we do, greater access to “big data,” and may be able to offer a wider range of, or more sophisticated, commercial and personal line products. Some of our competitors also have different marketing, advertising and sales strategies than we do and market and sell their products to consumers directly. Some companies are seeking to protect new products with patents or other legal protections, which may create new legal exposures or limit our ability to develop competing products. In addition, competition in the U.S. property and casualty insurance market has intensified over the past several years. This competition has had, and may continue to have, an adverse impact on our revenues and profitability.

A number of new, proposed or potential legislative or industry developments could further increase competition in our industry. These developments include:

- the implementation of commercial lines deregulation in several states;
- programs in which state-sponsored entities provide property insurance in catastrophe-prone areas or other alternative markets types of coverage; and
- changing practices caused by the Internet, application-based programs relying on algorithms and computer modeling to underwrite policies and administer claims, and the increased usage of real time comparative rating tools and claims management processes, which have led to greater competition in the insurance business in general, particularly on the basis of price, and pressure to reduce coverages to compete on price.

We could face heightened competition resulting from the entry of new competitors and the introduction of new products by new and existing competitors. Additionally, recent entries into the property and casualty marketplace by large technology companies, retail companies, so-called “Insurtech” companies and other non-traditional insurance providers, who aim to leverage their information about and direct access to customers, technology without the burden of legacy systems, access and ability to manipulate “big data,” artificial intelligence or other developing opportunities, may increase competition. Increased competition could make it difficult for us to obtain new or retain existing customers. It could also result in increasing our service, administrative, policy acquisition or general expenses as we seek to distinguish our products and services from those of our competitors. In addition, our administrative, technology and management information systems expenditures could increase substantially as we try to maintain or improve our competitive position or keep up with evolving technology.

We compete for business not just on the basis of price, but also on the basis of product coverages, reputation, financial strength, quality of service (including claims adjustment service), experience and breadth of product offering. We cannot provide assurance that we will be able to maintain a competitive position in the markets where we operate, or that we will be able to expand our operations into new markets.

We are rated by several rating agencies, and downgrades to our ratings could adversely affect our operations.

Our ratings are important in establishing our competitive position and marketing the products of our insurance companies to our agents and customers. Rating information is broadly disseminated and generally used throughout the industry. Many policyholders, particularly larger commercial customers, will not purchase, and many agents will not distribute, products of insurers that do not meet certain financial strength ratings.

Our insurance company subsidiaries are rated by A.M. Best, Moody's, and Standard & Poor's. These ratings reflect the rating agency's opinion of our insurance subsidiaries' financial strength, operating performance, position in the market place, risk management, and ability to meet their obligations to policyholders. These ratings are not evaluations directed to investors, and are not recommendations to buy, sell or hold our securities. Our ratings are subject to periodic review by the rating agencies, and we cannot guarantee the continued retention or improvement of our current ratings. This is particularly true given that rating agencies may change their criteria or increase capital requirements for various rating levels.

A downgrade in one or more of our or any of our subsidiaries' claims-paying ratings could negatively impact our business and competitive position, particularly in lines where customers require us to maintain minimum ratings. Additionally, a downgrade in one or more of our debt ratings could adversely impact our ability to access the capital markets and other sources of funds, increase the cost of current credit facilities, and/or adversely affect pricing of new debt sought in the capital markets in the future. Our ability to raise capital in the equity markets could also be adversely affected.

Negative changes in our level of statutory surplus could adversely affect our ratings and profitability.

The capacity for an insurance company's growth in premiums is in part a function of its statutory surplus. Maintaining appropriate levels of statutory surplus, as measured by state insurance regulators, is considered important by state insurance regulatory authorities and by rating agencies that rate insurers' claims-paying abilities and financial strength. As our business grows, or due to other factors, regulators may require that additional capital be retained or contributed to increase the level of statutory surplus. Failure to maintain certain levels of statutory surplus could result in increased regulatory scrutiny, action by state regulatory authorities or a downgrade by private rating agencies. Our surplus is affected by, among other things, results of operations and investment gains, losses, impairments, and dividends from the insurance operating company to its parent company. A number of these factors affecting our level of statutory surplus are, in turn, influenced by factors that are out of our control, including the frequency and severity of catastrophes, changes in policyholder behavior, changes in rating agency models and economic factors such as changes in equity markets, credit markets, interest rates or foreign currency exchange rates.

The NAIC uses a system for assessing the adequacy of statutory capital for property and casualty insurers. The system, known as risk-based capital, is in addition to the states' fixed dollar minimum capital and other requirements. The system is based on risk-based formulas that apply prescribed factors to the various risk elements in an insurer's business and investments to report a minimum capital requirement proportional to the amount of risk assumed by the insurer. Any failure to maintain appropriate levels of statutory surplus would have an adverse impact on our ability to maintain or grow our business.

We may not be able to grow as quickly or as profitably as we intend, which is important to our current strategy.

Over the past several years, we have made, and our current plans are to continue to make, significant investments in our Commercial and Personal Lines of business, in order to, among other things, strengthen our product offerings and service capabilities, expand into new geographic areas, improve technology and our operating models, build expertise in our personnel, and expand our distribution capabilities, with the ultimate goal of achieving significant, sustained growth. The ability to achieve significant profitable premium growth in order to earn adequate returns on such investments and expenses, and to grow further without proportionate increases in expenses, is an important part of our current strategy. There can be no assurance that we will be successful at profitably growing our business, or that we will not alter our current strategy due to changes in our markets or an inability to successfully maintain acceptable margins on new or existing business or for other reasons, in which case premiums written and earned, operating income and net book value could be adversely affected.

An impairment in the carrying value of goodwill and intangible assets could negatively impact our consolidated results of operations and shareholders' equity.

Upon an acquisition of a business, we record goodwill and intangible assets at fair value. Goodwill and intangible assets determined to have indefinite useful lives are not amortized, while other intangible assets are amortized over their estimated useful lives. Goodwill and intangible assets that are not amortized are reviewed for impairment at least annually. Evaluating the recoverability of such assets requires us to rely on estimates and assumptions related to return on equity, margin, growth rates, discount rates, and other data. There are inherent uncertainties related to these factors, and significant judgment is required in applying these factors. Goodwill and intangible asset impairment charges can result from declines in operating results, divestitures or sustained market declines and other factors. As of December 31, 2018, goodwill and intangible assets that are not amortized totaled $207 million and represented approximately 7% of shareholders' equity. Our legacy Hanover and Citizens businesses represent 63% of this balance; AIX represents 24% of this balance; and, the remaining acquisitions combined represent 13% of this balance.

Although we believe these assets are recoverable, we cannot provide assurance that future market or business conditions would not result in the impairment of a portion of these assets. Impairment charges could materially affect our financial position and our financial results in the quarter or annual period in which they are recognized.

We could be subject to additional losses related to the sale of our discontinued FAFLIC and variable life insurance and annuity businesses and our recent sale of our Chaucer business.

On January 2, 2009, we sold our remaining life insurance subsidiary, FAFLIC, to Commonwealth Annuity and Life Insurance Company. Coincident with the sale transaction, Hanover Insurance and FAFLIC entered into a reinsurance contract whereby Hanover Insurance assumed FAFLIC’s discontinued accident and health insurance business. We previously owned Commonwealth Annuity, but sold it in 2005 in conjunction with our disposal of our variable life insurance and annuity business. In connection with these transactions, we have agreed to indemnify Commonwealth Annuity for certain contingent liabilities, including litigation and other regulatory matters.

On December 28, 2018, we sold the majority of our Chaucer business (specifically our U.K.-based Lloyd’s entities) to China Re. In connection with this transaction, we made certain representations and warranties and agreed to indemnify China Re for certain pre-sale contingent liabilities.

We cannot provide assurance as to what the costs of any indemnifications will be when they ultimately settle.

We may incur financial losses related to our discontinued assumed accident and health reinsurance pools and arrangements.

We previously participated, through FAFLIC, in approximately 40 assumed accident and health reinsurance pools and arrangements. The business was retained in the sale of FAFLIC and assumed by Hanover Insurance through a reinsurance agreement. In 1999, prior to the sale of FAFLIC to Commonwealth Annuity, FAFLIC had ceased writing new premiums in this business, subject to certain contractual obligations. The reinsurance pool business consists primarily of long-term care, the medical and disability portions of workers' compensation risks, assumed personal accident, individual medical, long-term disability and special risk business. We are currently monitoring and managing the run-off of our related participation in the 24 pools with remaining liabilities.

Loss estimates associated with substantially all of the discontinued accident and health business are provided by managers of each pool. Reserve estimates for this business are subject to the variability caused by extended loss emergence periods. The estimation of reserves for this business is further complicated by delays between the time a claim is reported to the ceding insurer and when the claim, premium and other pertinent policy data is reported by the ceding insurer to the pool manager and then to us, and by our dependence on the quality and consistency of the claim cost reporting by the ceding company and actuarial estimates by the pool manager. We adopt reserve estimates for this business that consider this information, expected returns on assets assigned to this business and other facts. We update these reserves as new information becomes available and further events occur that may affect the ultimate resolution of unsettled claims. Based on information provided to us by the pool managers, we believe that the reserves recorded related to this business are adequate. However, since reserve and claim cost estimates related to the discontinued accident and health business are dependent on several assumptions, including, but not limited to, morbidity, lapses, future premium rates, future health care costs, persistency of medical care inflation and investment performance, and these assumptions can be impacted by technical developments and advancements in the medical field and other factors, there can be no assurance that the reserves established for this business will prove sufficient. Revisions to these reserves could have a material adverse effect on our results of operations for a particular quarterly or annual period or on our financial position.

Our long-term care pool accounts for the majority of our remaining accident and health reinsurance pool business. The potential risk and exposure of our long-term care pool is based upon expected estimated claims and payment patterns, using assumptions for, among other things, morbidity, lapses, future premium rates, and the interest rate used for discounting the future projected cash flows. The long-term exposure of this pool depends upon how our actual experience compares with these future cash flow projection assumptions. If any of our assumptions prove to be inaccurate, our reserves may be inadequate, which may have a material adverse effect on our results of operations. For example, during the fourth quarter of 2017, we received updated future cash flow projections from the manager of our long-term care pool that reflected a significant increase in projected claim costs. As a result of this deterioration, we increased our long-term care pool reserves by $23.3 million (44%), before tax, during the fourth quarter of 2017 and we continue to monitor developments in the legacy long-term care industry.

For some of these pools and arrangements, we variously acted as a reinsurer, a reinsured or both. In some instances, we ceded significant exposures to other reinsurers in the marketplace. The potential risk to us as a participant in such pools is primarily that other companies that reinsured this business from us may fail to pay their reinsurance obligations. Thus, we are exposed to both assumed losses and to credit risk related to these pools.

Based on the information provided by the pool managers, we believe that the reserves recorded related to this business are appropriate. However, due to the inherent volatility in this business and the reporting lag of losses that tend to develop over time and which ultimately affect excess covers, as well as uncertainty surrounding both future claim expenses and with future premium rate levels for certain of these businesses, there can be no assurance that current reserves are adequate or that we will not have additional losses in the future. Although we have discontinued participation in these reinsurance arrangements, unreported and new claims related to the years in which we were a participant may be reported, and previously reported claims may develop unfavorably. If any such unreported claims or unfavorable development is reported to us, our results of operations and financial position may be negatively impacted.

Other market fluctuations and general economic, market and political conditions may also negatively affect our business, profitability, investment portfolio, and the market value of our common stock.

It is difficult to predict the impact of a challenging economic environment on our business. In Commercial Lines, a difficult economy has resulted in reductions in demand for insurance products and services since there are more companies ceasing to do business and there are fewer business start-ups, particularly as businesses are affected by a decline in overall consumer and business spending. Additionally, claims frequency could increase as policyholders submit and pursue claims more aggressively than in the past, fraud incidences may increase, or we may experience higher incidents of abandoned properties or poorer maintenance, which may also result in more claims activity. We have experienced higher workers' compensation claims as injured employees take longer to return to work, increased surety losses as construction companies experience financial pressures and higher retroactive premium returns as audit results reflect lower payrolls. Our business could also be affected by an ensuing consolidation of independent insurance agencies. Our ability to increase pricing has been impacted as agents and policyholders have been more price sensitive, customers shop for policies more frequently or aggressively, utilize comparative rating models or, in Personal Lines in particular, turn to direct sales channels rather than independent agents. We have also experienced decreased new business premium levels, retention and renewal rates, and renewal premiums. Specifically, in Personal Lines, policyholders may reduce coverages or change deductibles to reduce premiums, experience declining home values, or be subject to increased foreclosures, and policyholders may retain older or less expensive automobiles and purchase or insure fewer ancillary items such as boats, trailers and motor homes for which we provide coverages. Additionally, if as a result of a difficult economic environment, drivers continue to eliminate automobile insurance coverage or to reduce their bodily injury limit, we may be exposed to more uninsured and underinsured motorist coverage losses. Conversely, favorable economic conditions may also impact our business and results of operations. For example, recent low unemployment has caused employers to hire less experienced workers, which has contributed to higher workers' compensation and commercial automobile losses.

At December 31, 2018, we held approximately $8.3 billion of investment assets in categories such as fixed maturities, equity securities, other investments, and cash and short-term investments. Our investments are primarily concentrated in the domestic market. Our investment returns, and thus our profitability, statutory surplus and shareholders' equity, may be adversely affected from time to time by conditions affecting our specific investments and, more generally, by bond, stock, real estate and other market fluctuations and general economic, market and political conditions, including the impact of changing government policies, including monetary policies, and geopolitical risks. These broader market conditions are out of our control. Our ability to make a profit on insurance products depends in part on the returns on investments supporting our obligations under these products, and the value of specific investments may fluctuate substantially depending on the foregoing conditions. We may use a variety of strategies to hedge our exposure to interest and currency rates and other market risks. However, hedging strategies are not always available and carry certain credit risks, and our hedging could be ineffective. Moreover, increased government regulation of certain derivative transactions used to hedge certain market risks has served to prevent (or otherwise substantially increase the cost associated with) hedging such risks.

Additionally, the aggregate performance of our investment portfolio depends, to a significant extent, on the ability of our investment managers to select and manage appropriate investments. As a result, we are also exposed to operational risks, which may include, but are not limited to, a failure to follow our investment guidelines, technological and staffing deficiencies and inadequate disaster recovery plans. The failure of these investment managers to perform their services in a manner consistent with our expectations and investment objectives could adversely affect our ability to conduct our business.

Debt securities comprise a material portion of our investment portfolio. The concentration of our investment portfolio in any one type of investment, industry or geography could have a disproportionately adverse effect on our investment portfolio. The issuers of debt securities, as well as borrowers under the loans we make, customers, trading counterparties, counterparties under swaps and other derivative contracts, banks which have commitments under our various borrowing arrangements, and reinsurers, may be affected by declining market conditions or credit weaknesses. These parties may default on their obligations to us due to lack of liquidity, downturns in the economy or real estate values, operational failure, bankruptcy or other reasons. Future increases in interest rates could result in increased defaults as borrowers are unable to pay the additional borrowing costs on variable rate securities or obtain refinancing. We cannot provide assurance that further impairment charges will not be necessary in the future. In addition, evaluation of available-for-sale securities for other-than-temporary impairment includes inherent uncertainty and subjective determinations. We cannot be certain that such impairments are adequate as of any stated date. Our ability to fulfill our debt and other obligations could be adversely affected by the default of third parties on their obligations owed to us.

Deterioration in the global financial markets may adversely affect our investment portfolio and have a related impact on our other comprehensive income, shareholders' equity and overall investment performance. As economic growth has improved in recent years, central bank policies and fiscal policies are either in transition or returning to a more prominent role across the globe, but the effects of such policies on financial markets are uncertain.

Market conditions also affect the value of assets under our employee pension plans, including our Cash Balance Plan. The expense or benefit related to our employee pension plans results from several factors, including, but not limited to, changes in the market value of plan assets, interest rates, regulatory requirements or judicial interpretation of benefits. At December 31, 2018, our plan assets included approximately 85% of fixed maturities and 15% of equity securities and other assets. Additionally, our net liabilities exceed assets by $18.8 million and $33.8 million for our qualified and non-qualified (which is an unfunded plan) pension plans, respectively, at December 31, 2018. Declines in the market value of plan assets and lower interest rates from levels at December 31, 2018, among other factors, could impact our funding estimates and negatively affect our results of operations. Deterioration in market conditions and differences between our assumptions and actual occurrences, and behaviors, could result in a need to fund more into the qualified plans to maintain an appropriate funding level.

These same market conditions and factors could also cause the market price of our common stock to fluctuate or become volatile, which could adversely affect our stock price. Because our stock price is influenced by our financial performance and other larger macro-economic factors that are out of our control, the price of our common stock may not remain at or exceed current or historical levels.

Table of Contents

We may experience unrealized losses on our investments, especially during a period of heightened volatility, or if assumptions related to our investment valuations are changed, which could have a material adverse effect on our results of operations or financial condition.

Our investment portfolio and shareholders' equity can be, and in the past have been, significantly impacted by changes in the market values of our securities. U.S. and global financial markets and economies remain uncertain. This could result in unrealized and realized losses in future periods, and adversely affect the liquidity of our investments, which could have a material adverse impact on our results of operations and our financial position. At December 31, 2018, our financial position (including assets-held-for-sale) was negatively affected by $85.9 million as a result of unrealized losses, largely driven by the low interest rate environment. Information with respect to interest rate sensitivity is included in "Quantitative and Qualitative Disclosures" in Management's Discussion and Analysis of Financial Condition. Valuation of financial instruments (i.e., Level 1, 2, or 3) include methodologies, estimates, assumptions and judgments that are inherently subjective and open to different interpretations and could result in changes to investment valuations or the ability to receive such valuations on sale. During periods of market disruption, it may be difficult to value certain of our securities if trading becomes less frequent and/or market data becomes less observable. In addition, in times of financial market disruption, certain asset classes that were in active markets with significant observable data may become illiquid. In those cases, the valuation process includes inputs that are less observable and require more subjectivity and judgment by management. Furthermore, a change in the subjective methodologies, estimates, assumptions and judgments used to value our investments could also materially affect the valuation of certain investments.

If, following such declines, we are unable to hold our investment assets until they recover in value, or if such asset value never recovers, we would incur other-than-temporary impairments that would be recognized as realized losses in our results of operations, reduce net income and earnings per share and adversely affect our liquidity. Impairment determinations, like valuations, are also subjective, and changes to the methodologies, estimates, assumptions and judgments used to determine impairments may affect the timing and amount of impairment losses recognized in our results of operations. Temporary declines in the market value of fixed maturities are recorded as unrealized losses, which do not affect net income and earnings per share, but reduce other comprehensive income, which is reflected on our Consolidated Balance Sheets. We cannot provide assurance that we will not have additional other-than-temporary impairments and/or unrealized or realized investment losses in the future.

We invest a portion of our portfolio in common stock or preferred stocks. The value of these assets fluctuates with the equity markets. Particularly in times of economic weakness, the market value and liquidity of these assets may decline, and may impact net income, capital and cash flows.

We are exposed to significant capital market risks related to changes in interest rates, credit spreads, and equity prices, which may adversely affect our results of operations, financial position or cash flows.

We are exposed to significant capital markets risk related to changes in interest rates, credit spreads, and equity prices. If significant, declines in equity prices, changes in interest rates, and changes in credit spreads each could have a material adverse effect on our results, financial position or cash flows. Our exposure to interest rate risk relates primarily to the market price and cash flow variability associated with changes in interest rates. Our investment portfolio contains interest rate sensitive instruments, such as fixed income securities, which may be adversely affected by changes in interest rates from governmental monetary policies, domestic and international economic and political conditions and other factors beyond our control. A rise in market yields would reduce the fair value of our investment portfolio, but provide the opportunity to earn higher rates of return on funds reinvested. A further decline in interest rates, on the other hand, would increase the fair value of our investment portfolio, but we would earn lower rates of return on reinvested assets. We may be forced to liquidate investments prior to maturity at a loss in order to cover liabilities, and such liquidation could be accelerated in the event of significant loss events, such as catastrophes. Although we take measures to manage the economic risks of investing in a changing interest rate environment, we may not be able to mitigate the interest rate risk of our assets relative to our liabilities.

Our investment portfolio is invested primarily in high quality, investment-grade fixed income securities. However, we also invest in non-investment-grade high yield fixed income securities and alternative investments. These securities, which pay a higher rate of interest, also have a higher degree of credit or default risk. These securities may also be less liquid in times of economic weakness or market disruptions. Additionally, the reported value of our investments do not necessarily reflect the lowest current market price for the asset, and if we require significant amounts of cash on short notice, we may have difficulty selling our investments in a timely manner, be forced to sell them for less than we otherwise would have been able to realize, or both. While we have procedures to monitor the credit risk and liquidity of our invested assets, we expect from time to time, and particularly in periods of economic weakness, to experience default losses in our portfolio. This would result in a corresponding reduction of net income, capital and cash flows.

Inflationary pressures may negatively impact expenses, reserves and the value of investments.

Inflationary pressures in the U.S. with respect to medical and health care, automobile repair and construction costs, as well as social inflation of jury awards and settlement expectations, all of which are significant components of our indemnity liabilities under policies we issue to our customers, and which could also impact the adequacy of reserves we have set aside for prior accident years, may have a negative effect on our results of operations. Inflationary pressures also cause or contribute to, or are the result of, increases in interest rates, which would reduce the fair value of our investment portfolio.

We are a holding company and rely on our insurance company subsidiaries for cash flow; we may not be able to receive dividends from our subsidiaries in needed amounts and may be required to provide capital to support their operations.

We are a holding company for a diversified group of insurance companies, and our principal assets are the shares of capital stock of these subsidiaries. Our ability to make required interest payments on our debt, as well as our ability to pay operating expenses and pay dividends to shareholders, depends upon the receipt of sufficient funds from our subsidiaries. The payment of dividends by our insurance company subsidiaries is subject to regulatory restrictions and will depend on the surplus and future earnings of these subsidiaries, as well as these regulatory restrictions. We are required to notify insurance regulators prior to paying any dividends from our insurance subsidiaries, and pre-approval is required with respect to “extraordinary dividends.”

Because of the regulatory limitations on the payment of dividends from our insurance company subsidiaries, we may not always be able to receive dividends from these subsidiaries at times and in amounts necessary to meet our debt and other obligations, or to pay dividends to our shareholders. The inability of our subsidiaries to pay dividends to us in an amount sufficient to meet our debt interest and funding obligations would have a material adverse effect on us. These regulatory dividend restrictions also impede our ability to transfer cash and other capital resources among our subsidiaries. Similarly, our insurance subsidiaries may require capital from the holding company to support their operations.

Our dependence on our insurance subsidiaries for cash flow, and their potential need for capital support, exposes us to the risk of changes in their ability to generate sufficient cash inflows from new or existing customers or from increased cash outflows. Cash outflows may result from claims activity, expense payments or investment losses. Because of the nature of our business, claims activity can arise suddenly and in amounts which could outstrip our capital or liquidity resources. Reductions in cash flow or capital demands from our subsidiaries could have a material adverse effect on our business and results of operations.

We may require additional capital or credit in the future, which may not be available or only available on unfavorable terms.

We monitor our capital adequacy on a regular basis. Our future capital and liquidity requirements depend on many factors, including our premiums written, loss reserves and claim payments, investment portfolio composition and risk exposures, the availability of letters and lines of credit, as well as regulatory and rating agency capital requirements. In addition, our capital strength can affect our ratings, and therefore is important to our ability to underwrite business. The quality of our claims paying and financial strength ratings are evaluated by independent rating agencies. Such ratings affect our ability to write quality business, our borrowing expenses and our ability to raise capital.

To the extent that our existing capital is insufficient or unavailable to fund our future operating requirements and/or cover claim losses, we may need to raise additional funds through financings or limit our growth. Any equity or debt financing, if available, may be on terms that are unfavorable to us. In the case of equity financings, dilution to our shareholders could result and, in any case, such securities may have rights, preferences, and privileges that are senior to our common stock. If we are not able to obtain additional capital as necessary, our business, results of operations and financial condition could be adversely affected.

Errors or omissions in connection with the administration of any of our products may cause our business and profitability to be negatively impacted.

We are responsible to our policyholders for administering their policies, premiums and claims and ensuring that appropriate records are maintained that reflect their transactions. We are subject to risks that errors or omissions of information occurred with respect to the administration of our products. We are also subject to misconduct and fraud on the part of our employees and agents. As a result, we are subject to risks of liabilities associated with "bad faith," unfair claims practices, unfair trade practices or similar allegations. Such risks may stem from allegations of agents, vendors, policyholders, claimants, reinsurers, regulators, states' attorneys general, or others. We may incur charges associated with any errors and omissions previously made or that are made in future periods. These charges may result from our obligation to policyholders to correct any errors or omissions or refund premiums, non-compliance with regulatory requirements, from fines imposed by regulatory authorities, or from other items, which may affect our financial position or results of operations.

We are subject to all of the foregoing risks with respect to the third-party asset management operations of Opus. Opus, which had $3.1 billion of unaffiliated assets under management as of December 31, 2018, is subject to federal (SEC) and other regulatory requirements and is subject to operational, technological, information security, investment and other risks, as well as claims by third parties whose funds it manages.

Changes in current accounting practices and future pronouncements may materially impact our reported financial results.

Table of Contents

Unanticipated developments in accounting practices may require us to incur considerable additional expenses to comply with such developments, particularly if we are required to prepare information relating to prior periods for comparative purposes or to apply the new requirements retroactively. Such developments may also significantly impact the presentation of such financial statements and may require restatements. The impact of changes in current accounting practices and future pronouncements cannot be predicted, but they may affect the calculation of net income, net equity and other relevant financial statement line items.

Failure to maintain effective internal control over financial reporting could have a material adverse effect on our business and stock price.

As a publicly traded company, we are required to maintain effective internal control over financial reporting. While management has certified that our internal control over financial reporting was effective as of December 31, 2018, because internal control over financial reporting is complex, we cannot assure you that our internal control over financial reporting will be effective in the future. Any failure to design, implement or maintain required controls, gaps in internal controls, or difficulties encountered in their operation, could adversely affect our results or cause us to fail to meet our reporting obligations. If we are not able to maintain or document effective internal control over financial reporting, our independent, registered public accounting firm would be unable to certify the effectiveness of our internal control over financial reporting or opine that our financial statements fairly present, in all material respects, our financial position, results of operations and cash flows in conformity with GAAP. Significant internal control deficiencies may also prevent us from reporting our financial information on a timely basis or cause us to restate previously issued financial information, and thereby subject us to litigation and adverse regulatory consequences, including fines and other penalties, and could result in a breach of the covenants under our credit agreements. Investor confidence in us and the reliability of our financial statements could erode, resulting in a decline in our stock price.

We are subject to the U.S. Foreign Corrupt Practices Act and similar worldwide anti-bribery laws, that impose restrictions and may carry substantial penalties. Violations of these laws or allegations of such violations could cause a material adverse effect on our business, financial position and results of operations.

The U.S. Foreign Corrupt Practices Act and anti-bribery laws in other jurisdictions, generally prohibit companies and their intermediaries from making improper payments for the purpose of obtaining or retaining business or other commercial advantage. Our policies mandate compliance with these anti-bribery laws that often carry substantial penalties. We cannot assure you that our internal control policies and procedures will always protect us from reckless or other inappropriate acts committed by our affiliates, employees, or agents. Violations of these laws, or allegations of such violations, could have a material adverse effect on our business, financial position and results of operations.

ITEM 1B–UNRESOLVED STAFF COMMENTS

None.

ITEM 2–PROPERTIES

We own our headquarters, located at 440 Lincoln Street, Worcester, Massachusetts, with approximately 803,000 square feet.

We also own office space located in a three-building complex located at 808 North Highlander Way, Howell, Michigan, with approximately 140,000 square feet, where various business operations are conducted. Certain of our properties have been leased to unrelated third parties or are available for lease.

We also lease offices throughout the United States for branch sales, underwriting and claims processing functions, and the operations of acquired subsidiaries.

We believe that our facilities are adequate for our present needs in all material respects.

ITEM 3–LEGAL PROCEEDINGS

Reference is made to the litigation matter captioned "Durand Litigation" included in Note 18 - "Commitments and Contingencies – Legal Proceedings" in the Notes to Consolidated Financial Statements.

ITEM 4–MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5–MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

COMMON STOCK AND STOCKHOLDER OWNERSHIP

Our common stock is traded on the New York Stock Exchange under the symbol "THG". On February 15, 2019, we had approximately 16,781 shareholders of record and 40,573,500 shares of common stock outstanding. On the same date, the trading price of our common stock was $117.63 per share.

DIVIDENDS

On December 30, 2018, the Board of Directors declared a special dividend of $4.75 per outstanding share following completion of the sale of the Chaucer business. See Note 2 – "Dispositions of Businesses" in the Notes to Consolidated Financial Statements.

We currently expect that quarterly cash dividends, comparable to what we have paid in the past of $0.54 per share in the first three quarters of 2018 and $0.60 per share in the fourth quarter of 2018, will continue to be paid in the future; however, the payment of future quarterly or special dividends on our common stock will be determined by the Board of Directors from time to time based upon cash available at our holding company, our results of operations and financial condition and such other factors as the Board of Directors considers relevant.

Dividends to shareholders may be funded from dividends paid to us from our subsidiaries. Dividends from insurance subsidiaries are subject to restrictions imposed by state insurance laws and regulations. See "Liquidity and Capital Resources" in Management's Discussion and Analysis of Financial Condition and Note 13 – "Dividend Restrictions" in the Notes to Consolidated Financial Statements.

ISSUER PURCHASES OF EQUITY SECURITIES

In 2005, the Board of Directors first authorized a stock repurchase program which, including subsequent amendments to increase the number of shares subject to repurchase, provided for aggregate repurchases of up to $900 million. This program was terminated on December 30, 2018 in conjunction with the establishment of the new program discussed below. Prior to termination, total repurchases under this program were 14.9 million shares at a cost of $811.2 million. The prior share repurchase authorization had a balance of approximately $89 million when terminated.

On December 30, 2018, the Board of Directors authorized a new stock repurchase program which provides for aggregate repurchases of up to $600 million. Under the new repurchase authorization, we may repurchase our common stock from time to time, in amounts, at prices, and at times we deem appropriate, subject to market conditions and other considerations. Our repurchases may be executed using open market purchases, privately negotiated transactions, accelerated repurchase programs or other transactions. We are not required to purchase any specific number of shares or to make purchases by any certain date under this program. On January 2, 2019, pursuant to the terms of an accelerated share repurchase agreement, we paid $250.0 million and received an initial delivery of approximately 1.8 million shares of our common stock, which is approximately 80% of the total number of shares expected to be repurchased under this agreement.

34

Table of Contents

Shares purchased in the fourth quarter of 2018 are as follows:

PERIOD	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet be Purchased Under the Plans or Programs (in millions) [2]
October 1 - 31, 2018[1]	86,140	$ 116.52	85,822	$ 92
November 1 - 30, 2018 [1]	14,899	110.69	14,874	91
December 1 - 31, 2018 [1]	16,730	109.56	16,700	600
Total	117,769	$ 114.79	117,396	$ 600

(1) Includes 318, 25 and 30 shares withheld to satisfy tax withholding amounts due from employees related to the receipt of stock which resulted from the exercise or vesting of equity awards for the months ended October 31, November 30 and December 31, 2018, respectively.

(2) As noted above, the Board of Directors authorized a new stock repurchase program which replaced the then existing program. Accordingly, the entire $600 million authorization is available for repurchases at December 31, 2018.

Table of Contents

ITEM 6 - SELECTED FINANCIAL DATA

FIVE YEAR SUMMARY OF SELECTED FINANCIAL HIGHLIGHTS

YEARS ENDED DECEMBER 31	2018	2017	2016	2015	2014
(in millions, except per share data)					
Statements of Income					
Revenues					
Premiums	$4,254.4	$3,980.4	$3,789.5	$3,653.6	$3,488.5
Net investment income	267.4	243.9	231.6	231.1	224.3
Net realized investment gains (losses)	(50.7)	21.1	10.2	19.2	29.3
Fees and other income	23.2	22.5	22.6	23.6	23.2
Total revenues	4,494.3	4,267.9	4,053.9	3,927.5	3,765.3
Losses and Expenses					
Losses and loss adjustment expenses	2,724.6	2,579.6	2,546.0	2,367.9	2,294.3
Amortization of deferred acquisition costs	891.8	840.7	803.6	778.0	748.5
Loss on repayment of debt	28.2	—	88.3	24.1	0.1
Other operating expenses	567.2	554.7	550.0	540.8	542.5
Total losses and expenses	4,211.8	3,975.0	3,987.9	3,710.8	3,585.4
Income from continuing operations before income taxes	282.5	292.9	66.0	216.7	179.9
Income tax expense (benefit)	43.5	76.8	(1.0)	59.3	40.9
Income from continuing operations, net of taxes	239.0	216.1	67.0	157.4	139.0
Discontinued Operations:					
Gain from sale of Chaucer business, net of taxes	131.9	—	—	—	—
Income (loss) from Chaucer business, net of taxes	20.0	(13.1)	89.1	173.4	143.3
Income (loss) from discontinued life business, net of taxes	0.1	(16.8)	(1.0)	0.7	(0.3)
Net income	$391.0	$186.2	$155.1	$331.5	$282.0
Net income per common share (diluted)	$9.09	$4.33	$3.59	$7.40	$6.28
Dividends declared per common share	$6.97	$2.04	$1.88	$1.69	$1.52
Balance Sheets (at December 31)					
Total assets	$12,399.7	$15,469.6	$14,220.4	$13,781.2	$13,748.9
Debt	777.9	786.9	786.4	803.1	892.7
Total liabilities	9,445.0	12,471.9	11,362.9	10,936.8	10,904.9
Shareholders' equity	2,954.7	2,997.7	2,857.5	2,844.4	2,844.0

Table of Contents

ITEM 7–MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

TABLE OF CONTENTS

INTRODUCTION

The following Management's Discussion and Analysis of Financial Condition and Results of Operations is intended to assist readers in understanding the consolidated results of operations and financial condition of The Hanover Insurance Group, Inc. and its subsidiaries ("THG"). Consolidated results of operations and financial condition are prepared in accordance with generally accepted accounting principles in the United States of America ("U.S. GAAP"). This discussion should be read in conjunction with the Consolidated Financial Statements and related footnotes included elsewhere herein.

Results of operations include the accounts of The Hanover Insurance Company ("Hanover Insurance") and Citizens Insurance Company of America ("Citizens"), our principal property and casualty companies; and certain other insurance and non-insurance subsidiaries. Our results of operations also include the results of our discontinued operations, consisting primarily of our former Chaucer international business, Chaucer Holdings Limited ("Chaucer"), a United Kingdom ("U.K.") domiciled specialist insurance underwriting group which operates through the Society and Corporation of Lloyd's ("Lloyd's"), and the international insurance and non-insurance subsidiaries, which collectively constituted our former Chaucer segment. On December 28, 2018, we completed the sale of Chaucer Holdings Limited, the major portion of our Lloyd's international specialty business. As of December 31, 2018 and for all prior periods presented in this Annual Report on Form 10-K, operations from Chaucer and the related assets and liabilities are presented as discontinued operations. Results of operations also include the discontinued operations of our accident and health and former life insurance businesses.

EXECUTIVE OVERVIEW

Business operations consist of three operating segments: Commercial Lines, Personal Lines and Other.

Net income was $391.0 million in 2018, compared to $186.2 million in 2017, an increase of $204.8 million, primarily due to the gain from the sale of our former Chaucer business and an increase in operating income.

Operating income before interest expense and income taxes (a non-GAAP financial measure; see also "Results of Operations – Consolidated – Non-GAAP Financial Measures") was $406.5 million in 2018 compared to $327.3 million in 2017, an increase of $79.2 million. This increase is primarily due to lower catastrophe losses, higher net investment income, a reduction in reinsurance reinstatement premiums, earned premium growth and lower expenses, partially offset by higher non-catastrophe current accident year losses. Pre-tax catastrophe losses were $219.2 million in 2018, compared to $251.5 million in 2017, a decrease of $32.3 million. Reinsurance reinstatement premium, net of ceding commissions, was a favorable change of $21.5 million. Net unfavorable development on prior years' loss and loss adjustment expense ("LAE") reserves ("prior years' loss reserves") was $0.4 million in 2018, compared to $1.2 million in 2017.

As discussed further in "Discontinued Operations" below, on December 28, 2018, we completed the sale of Chaucer to China Re. We subsequently completed the sale of our Chaucer-related Irish entity on February 14, 2019. The sale of the Australian entities is pending, subject only to local regulatory approval, and is expected to close in the first quarter of 2019. We received $28 million of additional consideration for the Irish entity, and we expect to receive $13 million of additional consideration related to the Australian entities.

Commercial Lines

Our account-focused approach to the small commercial market, distinctiveness in the middle market, and continued development of specialty lines provides us with a diversified portfolio of products and delivers significant value to agents and policyholders. Each of these businesses is expected to contribute to premium growth in Commercial Lines over the next several years as we continue to pursue our core strategy of developing strong partnerships with agents, enhanced franchise value through limited distribution, distinctive products and coverages, and continued investment in industry segmentation.

These efforts have driven, and we believe they will continue to drive, improvement in our overall mix of business and our underwriting profitability. Commercial Lines net premiums written grew by 6.0% in 2018, due to growth in small commercial, middle market, and the professional lines within our specialty business. Approximately 4.9% of this growth was due to rate and exposure increases, strong retention and targeted new business expansion, with the balance being attributable to improved reinsurance reinstatement activity.

Underwriting results improved in 2018, as compared to 2017, primarily due to lower catastrophe losses, higher favorable development on prior years' loss reserves, a reduction in reinsurance reinstatement premiums driven by prior year large loss activity, and lower expenses, partially offset by higher non-catastrophe current accident year losses. Catastrophe losses were $142.3 million in 2018, a decrease of $28.3 million when compared to 2017. Favorable development on prior years' loss reserve in 2018 was $34.1 million, compared to $9.4 million in 2017, an increase of $24.7 million. Reinsurance reinstatement premium, net of ceding commissions, had an unfavorable impact of $0.9 million in 2018, compared to $22.4 million in 2017, a favorable change of $21.5 million. The competitive nature of the Commercial Lines market requires us to be highly disciplined in our underwriting process to ensure that we write business at acceptable margins, and we continue to seek rate increases across our lines of business.

Table of Contents

Personal Lines

Personal Lines focuses on partnering with high quality, value-oriented agencies that deliver consultative selling and stress the importance of account rounding (the conversion of single policy customers to accounts with multiple policies and additional coverages, to address customers' broader objectives). Approximately 84% of our policies in force are account business. We are focused on seeking profitable growth opportunities, building a distinctive position in the market, and diversifying geographically.

Net premiums written grew by 7.7% in 2018, primarily due to higher renewal premium, driven by rate increases and strong retention, as well as new business growth. Underwriting results declined in 2018, as compared to 2017, primarily due to higher unfavorable development on prior years' loss reserves and higher non-catastrophe current accident year losses, partially offset by earned premium growth, lower catastrophe losses, and lower expenses. We continue to seek rate increases that meet or exceed underlying loss cost trends, subject to regulatory and competitive considerations.

DESCRIPTION OF OPERATING SEGMENTS

Primary business operations include insurance products and services currently provided through three operating segments: Commercial Lines, Personal Lines, and Other. Commercial Lines includes commercial multiple peril, commercial automobile, workers' compensation, and other commercial coverages, such as inland marine, specialty program business, management and professional liability, surety, and specialty property. Personal Lines includes personal automobile, homeowners, and other personal coverages, such as umbrella. Included in the "Other" segment are Opus Investment Management, Inc., which markets investment management services to institutions, pension funds, and other organizations; earnings on holding company assets; holding company and other expenses, including certain costs associated with retirement benefits due to our former life insurance employees and agents; and a run-off voluntary pools business. Due to the sale of Chaucer on December 28, 2018, the operations of Chaucer have been classified as Discontinued Operations for the period ending December 31, 2018. Periods prior to 2018 have also been restated to present Chaucer as a discontinued operation. We present the separate financial information of each segment consistent with the manner in which our chief operating decision maker evaluates results in deciding how to allocate resources and in assessing performance.

We report interest expense on debt separately from the earnings of our operating segments. This consists of interest on our senior debentures, subordinated debentures, and collateralized borrowings with the Federal Home Loan Bank ("FHLB").

RESULTS OF OPERATIONS – CONSOLIDATED

2018 Compared to 2017

Consolidated net income was $391.0 million in 2018, compared to $186.2 million in 2017, an increase of $204.8 million. The year over year comparison of consolidated net income reflects a $131.9 million gain, net of taxes, on the sale of our Chaucer business. Additionally, operating income before interest expense and income taxes increased $79.2 million, primarily due to lower catastrophe losses and higher net investment income. Income increased from our discontinued operations, primarily Chaucer and, to a lesser extent, our discontinued life business, which incurred a 2017 reserve charge related to our participation in a long-term care pool (See also "Discontinued Operations" section below). Also, income tax expense on operating income decreased $20.2 million, driven by a decrease in the U.S. statutory tax rate from 35% to 21% effective January 1, 2018. These increases in net income were partially offset by net realized and unrealized investment losses, net of taxes, of $30.9 million in 2018, compared to net realized investment gains, net of taxes, of $26.2 million in 2017, principally related to reductions in fair value of equity securities. Effective January 1, 2018, we implemented ASU 2016-01, which requires that the changes in fair value of equity securities be presented in net income. Prior to then, these changes were recognized through accumulated other comprehensive income (see also Note 1 – “Summary of Significant Accounting Policies” in the Notes to Consolidated Financial Statements). Net income was also affected by $22.3 million in losses, net of taxes, associated with the repayment of debt in 2018.

Table of Contents

2017 Compared to 2016

Consolidated net income was $186.2 million in 2017, compared to $155.1 million in 2016, an increase of $31.1 million. Operating income before interest expense and income taxes increased $134.4 million, primarily attributable to the year-over-year changes in development on prior years' loss reserves. Unfavorable development on prior years' loss reserves was $1.2 million in 2017 compared to $235.6 million in 2016. Additionally, our results in 2017 benefitted from improved non-catastrophe current accident year underwriting results and higher investment income. These increases were partially offset by a $134.4 million increase in current year catastrophe losses. The year over year comparison of consolidated net income was also affected by a $102.2 million decrease in earnings from the Chaucer business, now reclassified as discontinued operations, from income of $89.1 million in 2016 to losses of $13.1 million in 2017, primarily resulting from higher catastrophe losses. Also, consolidated net income in 2016 included a $57.4 million loss, after taxes, associated with the repayment of debt that did not recur in 2017. These increases in net income were partially offset by increases in 2017 of $15.8 million of after-tax losses from discontinued life operations, primarily due to an increase in our long-term care pool reserves.

The following table reflects operating income before interest expense and income taxes for each operating segment and a reconciliation to consolidated net income from operating income before interest expense and income taxes (a non-GAAP measure).

YEARS ENDED DECEMBER 31 (in millions)	2018	2017	2016
Operating income (loss) before interest expense and income taxes:			
Commercial Lines	$265.7	$177.4	$34.7
Personal Lines	146.2	158.7	177.7
Other	(5.4)	(8.8)	(19.5)
Operating income before interest expense and income taxes	406.5	327.3	192.9
Interest expense on debt	(45.1)	(45.2)	(51.4)
Operating income before income taxes	361.4	282.1	141.5
Income tax expense on operating income	(69.3)	(89.5)	(46.3)
Operating income	292.1	192.6	95.2
Non-operating items:			
Net realized investment gains (losses)	(50.7)	21.1	10.2
Net loss from repayment of debt	(28.2)	—	(88.3)
Other	—	(10.3)	2.6
Income tax benefit on non-operating items	25.8	12.7	47.3
Income from continuing operations, net of taxes	239.0	216.1	67.0
Discontinued operations:			
Gain from sale of Chaucer business, net of taxes	131.9	—	—
Income (loss) from Chaucer business, net of taxes	20.0	(13.1)	89.1
Income (loss) from discontinued life business, net of taxes	0.1	(16.8)	(1.0)
Net income	$391.0	$186.2	$155.1

Non-GAAP Financial Measures

In addition to consolidated net income, discussed above, we assess our financial performance based upon pre-tax "operating income," and we assess the operating performance of each of our three operating segments based upon the pre-tax operating income (loss) generated by each segment. As reflected in the table above, operating income before taxes excludes interest expense on debt and certain other items which we believe are not indicative of our core operations, such as net realized investment gains and losses. Such gains and losses are excluded since they are determined by interest rates, financial markets and the timing of sales. Also, operating income before taxes excludes net gains and losses on disposals of businesses, gains and losses related to the repayment of debt, discontinued operations, costs to acquire businesses, restructuring costs, the cumulative effect of accounting changes and certain other items. Although the items excluded from operating income before taxes are important components in understanding and assessing our overall financial performance, we believe a discussion of operating income before taxes enhances an investor's understanding of our results of operations by highlighting net income attributable to the core operations of the business. However, operating income before taxes, which is a non-GAAP measure, should not be construed as a substitute for income before income taxes, and operating income should not be construed as a substitute for net income.

Table of Contents

Catastrophe losses and prior years' reserve development are significant components in understanding and assessing the financial performance of our business. Management reviews and evaluates catastrophes and prior years' reserve development separately from the other components of earnings. References to "current accident year underwriting results" exclude prior accident year reserve development, and may also be presented, "excluding catastrophes". Prior years' reserve development and catastrophes are not predictable as to timing or the amount that will affect the results of our operations and have an effect on each year's operating and net income. Management believes that providing certain financial metrics and trends excluding the effects of catastrophes and prior years' reserve development helps investors to understand the variability in periodic earnings and to evaluate the underlying performance of our operations. Discussion of catastrophe losses in this Management's Discussion and Analysis of Financial Condition includes development on prior years' catastrophe reserves and, unless otherwise indicated, such development is excluded from discussions of prior year loss and LAE reserve development.

RESULTS OF OPERATIONS - SEGMENTS

The following is our discussion and analysis of the results of operations by business segment. The operating results are presented before interest expense, taxes and other items which management believes are not indicative of our core operations, including realized gains and losses and the results of discontinued operations.

The following table summarizes the results of operations for the periods indicated:

YEARS ENDED DECEMBER 31 (in millions)	2018	2017	2016
Operating revenues			
Net premiums written	$4,384.8	$4,109.1	$3,882.7
Net premiums earned	$4,254.4	$3,980.4	$3,789.5
Net investment income	267.4	243.9	231.6
Other income	23.2	22.5	22.6
Total operating revenues	4,545.0	4,246.8	4,043.7
Losses and operating expenses			
Losses and LAE	2,724.6	2,574.9	2,546.0
Amortization of deferred acquisition costs	891.8	840.7	803.6
Other operating expenses	522.1	503.9	501.2
Total losses and operating expenses	4,138.5	3,919.5	3,850.8
Operating income before interest expense and income taxes	$406.5	$327.3	$192.9

2018 Compared to 2017

Operating income before interest expense and income taxes was $406.5 million for the year ended December 31, 2018, compared to $327.3 million for the year ended December 31, 2017, an increase of $79.2 million. This increase was primarily due to lower catastrophe losses, higher net investment income, a favorable change in reinsurance reinstatement premiums driven by prior year large loss activity, earned premium growth and lower expenses, partially offset by higher non-catastrophe current accident year losses.

Net premiums written increased by $275.7 million for the year ended December 31, 2018, compared to the year ended December 31, 2017, due to growth in both our Commercial and Personal Lines segments.

2017 Compared to 2016

Operating income before interest expense and income taxes was $327.3 million for the year ended December 31, 2017, compared to $192.9 million for the year ended December 31, 2016, an increase of $134.4 million. This increase was primarily due to a favorable change in development on prior years' loss reserves, partially offset by higher catastrophe losses. Unfavorable development on prior years' loss reserves was $1.2 million for the year ended December 31, 2017, compared to unfavorable development of $235.6 million for the year ended December 31, 2016, a favorable change of $234.4 million. In 2016, we recognized a reserve charge of $174.1 million following the 2016 fourth quarter reserve review. Catastrophe-related activity for the year ended December 31, 2017 was $251.5 million, compared to $117.1 million for the year ended December 31, 2016, an increase of $134.4 million. This increase in catastrophe losses was primarily due to hurricanes Harvey, Irma and Maria that occurred in the third quarter of 2017, the California wildfires that occurred in the fourth quarter of 2017, and a Midwest wind event that occurred in the first quarter of 2017.

Net premiums written increased by $226.4 million for the year ended December 31, 2017, compared to the year ended December 31, 2016, due to growth in both our Personal and Commercial Lines segments.

Table of Contents

PRODUCTION AND UNDERWRITING RESULTS

The following table summarizes premiums written on a gross and net basis, net premiums earned and loss (including catastrophe losses), LAE, expense and combined ratios for the Commercial Lines and Personal Lines segments. Loss, LAE, catastrophe loss and combined ratios shown below include prior year reserve development. These items are not meaningful for our Other segment.

	YEAR ENDED DECEMBER 31, 2018						
	Gross Premiums	Net Premiums	Net Premiums	Catastrophe	Loss &	Expense	Combined
(dollars in millions)	Written	Written	Earned	Loss Ratios	LAE Ratios	Ratios	Ratios
Commercial Lines	$2,968.1	$2,610.7	$2,548.4	5.6	61.5	34.9	96.4
Personal Lines	1,875.6	1,774.1	1,706.0	4.5	67.7	27.8	95.5
Total	$4,843.7	$4,384.8	$4,254.4	5.2	64.0	32.1	96.1

	YEAR ENDED DECEMBER 31, 2017						
	Gross Premiums	Net Premiums	Net Premiums	Catastrophe	Loss &	Expense	Combined
(dollars in millions)	Written	Written	Earned	Loss Ratios	LAE Ratios	Ratios	Ratios
Commercial Lines	$2,826.8	$2,462.0	$2,399.6	7.1	63.7	35.6	99.3
Personal Lines	1,736.7	1,647.1	1,580.8	5.1	66.1	28.0	94.1
Total	$4,563.5	$4,109.1	$3,980.4	6.4	64.7	32.6	97.3

	YEAR ENDED DECEMBER 31, 2016						
	Gross Premiums	Net Premiums	Net Premiums	Catastrophe	Loss &	Expense	Combined
(dollars in millions)	Written	Written	Earned	Loss Ratios	LAE Ratios	Ratios	Ratios
Commercial Lines	$2,686.2	$2,361.5	$2,318.0	3.0	69.1	36.0	105.1
Personal Lines	1,604.6	1,521.2	1,471.5	3.2	63.6	28.7	92.3
Total	$4,290.8	$3,882.7	$3,789.5	3.1	67.2	33.2	100.4

The following table summarizes net premiums written, and loss and LAE and catastrophe loss ratios by line of business for the Commercial Lines and Personal Lines segments. Loss and LAE and catastrophe loss ratios include prior year reserve development.

	YEAR ENDED DECEMBER 31, 2018		
	Net		
	Premiums	Loss &	Catastrophe
(dollars in millions)	Written	LAE Ratios	Loss Ratios
Commercial Lines:			
Commercial multiple peril	$861.4	66.4	10.7
Commercial automobile	344.8	79.9	0.8
Workers' compensation	317.1	51.0	—
Other commercial	1,087.4	54.9	4.7
Total Commercial Lines	2,610.7	61.5	5.6
Personal Lines:			
Personal automobile	1,127.5	72.0	0.5
Homeowners	604.0	61.2	12.1
Other personal	42.6	48.1	2.2
Total Personal Lines	1,774.1	67.7	4.5
Total	$4,384.8	64.0	5.2

Table of Contents

	YEAR ENDED DECEMBER 31, 2017		
(dollars in millions)	Net Premiums Written	Loss & LAE Ratios	Catastrophe Loss Ratios
Commercial Lines:			
Commercial multiple peril	$815.3	66.2	11.8
Commercial automobile	322.7	70.6	1.4
Workers' compensation	311.1	58.6	—
Other commercial	1,012.9	61.1	7.3
Total Commercial Lines	2,462.0	63.7	7.1
Personal Lines:			
Personal automobile	1,041.6	70.7	0.6
Homeowners	566.9	59.8	13.5
Other personal	38.6	35.9	1.8
Total Personal Lines	1,647.1	66.1	5.1
Total	$4,109.1	64.7	6.4

	YEAR ENDED DECEMBER 31, 2016		
(dollars in millions)	Net Premiums Written	Loss & LAE Ratios	Catastrophe Loss Ratios
Commercial Lines:			
Commercial multiple peril	$792.9	66.7	5.8
Commercial automobile	307.1	78.6	0.8
Workers' compensation	285.6	50.6	—
Other commercial	975.9	73.2	2.4
Total Commercial Lines	2,361.5	69.1	3.0
Personal Lines:			
Personal automobile	953.6	72.2	0.6
Homeowners	529.7	49.9	7.8
Other personal	37.9	43.8	2.9
Total Personal Lines	1,521.2	63.6	3.2
Total	$3,882.7	67.2	3.1

The following table summarizes GAAP underwriting results for the Commercial Lines, Personal Lines, and Other segments and reconciles them to operating income (loss) before interest expense and income taxes.

	YEAR ENDED DECEMBER 31, 2018			
(in millions)	Commercial Lines	Personal Lines	Other	Total
Underwriting profit (loss), excluding prior year reserve development and catastrophes	$ 193.2	$ 176.8	$ (3.0)	$ 367.0
Prior year favorable (unfavorable) loss and LAE reserve development on non-catastrophe losses	34.1	(33.3)	(1.2)	(0.4)
Prior year favorable catastrophe development	6.8	2.5	—	9.3
Current year catastrophe losses	(149.1)	(79.4)	—	(228.5)
Underwriting profit (loss)	85.0	66.6	(4.2)	147.4
Net investment income	182.2	73.7	11.5	267.4
Fees and other income	8.9	11.6	2.7	23.2
Other operating expenses	(10.4)	(5.7)	(15.4)	(31.5)
Operating income (loss) before interest expense and income taxes	$ 265.7	$ 146.2	$ (5.4)	$ 406.5

43

Table of Contents

	YEAR ENDED DECEMBER 31, 2017			
(in millions)	Commercial Lines	Personal Lines	Other	Total
Underwriting profit (loss), excluding prior year reserve development and catastrophes	$173.4	$174.0	$(3.0)	$344.4
Prior year favorable (unfavorable) loss and LAE reserve development on non-catastrophe losses	9.4	(9.4)	(1.2)	(1.2)
Prior year favorable catastrophe development	1.4	—	—	1.4
Current year catastrophe losses	(172.0)	(80.9)	—	(252.9)
Underwriting profit (loss)	12.2	83.7	(4.2)	91.7
Net investment income	165.8	70.1	8.0	243.9
Fees and other income	8.4	11.4	2.7	22.5
Other operating expenses	(9.0)	(6.5)	(15.3)	(30.8)
Operating income (loss) before interest expense and income taxes	$177.4	$158.7	$(8.8)	$327.3

	YEAR ENDED DECEMBER 31, 2016			
(in millions)	Commercial Lines	Personal Lines	Other	Total
Underwriting profit (loss), excluding prior year reserve development and catastrophes	$169.9	$154.4	$(1.6)	$322.7
Prior year (unfavorable) favorable loss and LAE reserve development on non-catastrophe losses	(223.0)	(4.3)	(8.3)	(235.6)
Prior year favorable (unfavorable) catastrophe development	3.7	(6.3)	—	(2.6)
Current year catastrophe losses	(73.8)	(40.7)	—	(114.5)
Underwriting (loss) profit	(123.2)	103.1	(9.9)	(30.0)
Net investment income	158.5	69.5	3.6	231.6
Fees and other income	8.5	11.4	2.7	22.6
Other operating expenses	(9.1)	(6.3)	(15.9)	(31.3)
Operating income (loss) before interest expense and income taxes	$34.7	$177.7	$(19.5)	$192.9

2018 Compared to 2017

Commercial Lines

Commercial Lines net premiums written were $2,610.7 million for the year ended December 31, 2018, compared to $2,462.0 million for the year ended December 31, 2017. This $148.7 million increase was primarily driven by pricing increases, strong retention, and targeted new business expansion, in addition to reductions in reinstatement premiums.

Reinsurance reinstatements were $0.5 million unfavorable in 2018 compared to $27.8 million unfavorable in 2017. The year over year favorable change was $27.3 million due to several 2017 large losses above our retention level in our surety, inland marine and commercial multiple peril lines. The reinstatement premiums represent the pro-rata reinsurance premium charged for reinstating the amount of reinsurance coverage utilized as a result of the incurred losses that are reimbursable under our reinsurance treaties. See the Glossary of Selected Insurance Terms – “Reinstatement premium”.

Commercial Lines underwriting profit for the year ended December 31, 2018 was $85.0 million, compared to $12.2 million for the year ended December 31, 2017, a change of $72.8 million. Catastrophe-related losses for the year ended December 31, 2018 were $142.3 million, compared to $170.6 million for the year ended December 31, 2017, a decrease of $28.3 million. Favorable development on prior years’ loss reserves for the year ended December 31, 2018 was $34.1 million, compared to $9.4 million for the year ended December 31, 2017, a favorable change of $24.7 million.

Commercial Lines current accident year underwriting profit, excluding catastrophes, was $193.2 million for the year ended December 31, 2018, compared to $173.4 million for the year ended December 31, 2017. This $19.8 million improvement was primarily due to the reduction in large loss-related reinsurance reinstatement premiums, lower expenses and earned premium growth, partially offset by higher non-catastrophe current accident year losses. The reduction in reinsurance reinstatement premiums, net of ceding commissions, increased non-catastrophe current accident year underwriting profit by $21.5 million compared to the prior year. The higher non-catastrophe current accident year losses were driven by large property loss activity in our commercial multiple peril line and higher loss activity in our commercial automobile liability line, partially offset by lower loss activity in our other commercial lines.

We are continuing our efforts to improve underwriting results through increased rates, pricing segmentation, specific underwriting actions and targeted new business growth. Our ability to achieve overall rate increases is affected by the current competitive pricing

Table of Contents

environment, particularly within our workers' compensation line, as well as for larger middle market accounts, which may hamper our ability to grow in this portion of our business.

Personal Lines

Personal Lines net premiums written were $1,774.1 million for the year ended December 31, 2018, compared to $1,647.1 million for the year ended December 31, 2017, an increase of $127.0 million. This was primarily due to higher renewal premium driven by rate increases and strong retention, as well as new business growth.

Net premiums written in the personal automobile line of business for the year ended December 31, 2018 were $1,127.5 million, compared to $1,041.6 million for the year ended December 31, 2017, an increase of $85.9 million. This increase was primarily due to rate increases and an increase in policies in force of 2.5%. Net premiums written in the homeowners line of business for the year ended December 31, 2018 were $604.0 million, compared to $566.9 million for the year ended December 31, 2017, an increase of $37.1 million. This is attributable to rate increases and an increase in policies in force of 3.0%.

Personal Lines underwriting profit for the year ended December 31, 2018 was $66.6 million, compared to $83.7 million for the year ended December 31, 2017, a decline of $17.1 million. Catastrophe losses for the year ended December 31, 2018 were $76.9 million, compared to $80.9 million for the year ended December 31, 2017, a decrease of $4.0 million. Unfavorable development on prior years' loss reserves for the year ended December 31, 2018 was $33.3 million, compared to $9.4 million for the year ended December 31, 2017, an increase of $23.9 million.

Personal Lines current accident year underwriting profit, excluding catastrophes, was $176.8 million in the year ended December 31, 2018, compared to $174.0 million for the year ended December 31, 2017. This $2.8 million increase was primarily a result of earned premium growth and lower expenses, partially offset by higher non-catastrophe current accident year losses. This increase in losses was driven by higher homeowners property losses, partly due to large losses and non-catastrophe weather activity, higher personal automobile bodily injury loss severity and, to a lesser extent, higher personal automobile property losses.

We have been able to obtain rate increases in our Personal Lines markets and believe that our ability to obtain these increases will continue. However, our ability to maintain Personal Lines net premiums written may be affected by price competition, and regulatory and legal developments. Additionally, these factors along with weather-related loss volatility may also affect our ability to maintain and improve underwriting results. We monitor these trends and consider them in our rate actions.

Other

Other operating losses were $5.4 million for the year ended December 31, 2018, compared to $8.8 million for the year ended December 31, 2017, an improvement of $3.4 million, primarily due to higher net investment income.

2017 Compared to 2016

Commercial Lines

Commercial Lines net premiums written were $2,462.0 million for the year ended December 31, 2017, compared to $2,361.5 million for the year ended December 31, 2016. This $100.5 million increase was due to growth of $117.4 million, primarily driven by pricing increases, strong retention, and targeted new business expansion, partially offset by a $16.9 million increase in reinsurance reinstatement premiums driven by large property losses in our inland marine and commercial multiple peril lines.

Commercial Lines underwriting profit for the year ended December 31, 2017 was $12.2 million, compared to underwriting loss of $123.2 million for the year ended December 31, 2016, a change of $135.4 million. Favorable development on prior years' loss reserves for the year ended December 31, 2017 was $9.4 million, compared to unfavorable development of $223.0 million for the year ended December 31, 2016, a favorable change of $232.4 million, primarily due to the aforementioned reserve charge following our 2016 fourth quarter reserve review. Catastrophe-related losses for the year ended December 31, 2017 were $170.6 million, compared to $70.1 million for the year ended December 31, 2016, an increase of $100.5 million. This increase is primarily due to hurricanes Harvey and Irma that occurred in the third quarter, the California wildfires that occurred in the fourth quarter, and a large Midwest hail event that occurred in the second quarter.

Commercial Lines current accident year underwriting profit, excluding catastrophes, was $173.4 million for the year ended December 31, 2017, compared to $169.9 million for the year ended December 31, 2016. This $3.5 million improvement was primarily due to lower losses in our workers' compensation line, lower expenses and premium growth, partially offset by higher large losses and the increase in reinstatement premiums. The impact of additional reinstatement premiums, net of ceding commissions, decreased 2017 current accident year underwriting profit by $12.0 million from 2016 levels.

Personal Lines

Personal Lines net premiums written were $1,647.1 million for the year ended December 31, 2017, compared to $1,521.2 million for the year ended December 31, 2016, an increase of $125.9 million. This was primarily due to higher renewal premium driven by rate increases and improved retention, as well as new business growth.

Net premiums written in the personal automobile line of business for the year ended December 31, 2017 were $1,041.6 million, compared to $953.6 million for the year ended December 31, 2016, an increase of $88.0 million. This increase was primarily due to rate increases and an increase in policies in force of 3.8%. Net premiums written in the homeowners line of business for the year ended December 31, 2017 were $566.9 million, compared to $529.7 million for the year ended December 31, 2016, an increase of $37.2 million. This is attributable to rate increases and an increase in policies in force of 4.0%.

Personal Lines underwriting profit for the year ended December 31, 2017 was $83.7 million, compared to $103.1 million for the year ended December 31, 2016, a decline of $19.4 million. Catastrophe losses for the year ended December 31, 2017 were $80.9 million, compared to $47.0 million for the year ended December 31, 2016, an increase of $33.9 million. This increase is primarily due to a large Midwest wind event that occurred in the first quarter of 2017. Unfavorable development on prior years' loss reserves for the year ended December 31, 2017 was $9.4 million, compared to $4.3 million for the year ended December 31, 2016, an increase of $5.1 million.

Personal Lines current accident year underwriting profit, excluding catastrophes, was $174.0 million in the year ended December 31, 2017, compared to $154.4 million for the year ended December 31, 2016. This $19.6 million increase was primarily a result of earned premium growth and lower expenses. Also, higher current accident year losses in our homeowners line were substantially offset by lower losses in our personal automobile line.

Other

Other operating losses were $8.8 million for the year ended December 31, 2017, compared to $19.5 million for the year ended December 31, 2016, an improvement of $10.7 million, primarily due to 2016 unfavorable prior year reserve development in our run-off voluntary pools business (See "2016 Loss and LAE Development, excluding catastrophes" section below for further discussion).

RESERVE FOR LOSSES AND LOSS ADJUSTMENT EXPENSES

Overview of Loss Reserve Estimation Process

We maintain reserves for our property and casualty products to provide for our ultimate liability for losses and loss adjustment expenses (our "loss reserves") with respect to reported and unreported claims incurred as of the end of each accounting period. These reserves are estimates, taking into account past loss experience, modified for current trends, as well as prevailing economic, legal and social conditions. Loss reserves represent our largest liability.

Management's process for establishing loss reserves is a comprehensive process that involves input from multiple functions throughout our organization, including actuarial, finance, claims, legal, underwriting, distribution and business operations management. The process incorporates facts currently known, as well as the current, and in some cases, the anticipated, state of the law and coverage litigation. Based on information currently available, we believe that the aggregate loss reserves at December 31, 2018 were adequate to cover claims for losses that had occurred as of that date, including both those known to us and those yet to be reported. However, as described below, there are significant uncertainties inherent in the loss reserving process. Our estimate of the ultimate liability for losses that had occurred as of December 31, 2018 is expected to change in future periods as we obtain further information, and such changes could have a material effect on our results of operations and financial position.

Our loss reserves include case estimates for claims that have been reported and estimates for claims that have been incurred but not reported ("IBNR") at the balance sheet date. They also include estimates of the expenses associated with processing and settling all reported and unreported claims, less estimates of anticipated salvage and subrogation recoveries. Our property and casualty loss reserves are not discounted to present value.

Case reserves are established by our claim personnel individually on a claim by claim basis and based on information specific to the occurrence and terms of the underlying policy. For some classes of business, average case reserves are used initially. Case reserves are periodically reviewed and modified based on new or additional information pertaining to the claim.

Our ultimate IBNR reserves are estimated by management and our reserving actuaries on an aggregate basis for each line of business or coverage for loss and loss expense liabilities not reflected within the case reserves. The sum of the case reserves and the IBNR reserves represents our estimate of total unpaid losses and loss adjustment expenses.

We regularly review our loss reserves using a variety of industry accepted analytical techniques. We update the loss reserves as historical loss experience develops, additional claims are reported and resolved and new information becomes available. Net changes in loss reserves are reflected in operating results in the period in which the reserves are changed.

The IBNR reserve includes a provision for claims that have occurred but have not yet been reported to us, some of which may not yet be known to the insured, as well as a provision for future development on reported claims. IBNR represents a significant proportion of our total net loss reserves, particularly for long-tail liability classes. In fact, approximately 48% of our aggregate net loss reserves at December 31, 2018 were for IBNR losses and loss expenses.

Table of Contents

Critical Judgments and Key Assumptions

We determine the amount of our loss reserves based on an estimation process that is complex and considers information from both company specific and industry data, as well as general economic and other information. The estimation process utilizes a combination of objective and subjective information, the blending of which requires significant professional judgment. There are various assumptions required, including future trends in frequency and severity of claims, operational changes in claim handling and case reserving practices, and trends related to general economic and social conditions. Informed judgments as to our ultimate exposure to losses are an integral component of our loss reserve estimation process.

Given the inherent complexity of our loss reserve estimation process and the potential variability of the assumptions used, the actual emergence of losses will vary, perhaps substantially, from the estimate of losses included in our financial statements, particularly in those instances where settlements or other claim resolutions do not occur until well into the future. Our net loss reserves at December 31, 2018 were $3.8 billion. Therefore, a relatively small percentage change in the estimate of net loss reserves would have a material effect on our results of operations.

There is greater inherent uncertainty in estimating insurance reserves for certain types of property and casualty insurance lines, particularly liability lines, where a longer period of time may elapse before a definitive determination of ultimate liability and losses may be made. In addition, the technological, judicial, regulatory and political climates involving these types of claims are continuously evolving. There is also greater uncertainty in establishing reserves with respect to business that is new to us, particularly new business which is generated with respect to newly introduced product lines, by newly appointed agents or in geographies in which we have less experience in conducting business. In such cases, there is less historical experience or knowledge and less data upon which we can rely. A combination of business that is both new to us and has longer development periods provides even greater uncertainty in estimating insurance reserves. In our management and professional liability lines, we are modestly increasing, and expect to continue to increase, our exposure to longer-tailed liability lines, including directors and officers liability, errors and omissions liability and product liability coverages. In addition, in recent periods we have experienced extensions of the "tails" in certain lines of business as the full value of claims are presented later than had been our historical experience.

We regularly update our reserve estimates as new information becomes available and additional events occur which may impact the resolution of unsettled claims. Reserve adjustments are reflected in the results of operations as adjustments to losses and LAE. Often, these adjustments are recognized in periods subsequent to the period in which the underlying policy was written and the loss event occurred. When these types of subsequent adjustments affect prior years, they are described separately as "prior year reserve development". Such development can be either favorable or unfavorable to our financial results and may vary by line of business. As discussed below, estimated loss and LAE reserves for claims occurring in prior years, in the aggregate, developed unfavorably by $0.4 million, $1.2 million and $235.6 million for the years ended December 31, 2018, 2017, and 2016, respectively, although there was considerable variance by line of business. Additionally, our estimated loss and LAE reserves for catastrophe claims occurring in prior years developed favorably by $9.3 million, favorably by $1.4 million, and unfavorably by $2.6 million for the years ended December 31, 2018, 2017, and 2016, respectively. There can be no assurance that current loss and LAE reserves will be sufficient.

We regularly review our reserving techniques, our overall reserving position and our reinsurance. Based on (i) our review of historical data, legislative enactments, judicial decisions, legal developments in impositions of damages and policy coverage, political attitudes and trends in general economic conditions, (ii) our review of per claim information, (iii) our historical loss experience and that of the industry, (iv) the nature of policies written by us, and (v) our internal estimates of required reserves, we believe that adequate provision has been made for loss reserves. However, establishment of appropriate reserves is an inherently uncertain process, and there can be no certainty that current established reserves will prove adequate in light of subsequent actual experience. A significant change to the estimated reserves could have a material impact on our results of operations and financial position. An increase or decrease in reserve estimates would result in a corresponding decrease or increase in financial results. For example, each one percentage point change in the aggregate loss and LAE ratio resulting from a change in reserve estimation is currently projected to have an approximate $43 million impact on operating income, based on 2018 full year premiums.

The major causes of material uncertainty relating to ultimate losses and LAE ("risk factors") generally vary for each line of business, as well as for each separately analyzed component of the line of business. In some cases, such risk factors are explicit assumptions of the estimation method and in others, they are implicit. For example, a method may explicitly assume that a certain percentage of claims will close each year, but will implicitly assume that the legal interpretation of existing contract language will remain substantially unchanged. Actual results will likely vary from expectations for each of these assumptions, resulting in an ultimate claim liability that is different from that being estimated currently.

Some risk factors affect multiple lines of business. Examples include changes in claim handling and claim reserving practices, changes in claim settlement patterns, regulatory and legislative actions, court actions, timeliness of claim reporting, state mix of claimants, and degree of claimant fraud. Additionally, there is also a higher degree of uncertainty due to growth in our newly acquired businesses, with respect to which we have less familiarity and, in some cases, limited historical claims experience. The extent of the impact of a risk factor will also vary by components within a line of business. Individual risk factors are subject to interactions with other risk factors within line of business components. Thus, risk factors can have offsetting or compounding effects on required reserves.

Table of Contents

Inflation generally increases the cost of losses covered by insurance contracts. The effect of inflation varies by product. Our property and casualty insurance premiums are established before the amount of losses and LAE and the extent to which inflation may affect such expenses are known. Consequently, we attempt, in establishing rates and reserves, to anticipate the potential impact of inflation in the projection of ultimate costs. For example, we monitor and continue to experience increases in medical costs, wages and legal costs, which are key considerations in setting reserve assumptions for workers' compensation, bodily injury and other liability lines. We are also monitoring the continued advancements in technology and design found in automobiles and homes and the increased claims settlement costs that result from repairs or replacement of such equipment. Estimated increases are reflected in our current reserve estimates, but continued increases are expected to contribute to increased losses and LAE in the future.

We are also defendants in various litigation matters, including putative class actions, which may seek punitive damages, bad faith or extra-contractual damages, legal fees and interest, or claim a broader scope of policy coverage or settlement and payment obligations than our interpretation. Resolution of these cases are often highly unpredictable and could involve material unanticipated damage awards. We have experienced, and others in the industry have reported, increased attorney involvement in claims, delayed submissions of medical and other expense claims, and a trend toward higher valued settlements and litigation, all of which contribute to uncertainty regarding reserve estimates.

Loss and LAE Reserves by Line of Business

Reserving Process Overview

Our loss reserves include amounts related to short-tail and long-tail classes of business. "Tail" refers to the time period between the occurrence of a loss and the final settlement of the claim. The longer the time span between the incidence of a loss and the settlement of the claim (i.e., a longer tail), the more the ultimate settlement amount may likely vary from our original estimate.

Short-tail classes consist principally of automobile physical damage, homeowners property, commercial property and marine business. For these property coverages, claims are generally reported and settled shortly after the loss occurs because the claims relate to tangible property and are more likely to be discovered shortly after the loss occurs. Consequently, the estimation of loss reserves for these classes is generally less complex.

While we estimate that a majority of our written premium is in what we would characterize as shorter-tailed classes of business, most of our loss reserves relate to longer-tail liability classes of business. Long-tailed classes include commercial liability, automobile liability, workers' compensation and other types of third-party coverage. For many liability claims, significant periods of time, ranging up to several years or more, may elapse between the occurrence of the loss, the discovery and reporting of the loss to us and the settlement of the claim. As a result, loss experience in the more recent accident years for long-tailed liability coverage has limited statistical credibility because a relatively small proportion of losses in these accident years (the calendar years in which losses are incurred) are reported claims and an even smaller proportion are paid losses. Liability claims are also more susceptible to litigation and can be significantly affected by changing contract interpretations, the legal, political and social environment, the risk and expense of protracted litigation and inflation. Consequently, the estimation of loss reserves for these coverages is more complex and typically subject to a higher degree of variability and uncertainty compared to short-tailed coverages.

Most of our indirect business from our run-off voluntary and ongoing involuntary pools is assumed long-tailed casualty reinsurance. Reserve estimates for this business are therefore subject to the variability caused by extended loss emergence periods. The estimation of loss reserves for this business is further complicated by delays between the time the claim is reported to the ceding insurer and when it is reported by the ceding insurer to the pool manager and then to us, and by our dependence on the quality and consistency of the loss reporting by the ceding company and actuarial estimates by the pool manager. These reserving factors also apply to our discontinued assumed accident and health reinsurance pools and arrangements that are included in our liabilities of discontinued life business (See "Risk Factors" in Part I – Item 1A for further discussion).

A review of loss reserves for each of the classes of business which we write is conducted regularly, generally quarterly. This review process takes into consideration a variety of trends that impact the ultimate settlement of claims. Where appropriate, the review includes a review of overall payment patterns and the emergence of paid and reported losses relative to expectations.

The loss reserve estimation process relies on the basic assumption that past experience, adjusted for the effects of current developments and likely trends, is an appropriate basis for predicting future outcomes. As part of this process, we use a variety of analytical methods that consider experience, trends and other relevant factors. IBNR reserves are generally calculated by first projecting the ultimate cost of all claims that have been reported or expected to be reported in the future and then subtracting reported losses and loss expenses. Reported losses include cumulative paid losses and loss expenses plus case reserves. Within the loss reserving process, standard actuarial methods which include: (1) loss development factor methods; (2) expected loss methods (Bornheutter-Ferguson); and (3) adjusted loss methods (Berquist-Sherman), are given due consideration. These methods are described below:

- Loss development factor methods generally assume that the losses yet to emerge for an accident year are proportional to the paid or reported loss amount observed to date. Historical patterns of the development of paid and reported losses by

48

accident year can be predictive of the expected future patterns that are applied to current paid and reported losses to generate estimated ultimate losses by accident year.

- Bornheutter-Ferguson methods utilize the product of the expected ultimate losses times the proportion of ultimate losses estimated to be unreported or unpaid to calculate IBNR. The expected ultimate losses are based upon current estimates of ultimate losses from prior accident years, adjusted to reflect expected earned premium, current rating, claims cost levels and changes in business mix. The expected losses, and corresponding loss ratios, are a critical component of Bornheutter-Ferguson methodologies and provide a general reasonability guide.
- Berquist-Sherman methods are used for estimating reserves in business lines where historical development patterns may be deemed less reliable for more recent accident years' ultimate losses. Under these methods, patterns of historical paid or reported losses are first adjusted to reflect current payment settlement patterns and case reserve adequacy and then evaluated in the same manner as the loss development factor methods described above. When the adequacy of case reserves change, the Berquist-Sherman incurred method may be deemed more reliable than the reported loss development factor method. Likewise, when the settlement patterns change, the Berquist-Sherman paid method may be deemed more reliable than the paid loss development factor method.

In addition to the methods described above, various tailored reserving methodologies are used for certain businesses. For example, for some low volume and high volatility classes of business, special reserving techniques are utilized that estimate IBNR by selecting the loss ratio that balances actual reported losses to expected reported losses as defined by the estimated underlying reporting pattern. Also, for some classes with long exposure periods (e.g., construction defect, engineering and surety), earnings patterns plus an estimated reporting lag applied to the Bornheutter-Ferguson initial expected loss ratio are used to estimate IBNR. This is done in order to reflect the changing average exposure periods by policy year (and consequently accident year).

In completing the loss reserve analysis, a variety of assumptions must be made for each line of business, coverage and accident year. Each estimation method has its own pattern, parameter and/or judgmental dependencies, with no estimation method being better than the others in all situations. The relative strengths and weaknesses of the various estimation methods, when applied to a particular class of business, can also change over time, depending on the underlying circumstances. In many cases, multiple estimation methods will be valid for the particular facts and circumstances of the relevant class of business. The manner of application and the degree of reliance on a given method will vary by line of business and coverage, and by accident year based on an evaluation of the above dependencies and the potential volatility of the loss frequency and severity patterns. The estimation methods selected or given weight at a particular valuation date are those that are believed to produce the most reliable indication for the loss reserves being evaluated. Selections incorporate input from claims personnel, pricing actuaries, and underwriting management on loss cost trends and other factors that could affect ultimate losses.

For most classes of shorter-tailed business in our Commercial and Personal Lines segments, the emergence of paid and incurred losses generally exhibits a relatively stable pattern of loss development from one accident year to the next. Thus, for these classes, the loss development factor method is generally appropriate. For many of the classes of shorter-tailed business, the emergence of paid and incurred losses may exhibit a relatively volatile pattern of loss development from one accident year to the next. In certain cases where there is a relatively low level of reliability placed on the available paid and incurred loss data, expected loss methods or adjusted loss methods are considered appropriate for the most recent accident year.

For longer-tailed lines of business, applying the loss development factor method often requires even more judgment in selecting development factors, as well as more significant extrapolation. For those long-tailed lines of business with high frequency and relatively low per-loss severity (e.g., personal automobile liability), volatility will often be sufficiently modest for the loss development factor method to be given significant weight, even in the most recent accident years, but expected loss methods and adjusted loss methods are always considered and frequently utilized in the selection process. For those long-tailed lines of business with low frequency and high loss potential (e.g., commercial general liability), anticipated loss experience is less predictable because of the small number of claims and erratic claim severity patterns. In these situations, the loss development factor methods may not produce a reliable estimate of ultimate losses in the most recent accident years since many claims either have not yet been reported or are only in the early stages of the settlement process. Therefore, the loss reserve estimates for these accident years may be based on methods less reliant on extrapolation, such as Bornheutter-Ferguson. Over time, as a greater number of claims are reported and the statistical credibility of loss experience increases, loss development factor methods or adjusted loss methods are given increasing weight.

Management endeavors to apply as much available data as practicable to estimate the loss reserve amount for each line of business, coverage and accident year, utilizing varying assumptions, projections and methods. The ultimate outcome is likely to fall within a range of potential outcomes around this loss reserve estimated amount.

Our carried reserves for each line of business and coverage are determined based on the quarterly loss reserving process. In making the determination, we consider numerous quantitative and qualitative factors. Quantitative factors include changes in reserve estimates in the period, the maturity of the accident year, trends observed over the recent past, the level of volatility within a particular class of business, the estimated effects of reinsurance, including reinstatement premiums, general economic trends, and other factors. Qualitative factors may include legal and regulatory developments, changes in claim handling and case reserving practices, recent entry into new markets or products, changes in underwriting practices or business mix, concerns that we do not have sufficient or quality historical reported and paid loss and LAE information with respect to a particular line or segment of our business, effects of the economy and political outlook, perceived anomalies in the historical results, evolving trends or other factors. In doing so, we must evaluate whether a change in the data represents credible actionable information or an anomaly. Such an assessment requires considerable judgment. Even if a change is determined to be apparent, it is not always possible to determine the extent of the change. As a result, there can be a time lag between the emergence of a change and a determination that the change should be partially or fully reflected in the carried loss reserves. In general, changes are made more quickly to reserves for more mature accident years and less volatile classes of business.

Reserving Process Uncertainties

As stated above, numerous factors (both internal and external) contribute to the inherent uncertainty in the process of establishing loss reserves, including changes in the rate of inflation for goods and services related to insured damages (e.g., medical care, home repairs, etc.), changes in the judicial interpretation of policy provisions, and settlement obligations, changes in the general attitude of juries in determining damage awards, legislative actions, such as expanding liability, coverage mandates or expanding or suspending statutes of limitations which otherwise limit the times within which claims can be made, changes in the extent of insured injuries, changes in the trend of expected frequency and/or severity of claims, changes in our book of business (e.g., change in mix due to new product offerings, new geographic areas, etc.), changes in our underwriting practices, and changes in claim handling procedures and/or systems. Regarding our indirect business from voluntary and involuntary pools, we are provided loss estimates by managers of each pool. We adopt reserve estimates for the pools that consider this information and other facts.

In addition, we must consider the uncertain effects of emerging or potential claims and coverage issues that arise as legal, judicial, social conditions, political risks, and economic conditions change. For example, claims which we consider closed may be re-opened as additional damages surface or new liability or damage theories are presented. Also, historically we have observed more frequent and higher severity in workers' compensation, bodily injury and other liability claims, and more credit related losses (for example, in our surety business) during periods of economic uncertainty or high unemployment. These and other issues could have a negative effect on our loss reserves by either extending coverage beyond the original underwriting intent or by increasing the number or size of claims.

As part of our loss reserving analysis, we consider the various factors that contribute to the uncertainty in the loss reserving process. Those factors that could materially affect our loss reserve estimates include loss development patterns and loss cost trends, reporting lags, rate and exposure level changes, the effects of changes in coverage and policy limits, business mix shifts, the effects of regulatory and legislative developments, economic circumstances, the effects of changes in judicial interpretations, the effects of emerging claims and coverage issues and the effects of changes in claim handling and claim reserving practices. In making estimates of reserves, however, we do not necessarily make an explicit assumption for each of these factors. Moreover, all estimation methods do not utilize the same assumptions and typically no single method is determinative in the reserve analysis for a line of business and coverage. Consequently, changes in our loss reserve estimates generally are not the result of changes in any one assumption. Instead, the variability will be affected by the interplay of changes in numerous assumptions, many of which are implicit to the approaches used.

For each line of business and coverage, we regularly adjust the assumptions and methods used in the estimation of loss reserves in response to our actual loss experience, as well as our judgments regarding changes in trends and/or emerging patterns. In those instances where we primarily utilize analyses of historical patterns of the development of paid and reported losses, this may be reflected, for example, in the selection of revised loss development factors. In longer-tailed classes of business and for which loss experience is less predictable due to potential changes in judicial interpretations, potential legislative actions, the cost of litigation or determining liability and the ultimate loss, inflation, potential claims and other issues, this may be reflected in a judgmental change in our estimate of ultimate losses for particular accident years. Most of the insurance policies we have written over many years are written on an “occurrence” basis, which means we insure specified acts or events which occurred during the covered period, even if claims first arise from such events many years later. For example, the industry incurred significant losses as a result of claims arising from asbestos and environmental damage which occurred decades ago and was not known at such time, and in many cases policy limits were available for each year during which such occurrence policies were in place.

The future impact of the various factors that contribute to the uncertainty in the loss reserving process is impossible to predict. There is potential for significant variation in the development of loss reserves, particularly for long-tailed classes of business and classes of business that are more vulnerable to economic or political risks.

Reserving Process for Catastrophe Events

The estimation of claims and claims expense reserves for catastrophes also comprises estimates of losses from reported claims and IBNR, primarily for damage to property. In general, our estimates for catastrophe reserves are determined on an event basis by considering various sources of available information, including specific loss estimates reported to us based on claim adjuster inspections, overall industry loss estimates, and our internal data regarding exposures related to the geographical location of the event. However, depending on the nature of the catastrophe, the estimation process can be further complicated by other impediments. For

Table of Contents

example, for hurricanes and other severe wind storms, complications often include the inability of insureds to promptly report losses, delays in the ability of claims adjusting staff to inspect losses, difficulties in determining whether losses are covered by our homeowners policy (generally for damage caused by wind or wind driven rain) or are specifically excluded from coverage caused by flood, and challenges in estimating additional living expenses, assessing the impact of demand surge, exposure to mold damage, and the effects of numerous other considerations. Another example is the complication of estimating the cost of business interruption coverage on commercial lines policies. Estimates for catastrophes which occur at or near the end of a financial reporting period may be even less reliable since we will have less claims data available and little time to complete our estimation process. In such situations, we may adapt our practices to accommodate the circumstances.

For events designated as catastrophes which affect our Commercial and Personal Lines business segments, we generally calculate IBNR reserves directly as a result of an estimated IBNR claim count and an estimated average claim amount for each event. Such an assessment involves a comprehensive analysis of the nature of the event, of policyholder exposures within the affected geographic area and of available claims intelligence. Depending on the nature of the event, available claims intelligence could include surveys of field claims associates within the affected geographic area, feedback from a catastrophe claims team sent into the area, as well as data on claims reported as of the financial statement date. In addition, loss emergence from similar historical events is compared to the estimated IBNR for our current catastrophe events to help assess the reasonableness of our estimates.

Reserving Sensitivity Analysis

The following discussion presents disclosure related to possible variation in net reserve estimates due to changes in key assumptions. This information is provided for illustrative purposes only. Many other assumptions may also lead to material reserve adjustments. If any such variations do occur, then they would likely occur over a period of several years and therefore their impact on our results of operations would be recognized during the same periods. It is important to note, however, that there is the potential for future variations greater than the amounts described below and for any such variations to be recognized in a single quarterly or annual period. No consideration has been given to potential correlation or lack of correlation among key assumptions or among lines of business and coverage as described below. As a result and because there are so many other factors which affect our net reserve estimate, it would be inappropriate to take the amounts described below and simply add them together in an attempt to estimate volatility in total. While we believe these are reasonably possible scenarios, the reader should not consider the following sensitivity analysis as illustrative of a net reserve range.

- Personal and Commercial Automobile Bodily Injury – loss reserves recorded for bodily injury on U.S. voluntary business were $635.7 million as of December 31, 2018. A key assumption for bodily injury is the inflation rate underlying the estimated reserve. A five point change (e.g., 4% changed to 9% or -1%) in the embedded inflation rate would have changed total reserves by approximately $79 million, either positive or negative, respectively, at December 31, 2018.
- Personal Automobile Personal Injury Protection Medical Payment – loss reserves recorded for personal injury protection medical payment on U.S. voluntary business were $150.1 million as of December 31, 2018. A key assumption for this coverage is the inflation rate underlying the estimated reserve. Given the long reporting pattern for this line of business, an additional key assumption is the amount of additional development required to reach full maturity, thereby reflecting ultimate costs, as represented by the tail factor. A five point change in the embedded inflation rate and a one point change to the tail factor assumption (e.g., 2% changed to 1% or 3%) would have changed total reserves by approximately $47 million, either positive or negative, at December 31, 2018.
-

Workers' Compensation – loss reserves recorded for workers' compensation on U.S. voluntary business were $420.6 million as of December 31, 2018. A key assumption for workers' compensation is the inflation rate underlying the estimated reserve. Given the long reporting pattern for this line of business, an additional key assumption is the amount of additional development required to reach full maturity, thereby reflecting ultimate costs, as represented by the tail factor. A five point change in the embedded inflation rate and a one point change to the tail factor assumption would have changed total reserves by approximately $123 million, either positive or negative, at December 31, 2018.

- Monoline and Multiple Peril General Liability – loss reserves recorded for monoline and multiple peril general liability on U.S. voluntary business were $787.7 million as of December 31, 2018. A key assumption for monoline and multiple peril general liability is the implied adequacy of the underlying case reserves. A ten point change in case adequacy (e.g., 10% deficiency changed to 0% or 20% deficiency) would have changed total reserves by approximately $87 million, either positive or negative, at December 31, 2018.
- Specialty Programs – loss reserves recorded for the AIX program business were $339.6 million as of December 31, 2018. Two key assumptions underlying the actuarial reserve analysis for specialty programs are the inflation rate underlying the estimated reserve for our commercial automobile liability, general liability and workers' compensation coverages, as well as the tail factor selection for workers' compensation. A five point change to the embedded inflation rate for the aforementioned coverages, and a one point change in the workers' compensation tail factor on AIX program business would have changed total reserves by approximately $52 million at December 31, 2018.

Table of Contents

- Chaucer Catastrophe events – the most significant events of 2018 were typhoons Jebi and Trami, the California wildfires, and hurricanes Michael and Florence. For these events, which represent 71% of the total 2018 accident year incurred catastrophe losses, a 25% increase in their estimated gross ultimate claims deterioration would have increased incurred catastrophe losses by approximately $6 million, net of reinsurance. For these events, a 25% decrease in their estimated gross ultimate claims deterioration would have decreased incurred catastrophe losses by approximately $9 million, net of reinsurance.

Carried Reserves and Reserve Rollforward

The following table provides a reconciliation of the gross beginning and ending reserve for unpaid losses and loss adjustment expenses.

YEARS ENDED DECEMBER 31 (in millions)	2018	2017	2016
Gross loss and LAE reserves, beginning of year	$5,058.5	$4,660.0	$4,201.9
Reinsurance recoverable on unpaid losses	1,455.0	1,349.2	1,295.3
Net loss and LAE reserves, beginning of year	3,603.5	3,310.8	2,906.6
Net incurred losses and LAE in respect of losses occurring in:			
Current year	2,733.5	2,579.8	2,307.8
Prior year non-catastrophe development	0.4	1.2	235.6
Prior year catastrophe development	(9.3)	(1.4)	2.6
Total incurred losses and LAE	2,724.6	2,579.6	2,546.0
Net payments of losses and LAE in respect of losses occurring in:			
Current year	1,232.3	1,203.8	1,063.0
Prior years	1,264.3	1,083.1	1,078.8
Total payments	2,496.6	2,286.9	2,141.8
Net reserve for losses and LAE, end of year	3,831.5	3,603.5	3,310.8
Reinsurance recoverable on unpaid losses	1,472.6	1,455.0	1,349.2
Gross reserve for losses and LAE, end of year	$5,304.1	$5,058.5	$4,660.0

The following table summarizes the gross reserve for losses and LAE by line of business.

DECEMBER 31 (in millions)	2018	2017	2016
Commercial multiple peril	$1,098.7	$1,012.5	$899.7
Workers' compensation	649.3	628.3	580.2
Commercial automobile	399.6	380.2	374.2
Other commercial lines:			
AIX program business	492.0	475.4	453.2
General liability	285.0	269.8	261.9
Umbrella	139.7	135.9	112.6
Surety	99.0	87.8	72.4
Other lines	395.3	410.6	311.5

Total other commercial lines	1,411.0	1,379.5	1,211.6
Total Commercial Lines	3,558.6	3,400.5	3,065.7
Personal automobile	1,532.8	1,471.7	1,430.2
Homeowners and other personal	174.8	147.6	123.8
Total Personal Lines	1,707.6	1,619.3	1,554.0
Total Other Segment	37.9	38.7	40.3
Total loss and LAE reserves	$5,304.1	$5,058.5	$4,660.0

"Other commercial lines – Other lines" in the table above, is primarily comprised of management and professional liability, marine, miscellaneous commercial property, healthcare, and fidelity lines. Loss and LAE reserves in our "Total Other Segment" relate to our run-off voluntary assumed reinsurance pools business.

Table of Contents

Prior Year Development

Conditions and trends that have affected reserve development in the past will not necessarily recur in the future. As discussed under "Reserving Process Overview" in the preceding section, our historical loss experience and loss development patterns are important factors in estimating loss reserves, however, they are not the only factors we evaluate to establish reserves. Therefore, a mechanical application of standard actuarial methodologies in projecting ultimate claims could result in materially different reserves to those held. Accordingly, it is not appropriate to extrapolate future favorable or unfavorable development based on amounts experienced in prior periods.

The following table summarizes prior year (favorable) unfavorable development by segment for the periods indicated:

	2018			2017			2016		
(in millions)	Loss & LAE	Catastrophe	Total	Loss & LAE	Catastrophe	Total	Loss & LAE	Catastrophe	Total
Commercial Lines	$(34.1)	$ (6.8)	$(40.9)	$(9.4)	$ (1.4)	$(10.8)	$223.0	$ (3.7)	$219.3
Personal Lines	33.3	(2.5)	30.8	9.4	—	9.4	4.3	6.3	10.6
Other Segment	1.2	—	1.2	1.2	—	1.2	8.3	—	8.3
Total prior year (favorable) unfavorable development	$0.4	$ (9.3)	$(8.9)	$1.2	$ (1.4)	$(0.2)	$235.6	$ 2.6	$238.2

Catastrophe Loss Development

In 2018, favorable catastrophe development was $9.3 million, primarily due to lower than expected losses related to the 2017 hurricanes Harvey, Irma and Maria and California wildfires. In 2017, favorable catastrophe development was $1.4 million, primarily due to lower than expected losses related to the 2016 hurricane Matthew. In 2016, unfavorable catastrophe development was $2.6 million, primarily due to higher than expected losses related to 2015 severe summer hail and wind storms.

Loss and LAE Development, excluding catastrophes

The following table provides a summary of (favorable)/unfavorable loss and LAE reserve development, excluding catastrophes.

YEARS ENDED DECEMBER 31	2018	2017	2016
(in millions)			
Commercial multiple peril	$(1.2)	$2.5	$74.2
Workers' compensation	(31.0)	(9.1)	(46.7)
Commercial automobile	23.2	2.5	27.5

Other commercial lines:			
AIX program business	18.2	(0.4)	75.3
General liability	(21.1)	(1.9)	56.0
Surety	(9.0)	0.1	35.3
Umbrella	0.6	(0.2)	(9.0)
Other lines	(13.8)	(2.9)	10.4
Total other commercial lines	(25.1)	(5.3)	168.0
Total Commercial Lines	(34.1)	(9.4)	223.0
Personal automobile	15.0	3.7	4.8
Homeowners and other personal lines	18.3	5.7	(0.5)
Total Personal Lines	33.3	9.4	4.3
Total Other Segment	1.2	1.2	8.3
Total loss and LAE reserve development, excluding catastrophes	$0.4	$1.2	$235.6

2018 Loss and LAE Development, excluding catastrophes

In 2018, net unfavorable loss and LAE development, excluding catastrophes, was $0.4 million. Commercial Lines favorable development of $34.1 million was primarily due to lower than expected losses of $31.0 million within the workers' compensation line in accident years 2015 through 2017; $25.1 million in other commercial lines, primarily in our professional and management liability and monoline general liability lines, related to the 2014 through 2016 accident years; and our surety line in accident years 2015 and 2017; partially offset by higher than expected losses in AIX programs and business classes which have since been terminated. Also partially offsetting the favorable Commercial Lines development was higher than expected losses of $23.2 million in the commercial automobile line, driven by higher bodily injury severity in the 2014, 2016, and 2017 accident years. Personal Lines unfavorable development of $33.3 million was primarily due to higher than expected losses of $15.8 million within the homeowners line in accident years 2015 through 2017, and $15.0 million in the personal automobile line, driven by bodily injury severity in the 2016 accident year and, to a lesser extent, the 2015 accident year. In addition, Other segment unfavorable development of $1.2 million was due to higher than expected losses in our runoff voluntary pools business.

2017 Loss and LAE Development, excluding catastrophes

In 2017, net unfavorable loss and LAE development, excluding catastrophes, was $1.2 million. Commercial Lines favorable development of $9.4 million was primarily due to lower than expected losses within the workers' compensation line in accident years 2012 through 2016. Personal Lines unfavorable development of $9.4 million was primarily due to higher than expected losses in homeowners for accident year 2016. In addition, Other segment unfavorable development of $1.2 million was due to higher than expected losses in our runoff voluntary pools business.

2016 Loss and LAE Development, excluding catastrophes

In 2016, net unfavorable loss and LAE development was $235.6 million, primarily as a result of net unfavorable development of $223.0 million for Commercial Lines. The net unfavorable Commercial Lines development primarily resulted from higher than expected losses in other commercial lines of $168.0 million, which includes the AIX program business. This was primarily driven by AIX programs, general liability coverages in accident years 2012 through 2015, and surety bonds in accident years 2012 through 2015. We also experienced higher than expected losses within the commercial multiple peril line of $74.2 million for accident years 2012 through 2015 and the commercial automobile line of $27.5 million in accident years 2012 through 2014, both primarily within liability coverages. Partially offsetting the unfavorable development was lower than expected losses of $46.7 million within the workers' compensation line, primarily related to accident years 2013 through 2015 and, to a lesser extent, our commercial umbrella line related to accident year 2015.

As a result of our 2016 fourth quarter reserve review, carried reserves for prior accident years, excluding catastrophes, were increased by $174.1 million in the fourth quarter, of which $161.5 million related to Commercial Lines. The majority of this adjustment was attributed to our long-tailed commercial liability coverages, including our AIX program business and was largely driven by worsening trends in the number and nature of high severity losses and higher than anticipated legal defense costs. We reacted to this adverse emergence by updating our assumptions about loss severity, loss development patterns, expected loss ratios and loss adjustment expenses for the most recent accident years, placing greater weight on the adverse severity trends experienced in the most recent calendar years. The adverse prior year development for our Other segment was due to our run-off voluntary assumed reinsurance pools business. The reserve increase was based on an updated third-party actuarial study received in the fourth quarter for the Excess and Casualty Reinsurance Association ("ECRA") pool that primarily consists of asbestos and environmental exposures.

Asbestos and Environmental Reserves

As of December 31, 2018, we have $38.9 million of net asbestos and environmental reserves, comprised of $8.9 million of direct reserves and $30.0 million of assumed reinsurance pool reserves. This compares to net reserves of $39.8 million and $41.1 million as of December 31, 2017 and 2016, respectively. Ending loss and LAE reserves for all direct business written by our property and casualty companies related to asbestos and environmental damage liability were $8.9 million, $9.5 million, and $9.9 million, net of reinsurance of $18.7 million, $20.2 million, and

$19.9 million for the years ended December 31, 2018, 2017 and 2016, respectively. Activity for our direct asbestos and environmental reserves was not significant to our 2018, 2017 or 2016 financial results. As a result of our historical direct underwriting mix of Commercial Lines policies toward smaller and middle market risks, past asbestos and environmental damage liability loss experience has remained minimal in relation to our total loss and LAE incurred experience. Although we attempt to limit our exposures to asbestos and environmental damage liability through specific policy exclusions, we have been and may continue to be subject to claims related to these exposures.

In addition to reserves we carry to cover exposure in our direct business, we have established gross and net loss and LAE reserves for assumed reinsurance pool business with asbestos and environmental damage liability of $30.0 million, $30.3 million and $31.2 million at December 31, 2018, 2017 and 2016, respectively. These reserves relate to pools in which we have terminated our participation; however, we continue to be subject to claims related to years in which we were a participant. Results of operations from these pools are included in our Other segment. A significant part of our pool reserves relates to our participation in the ECRA voluntary pool from 1950 to 1982. In 1982, the pool was dissolved and since that time, the business has been in run-off. Our percentage of the total pool liabilities varied from 1% to 6% during these years. Our participation in this pool has resulted in average paid losses of approximately $2 million annually over the past ten years.

We estimate our ultimate liability for asbestos, environmental and toxic tort liability claims, whether resulting from direct business, assumed reinsurance or pool business, based upon currently known facts, reasonable assumptions where the facts are not known, current law and methodologies currently available. Although these outstanding claims are not significant, their existence gives rise to uncertainty and are discussed because of the possibility that they may become significant. We believe that, notwithstanding the evolution of case law expanding liability in asbestos and environmental claims, recorded reserves related to these claims are adequate.

Table of Contents

Nevertheless, the asbestos, environmental and toxic tort liability reserves could be revised, and any such revisions could have a material adverse effect on our results of operations for a particular quarterly or annual period or on our financial position.

Reinsurance

See "Reinsurance" in Item 1 – Business for information on our reinsurance programs.

INVESTMENTS

The investments discussion below excludes amounts relating to the operations of Chaucer.

INVESTMENT RESULTS

Net investment income before income taxes was as follows:

DECEMBER 31 (dollars in millions)	2018	2017	2016