State Auto Financial CORP
Form 10-K
March 15, 2019

10-KFALSE2018FYSTFCState Auto Financial CORP000087497712/31NoYesNoAccelerated FilerFALSEFALSEFALSE2,188.22,173.1364.6318.656.625.848.357.27.57.2593.6711.4112.4187.917.715.515.215.2——2.52
31, 20334.94.9In May 2009, the Company entered into 2 separate credit agreements with State Auto Mutual pursuant to which it loaned State Auto Mutual a total of $70.0 million.2P05YP01Y—001533.33100.010.0120.0020.0130.00116.5116.52.52.5——2.52.5————100.0100.049.248.22.502.

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

FORM 10-K

ý **Annual Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the fiscal year ended December 31, 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 000-19289
STATE AUTO FINANCIAL CORPORATION
(Exact name of Registrant as specified in its charter)

Ohio	**31-1324304**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
518 East Broad Street,	**43215-3976**

Columbus, Ohio	
(Address of principal executive offices)	**(Zip Code)**

Registrant’s telephone number, including area code: (614) 464-5000

Securities registered pursuant to Section 12(b) of the Act: None
Securities registered pursuant to Section 12(g) of the Act:
Common Shares, without par value

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ¨ No ý
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 ý
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 ý No ¨
Indicate by check mark whether the Registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files). Yes ý No ¨
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant’s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ¨
Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See definition of “large accelerated filer”, "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ¨	Accelerated filer ý
Non-accelerated filer ¨	Smaller reporting company ¨
(Do not check if a smaller reporting company)	Emerging growth company ¨

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ¨ No ý
As of June 30, 2018, the last business day of the Registrant’s most recently completed second fiscal quarter, the aggregate market value (based on the closing sales price on that date) of the voting stock held by non-affiliates of the Registrant was $511,448,022.
On March 8, 2019, the Registrant had 43,346,220 Common Shares outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant’s Proxy Statement relating to the annual meeting of shareholders to be held May 10, 2019 (the “2019 Proxy Statement”), which will be filed within 120 days of December 31, 2018, are incorporated by reference into Part III of this Form 10-K.

Index to Annual Report on Form 10-K for the year ended December 31, 2018

IMPORTANT INFORMATION REGARDING FORWARD-LOOKING STATEMENTS

All statements, other than statements of historical facts, included in this Annual Report on Form 10-K (this "Form 10-K") of State Auto Financial Corporation ("State Auto Financial" or "STFC") or incorporated herein by reference, including, without limitation, statements regarding State Auto Financial's future financial position, business strategy, budgets, projected costs, goals and plans and objectives of management for future operations, are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements generally can be identified by the use of forward-looking terminology such as "may," "will," "expect," "intend," "estimate," "anticipate," "project," "believe" or "continue" or the negative thereof or variations thereon or similar terminology. Forward-looking statements speak only as the date the statements were made. Although State Auto Financial believes that the expectations reflected in forward-looking statements have a reasonable basis, it can give no assurance that these expectations will prove to be correct. Forward-looking statements are subject to risks and uncertainties that could cause actual events or results to differ materially from those expressed in or implied by the statements. For a discussion of the most significant risks and uncertainties that could cause State Auto Financial's actual results to differ materially from those projected, see "Risk Factors" in Item 1A of this Form 10-K. Except to the limited extent required by applicable law, State Auto Financial undertakes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

IMPORTANT DEFINED TERMS USED IN THIS FORM 10-K

Glossary of Terms for State Auto Financial Corporation and Its Subsidiaries and Affiliates

State Auto Financial or STFC	Refers to our holding company, State Auto Financial Corporation.
We, us, our or the Company	Refers to STFC and its consolidated subsidiaries, namely State Auto Property & Casualty Insurance Company (“State Auto P&C”), Milbank Insurance Company (“Milbank”), State Auto Insurance Company of Ohio (“SA Ohio”), and Stateco Financial Services, Inc. (“Stateco”).
State Auto Mutual	Refers to State Automobile Mutual Insurance Company, which owns approximately 59.9% of STFC’s outstanding common shares.
STFC Pooled Companies	Refers to State Auto P&C, Milbank, and SA Ohio.
Mutual Pooled Companies	Refers to State Auto Mutual, and certain subsidiaries and affiliates of State Auto Mutual,

	namely, State Auto Insurance Company of Wisconsin ("SA Wisconsin"), Meridian Security Insurance Company ("Meridian Security"), Patrons Mutual Insurance Company of Connecticut ("Patrons Mutual"), Rockhill Insurance Company ("RIC"), Plaza Insurance Company ("Plaza"), American Compensation Insurance Company ("American Compensation") and Bloomington Compensation Insurance Company ("Bloomington Compensation").
Pooled Companies or our Pooled Companies	Refers to the STFC Pooled Companies and the Mutual Pooled Companies.
Rockhill Insurance Group	Refers to Rockhill Holding Company, its insurance subsidiaries, namely RIC, Plaza, American Compensation and Bloomington Compensation, and its other non-insurance subsidiaries,

	including RTW, Inc. ("RTW"), a holding company that owns 100% of American Compensation and Bloomington Compensation.
Rockhill Insurers	Refers to RIC, Plaza, American Compensation and Bloomington Compensation.
State Auto Group	Refers to the Pooled Companies

Glossary of Selected Insurance and Accounting Terms

Accident year	The calendar year in which loss events occur, regardless of when the losses are actually reported, booked or paid.
Accounting standards codification or ASC	The Codification is the single source of authoritative nongovernmental GAAP developed by the Financial Accounting Standards Board (“FASB”).
Admitted insurer	An insurer licensed to transact insurance business within a state and subject to comprehensive policy rate, form and market conduct regulation by that state’s insurance regulatory authority.
American Institute of Certified Public Accountants or AICPA	The AICPA represents the certified public accounting profession nationally regarding rule-making and standard-setting, and serves as an advocate before legislative bodies, public interest groups and other professional organizations. The AICPA also

	monitors and enforces compliance with the profession's technical and ethical standards.
Allocated loss adjustment expenses or ALAE	The costs that can be related to a specific claim, which may include attorney fees, external claims adjusters and investigation costs, among others.
Book value per share	Total common stockholders' equity divided by the number of common shares outstanding.
Catastrophe loss	Loss and ALAE from catastrophes, where catastrophes are defined as a severe loss caused by various natural events, including hurricanes, hailstorms, tornadoes, windstorms, earthquakes, severe winter weather and fires. Our catastrophe losses are those designated by the Insurance Services Office ("ISO") Property Claim Services ("PCS"). PCS defines a catastrophe as an event that causes \$25.0 million or more in industry insured property losses and affects a significant number

	of property and casualty policyholders and insurers.
Combined ratio	The sum of the loss and LAE ratio and the expense ratio. A combined ratio under 100% generally indicates an underwriting profit. A combined ratio over 100% generally indicates an underwriting loss.
Debt to capital ratio	The ratio of notes payable to the sum of total stockholders' equity and notes payable.
Deferred acquisition costs or DAC	Expenses that vary with, and are primarily related to, the production of new and renewal insurance business, and are deferred and amortized to achieve a matching of revenues and expenses when reported in financial statements prepared in accordance with GAAP.
Direct written premiums	The amounts charged by an insurer to insureds in exchange for coverages provided in accordance with the terms of an insurance contract. The amounts exclude the impact of all reinsurance

	premiums, either assumed or ceded.
Duration	A measure of the sensitivity of a financial asset's price to interest rate movements.
Earned premiums or premiums earned	The portion of written premiums that applies to the expired portion of the policy term. Earned premiums are recognized as revenue under both SAP and GAAP.
Excess and surplus lines insurance	Specialized property and liability coverages written by non-admitted insurers. These coverages include exposures that do not fit within normal underwriting patterns, involve a degree of risk that is not commensurate with standard rates and/or policy forms, or are not written by admitted insurers because of general market conditions.

Expense ratio or underwriting expense ratio	For SAP, it is the ratio of (i) the sum of statutory underwriting and miscellaneous expenses incurred offset by miscellaneous income (collectively, “underwriting expenses”) to (ii) written premiums. For GAAP, it is the ratio of acquisition and operating expenses incurred to earned premiums.
Financial Accounting Standards Board or FASB	In the United States, a non-governmental body the SEC has charged with establishing and maintaining generally accepted standards for professional accountants.
Generally accepted accounting principles or GAAP	Accounting practices used in the United States of America determined by the FASB and American Institute of Certified Public Accountants (“AICPA”).
Incurred but not reported reserves or IBNR	Estimated losses and LAE that have been incurred but not yet reported to the insurer. This includes amounts for unreported claims, development on known cases, and re-opened claims.

Loss adjustment expenses or LAE	The expenses of settling claims, including legal and other fees, and the portion of general expenses allocated to claim settlement. LAE is comprised of ALAE and ULAE.
Loss and LAE ratio or loss ratio	For both SAP and GAAP, it is the ratio of incurred losses and LAE to earned premiums.
Loss reserves	Liabilities established by insurers and reinsurers to reflect the estimated cost of claims incurred that the insurer or reinsurer will ultimately be required to pay in respect of insurance or reinsurance it has written. Reserves are established for losses and for LAE, and consist of case reserves and IBNR reserves.
Managing general underwriter or MGU	An independent insurance professional firm that acts as an intermediary between the insurer and retail agents, much like a wholesaler. MGUs frequently have binding authority to issue insurance policies on behalf of an insurer that fit into the underwriting

	guidelines provided by that insurer. MGUs typically are compensated by an override commission on the insurance coverages sold by their sub-agents.
National Association of Insurance Commissioners or NAIC	An organization of the insurance commissioners or directors of all 50 states, the District of Columbia and the five U.S. territories organized to promote consistency of regulatory practices and statutory accounting standards throughout the United States.
Net premiums written to surplus ratio or leverage ratio	A SAP calculation which measures statutory surplus available to absorb losses. This ratio is calculated by dividing the net statutory premiums written for a rolling twelve month period by the ending statutory surplus for the period. For example, a ratio of 1.5 means that for every dollar of surplus, the insurer wrote $1.50 in premiums.
Net written premiums	Direct written premiums plus assumed reinsurance

	premiums less ceded reinsurance premiums.
Non-admitted insurer or surplus lines carrier	An insurer that is not required to be licensed in a state but is allowed to do business in that state subject to certain regulatory oversight by that state's insurance regulatory authority. Non-admitted insurers are not subject to most of the rate and form regulations imposed on admitted insurers because they write specialized property and liability coverages, also known as excess and surplus lines insurance, which allows them the flexibility to change coverages offered and rates charged without time constraints and financial costs associated with the filing process. As such, these insurers offer an opportunity for coverage for specialized exposures that otherwise might not be insurable.
Retail agent or retail agency	An independent insurance professional who represents, and acts as an intermediary for, admitted insurers, generally recommending,

	marketing and selling insurance products and services to insurance consumers.
Return on average equity	The percent derived by dividing net income by average total stockholders' equity.

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Risk-based capital or RBC	A measure adopted by the NAIC and state regulatory authorities for determining the minimum statutory capital and surplus requirements of insurers. Insurers having total adjusted capital less than that required by the RBC calculation will be subject to varying degrees of regulatory action depending on the level of capital inadequacy.
Standard insurance	Insurance which is typically written by admitted insurers. Our personal and business insurance segments are comprised of standard insurance.
Statutory accounting practices or SAP	The practices and procedures prescribed or permitted by state insurance regulatory authorities in

	the United States for recording transactions and preparing financial statements.
Statutory surplus	Under SAP, the amount remaining after all liabilities, including loss reserves, are subtracted from all admitted assets. Admitted assets are assets of an insurer prescribed or permitted by a state to be recognized on the balance sheet prepared in accordance with SAP.
Unallocated loss adjustment expenses or ULAE	The costs incurred in settling claims, such as in-house processing costs, which cannot be associated with a specific claim.
Underwriting gain or loss	Under SAP, earned premiums less loss and LAE and underwriting expenses.
Unearned premiums	The portion of written

	premiums that applies to the unexpired portion of the policy term. Unearned premiums are not recognized as revenues under both SAP and GAAP.
Wholesale broker	An independent insurance professional who offers specialized insurance products and serves as an intermediary between a retail agent and an insurer, while typically having no contact with the insured. A wholesale broker may represent both admitted and non-admitted insurers, and may offer both standard and excess and surplus lines insurance.

PART I

Item 1. Business

State Auto Financial is an Ohio domiciled property and casualty insurance holding company incorporated in 1990. We are engaged in writing personal and business insurance. State Auto Financial's principal subsidiaries are State Auto P&C, Milbank and SA Ohio, each of which is a property and casualty insurance company, and Stateco, which provides investment management services to affiliated insurance companies.

State Auto Mutual is an Ohio domiciled mutual property and casualty insurance company organized in 1921. It owns approximately 59.9% of State Auto Financial's outstanding common shares. State Auto Mutual's other subsidiaries and affiliates include SA Wisconsin, Meridian Security, Patrons Mutual and the Rockhill Insurers, each of which is a property and casualty insurance company. State Auto Mutual and its insurance subsidiaries and affiliates, along with State Auto Financial's insurance subsidiaries, pool their respective insurance business under the Pooling Arrangement, as further described below.

The State Auto Group markets its insurance products throughout the United States primarily through independent agencies, which include retail agencies and wholesale brokers. All of the property and casualty insurance companies in the State Auto Group are admitted insurers, except for RIC, which is a non-admitted insurer. The operations of the State Auto Group are headquartered in Columbus, Ohio.

As described in more detail below, we have exited our specialty business, which will result in the elimination of our specialty insurance segment and its related underwriting results from the State Auto Group. As a result, in 2019 the specialty insurance segment will no longer be a reportable segment. We stopped writing this business on a net basis in 2018. However, exposure to the risks underlying this business will continue as the premiums are earned through mid-2019.

Our Pooled Companies are rated A- (Excellent) by the A.M. Best Company ("A.M. Best").

FINANCIAL INFORMATION ABOUT SEGMENTS

Our reportable insurance segments are personal insurance, commercial insurance and specialty insurance (collectively the "insurance segments"). These insurance segments are aligned consistent with the reporting lines to our principal operating decision makers. Our investment operations is also a reportable segment. See a detailed discussion regarding our segments at Item 7 of this Form 10-K "Management's Discussion and Analysis of Financial Condition and Results of Operations—Overview" and Note 17 to our consolidated financial statements included in Item 8 of this Form 10-K.

The products within each reportable insurance segment are as follows:

•*Personal Insurance Segment*- personal auto, homeowners and other personal

•*Commercial Insurance Segment* - commercial auto, small commercial package, middle market commercial, workers' compensation, farm and ranch and other commercial

•*Specialty Insurance Segment* - E&S property, E&S casualty and programs

PERSONAL AND COMMERCIAL INSURANCE

Products offered in our personal and commercial insurance segments are marketed exclusively through retail agents, but the segments are managed separately from each other due to the differences in the types of customers they serve, products they provide or services they offer.

Products

Personal Insurance

In our personal insurance segment, we write standard insurance covering personal exposures to individuals. The primary coverages offered are personal auto, homeowners, and other personal (examples of products included in other personal are dwelling fire, personal inland marine and personal umbrella).

Commercial Insurance

In our commercial insurance segment, we write standard insurance covering small to medium sized commercial exposures. We offer a broad range of coverages including commercial auto, small commercial package, middle market commercial, farm & ranch, workers' compensation and other commercial (examples of products included in other commercial are commercial inland marine, small commercial package umbrella and middle market commercial umbrella).

Marketing

We market our personal and commercial insurance products through approximately 3,000 retail agencies. We view our retail agents as our primary customers, because they are in a position to either recommend our insurance products or those of a competitor to their customers. We strongly support the independent agency system and believe its maintenance is essential to our present and future success. We continually develop programs and procedures to enhance our agency relationships, including the following: regular travel by senior management and regional office staff to meet with agents in their home states; training opportunities; and incentives related to profit and growth.

We actively help our agencies develop the professional sales skills of their staff. Our training programs include both product and sales training conducted in our corporate headquarters. Further, some of our training programs include disciplined follow-up and coaching for an extended time. In addition, from time to time we provide targeted training sessions in our agents' offices.

We provide our retail agents with defined travel and cash incentives if they achieve certain sales and underwriting profit levels. Further, we recognize our very top agencies—measured by consistent profitability, achievement of written premium thresholds and growth—as Inner Circle Agencies. Inner Circle Agencies are rewarded with additional incentives.

SPECIALTY INSURANCE

As previously reported, we have exited the specialty business, either through a series of renewal right transactions or by placing lines of business into run-off, which will result in the elimination of the specialty insurance segment and its related underwriting results from the State Auto Group. We stopped writing this business on a net basis in 2018.

INVESTMENT OPERATIONS

The primary objectives of our investment strategy are to maintain adequate liquidity and capital to meet our responsibilities to policyholders; grow surplus long term to support the growth of our company; provide a consistent level of income; and manage investment risk. Our investment portfolio is managed separately from that of State Auto Mutual and its subsidiaries and affiliates, and investment results are not shared through the Pooling Arrangement, as described below. Stateco performs investment management services for both us and State Auto Mutual and all subsidiaries and affiliates. Investment policies and guidelines are set for each company through the Investment Committee of its respective Board of Directors.

For additional discussion regarding our investments, including the market risks related to our investment portfolio, see Item 7 of this Form 10-K, "Management's Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations—Investment Operations Segment."

CLAIMS

Our claims and risk engineering (“CARE”) division supports our insurance segments through emphasis on timely investigation of claims, settlement of meritorious claims for equitable amounts, maintenance of adequate case reserves for claims, sharing of relevant information, and control of external claims adjustment expenses. Achievement of these goals supports our marketing efforts by providing agents and policyholders with prompt and effective service.

We employ a specialized claims model that is skills-based and focused on yielding a quality customer experience regardless of the type and severity of the claim. We staff field adjusters in locations where we have size, scale and density of claims whenever possible to control file quality and enhance customer service. In areas where there is not a sufficient volume of claims to warrant staff adjusters, we supplement our field staff with outside adjusters and appraisers who work under our direction.

Claim settlement authority levels are established for each adjuster, supervisor and manager based on their level of expertise. Our claims division is responsible for reviewing the claim, obtaining necessary documentation and establishing loss and expense reserves of certain claims. Generally, property or casualty claims estimated to reach $100,000 or above are sent to specialists for direct handling.

We minimize claim adjusting costs by settling as many claims as possible through our claims staff and, when appropriate, by settling disputes regarding automobile physical damage, bodily injury and property insurance claims through arbitration or mediation.

In addition to our internal claims adjusters, we utilize third party claims administrators (“TPAs”) to investigate, process and settle certain specialty insurance segment claims on our behalf. As with our internal claims adjusters, claim settlement authority is established for adjusters, supervisors and managers within each TPA. Claims handling and reporting guidelines are established and provided to each TPA. Members of our internal claims staff perform periodic reviews of individual claim files produced by each TPA for compliance with such established claims handling and reporting guidelines.

We have in-house counsel offices to defend and resolve claims which are in litigation. These offices are strategically placed where we have size, scale and density of legal cases to warrant their existence. We also have a list of highly skilled panel counsel to defend our insureds, when appropriate.

POOLING ARRANGEMENT

Our Pooled Companies pool their respective insurance business in accordance with a quota share reinsurance agreement which we refer to as the “Pooling Arrangement.” In general, under the Pooling Arrangement, State Auto Mutual assumes premiums, losses and expenses from each of the remaining Pooled Companies and in turn cedes to each a specified portion of premiums, losses and expenses based on each of the Pooled Companies’ respective pooling percentages. The balance of the pooled premiums, losses and expenses are retained by State Auto Mutual.

See the detailed discussion of our Pooling Arrangement at Item 7 of this Form 10-K, “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Pooling Arrangement.”

GEOGRAPHIC DISTRIBUTION

The following table sets forth the geographic distribution of our direct written premiums for the year ended December 31, 2018:

State	% of Total
Texas	10.4 %
Ohio	8.9
Kentucky	6.7
Minnesota	4.4
South Carolina	4.2
Tennessee	4.1
Arkansas	4.0
Georgia	3.8
Maryland	3.7
Indiana	3.7
Mississippi	3.6
Missouri	3.5
Pennsylvania	3.4
Illinois	3.3
Michigan	3.2
North Carolina	3.2
All others [1]	25.9
Total	100.0 %

(1) No other single state accounted for 3.0% or more of the total direct written premiums written in 2018.

MANAGEMENT AGREEMENT

Through various management and cost sharing agreements, State Auto P&C provides employees to perform all organizational, operational and management functions for the State Auto Group, while State Auto Mutual provides certain operating facilities, including our corporate headquarters.

Our primary management agreement, which we refer to as the 2005 Management Agreement, renewed for an additional ten-year period on January 1, 2015. If the 2005 Management Agreement was terminated for any reason, we would have to relocate our facilities to continue our operations. See “Properties” included in Item 2 of this Form 10-K.

REINSURANCE

Members of the State Auto Group follow the customary industry practice of reinsuring a portion of their exposures and paying to the reinsurers a portion of the premiums received. Insurance is ceded principally to reduce net liability on individual risks or for individual loss occurrences, including catastrophic losses. Although reinsurance does not legally discharge the individual members of the State Auto Group from primary liability for the full amount of limits applicable under their policies, it does make the assuming reinsurer liable to the extent of the reinsurance ceded. See the detailed discussion of our reinsurance arrangements at Item 7 of this Form 10-K, “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Reinsurance Arrangements.”

See “Regulation” in this Item 1 for a discussion of the Terrorism Acts.

LOSS RESERVES

We maintain reserves for the eventual payment of losses and LAE for both reported claims and IBNR. Loss reserves are management’s best estimate at a given point in time of what we expect to pay to settle all losses incurred as of the end of the accounting period, based on facts, circumstances and historical trends then known. During the loss settlement period, additional facts regarding individual claims may become known, and consequently, it often becomes necessary to revise our estimate of the liability. The results of our operations and financial condition could be impacted, perhaps significantly, in the future if our estimate of ultimate payments required to settle claims varies from the loss reserves currently recorded.

Loss reserves for reported losses are initially established on either a case-by-case or formula basis depending on the type and circumstances of the loss. The case-by-case reserve amounts are determined based on our reserving practices, which take into account the type of risk, the circumstances surrounding each claim and applicable policy provisions. The formula reserves are based on historical paid loss data for similar claims with provisions for changes caused by inflation. Loss reserves for IBNR claims are estimated based on many variables including historical and statistical information, changes in exposure units, inflation, legal developments, storm loss estimates and economic conditions. Case and formula basis loss reserves are reviewed on a regular basis. As new data becomes available, estimates are updated resulting in adjustments to loss reserves. Generally, reported losses initially reserved on a formula basis which have not settled after six months, are case reserved at that time. Although our management uses many resources to calculate loss reserves, there is no single method for determining the exact ultimate liability. We do not discount loss reserves for financial statement purposes. For additional information regarding our loss reserves, see Item 7 of this Form 10-K, "Management's Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations—Loss and LAE."

The following table sets forth our one-year development information on changes in the loss reserve for the years ended December 31, 2018, 2017 and 2016:

($ millions)	Year Ended December 31		
	2018	2017	2016
Beginning of Year:			
Loss and loss expenses payable	**$ 1,255.6**	$ 1,181.6	$ 1,053.0
Less: Reinsurance recoverable on losses and loss expenses payable	**3.1**	3.6	5.9
Net losses and loss expenses payable[1]	**1,252.5**	1,178.0	1,047.1
Provision for losses and loss expenses occurring:			
Current year	**876.6**	964.9	915.3
Prior years[2]	**(80.2)**	(46.6)	27.0
Total	**796.4**	918.3	942.3
Loss and loss expense payments for claims occurring during:			
Current year	**456.5**	445.2	417.7
Prior years	**451.1**	398.6	393.7
Total	**907.6**	843.8	811.4
End of Year:			
Net losses and loss expenses payable	**1,141.3**	1,252.5	1,178.0

Add: Reinsurance recoverable on losses and loss expenses payable	**5.5**		3.1		3.6	
Losses and loss expenses payable(3)	**$**	**1,146.8**	$	1,255.6	$	1,181.6

(1) Includes net amounts assumed from affiliates of $711.4 million, $630.9 million, and $532.4 million at beginning of year 2018, 2017, and 2016, respectively.

(2) This line item shows changes in the current calendar year in the provision for losses and loss expenses attributable to claims occurring in prior years. See discussion regarding the calendar year developments at Item 7 of this Form 10-K Management's Discussion and Analysis section at "Results of Operations—Loss and LAE Development."

(3) Includes net amounts assumed from affiliates of $593.6 million, $711.4 million, and $630.9 million at end of year 2018, 2017, and 2016, respectively.

COMPETITION

The property and casualty insurance industry is highly competitive. We compete with numerous insurance companies, with varying sizes and financial resources. We compete in the personal and business insurance markets based on the following factors: price; product offerings and innovation; underwriting criteria; quality of service to insureds, relationships with our retail agents and wholesale brokers; prompt and fair claims handling and settlement; financial stability; and technology, making us a preferred business partner. In addition, because most of our retail agents and wholesale brokers represent more than one insurer, we face competition within each agency and broker.

REGULATION

Most states, including all the domiciliary states of the State Auto Group, have enacted legislation that regulates insurance holding company systems. Each insurance company in our holding company system is required to register with the insurance supervisory agency of its state of domicile and furnish information concerning the operations of companies within our holding company system that may materially affect the operations, management or financial condition of the insurers within the system. Pursuant to these laws, the respective insurance departments may examine any members of the State Auto Group, at any time, require disclosure of material transactions involving insurer members of our holding company system, and require prior notice and an opportunity to disapprove of certain "extraordinary" transactions, including, but not limited to, extraordinary dividends to shareholders. Additionally, these laws require that all transactions within our holding company system affecting any insurance subsidiary within the State Auto Group are fair and equitable. In addition, approval of the applicable state insurance commissioner is required prior to the consummation of transactions affecting the control of an insurer. The insurance laws of all the domiciliary states of the State Auto Group provide that no person may acquire direct or indirect control of a domestic insurer without obtaining the prior written approval of the state insurance commissioner for such acquisition.

In addition to being regulated by the insurance department of its state of domicile, each of our insurance companies is subject to supervision and regulation in the states in which we transact business. Such supervision and regulation relate to numerous aspects of an insurance company's business operations and financial condition. The primary purpose of such supervision and regulation is to ensure financial stability of insurance companies for the protection of policyholders. The laws of the various states establish insurance departments with broad regulatory powers relative to granting and revoking licenses to transact business, regulating trade practices, licensing agents, approving policy forms, setting reserve requirements, determining the form and content of required statutory financial statements, prescribing the types and amount of investments permitted and requiring minimum levels of statutory capital and surplus. Although premium rate regulation varies among states and lines of insurance, such regulations generally require approval of the regulatory authority prior to any changes in rates. In addition, all of the states in which the State Auto Group transacts business have enacted laws which restrict these companies' underwriting discretion. Examples of these laws include restrictions on policy terminations, restrictions on agency terminations and laws requiring companies to accept any applicant for automobile insurance. These laws may adversely affect the ability of the insurers in the State Auto Group to earn a profit on their underwriting operations.

The Risk Management and Own Risk Solvency Assessment Model Act ("ORSA"), adopted by the NAIC in 2012, requires insurers to incorporate a comprehensive enterprise risk management framework within company operations. Overall, ORSA is an internal assessment of the risks associated with an insurer's business and the sufficiency of capital resources to support those risks. Each insurer's ORSA process will be unique, reflecting its business, strategy and approach to enterprise risk management. In 2018, the State Auto Group filed its ORSA Summary Report, supported by internal risk management materials, with the Ohio Department of Insurance, our lead state regulator.

We are required to file detailed annual reports with the supervisory agencies in each of the states in which we do business, and our business and accounts are subject to examination by such agencies at any time.

There can be no assurance that such regulatory requirements will not become more stringent in the future and have an adverse effect on the operations of the State Auto Group.

Dividends. Our insurance subsidiaries generally are restricted by the insurance laws of our respective states of domicile as to the amount of dividends we may pay without the prior approval of our respective state regulatory authorities. Generally, the maximum dividend that may be paid by an insurance subsidiary during any year without prior regulatory approval is limited to the greater of a stated percentage of that subsidiary's statutory surplus as of a certain date, or adjusted net income of the subsidiary for the preceding year. Under current law, $87.2 million is available in 2019 for payment as a dividend from our insurance subsidiaries to STFC without prior approval from our respective domiciliary state insurance departments. STFC received dividends of $10.0 million, $15.0 million and $10.0 million in 2018, 2017 and 2016, respectively, from its insurance subsidiaries. Additional information regarding dividend restrictions can be found in this Item 7 and in Note 13 to our consolidated financial statements included in Item 8 of this Form 10-K.

Rates and Related Regulation. Except as discussed below, we are not aware of the adoption of any material adverse legislation or regulation in any state in which we conducted business during 2018 which would materially impact our business.

Many states in which we operate have passed or are considering legislation restricting or banning the use of credit scoring in the rating and risk selection process. Some states are also becoming active in questioning the use of catastrophe modeling in the pricing and underwriting areas. Regulation risk is realized when states do not approve or limit the amount of rate a company can charge which may result in writing underpriced business. See “Risk Factors - Regulations” in Item 1A of this Form 10-K.

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In an attempt to make capital and surplus requirements more accurately reflect the underwriting risk of different lines of insurance, as well as investment risks that attend insurers' operations, the NAIC annually tests insurers' risk-based capital requirements. As of December 31, 2018, each of the Pooled Companies had adequate levels of capital as defined by the NAIC with its respective risk-based capital requirements.

The property and casualty insurance industry is also affected by court decisions. In general, premium rates are actuarially determined to enable an insurance company to generate an underwriting profit. These rates contemplate a certain level of risk. The courts may modify, in a number of ways, the level of risk which insurers had expected to assume, including eliminating exclusions, expanding the terms of the contract, multiplying limits of coverage, creating rights for policyholders not intended to be included in the contract and interpreting applicable statutes expansively to create obligations on insurers not originally considered when the statute was passed. Courts have also undone legal reforms passed by legislatures, which reforms were intended to reduce a litigant's rights of action or amounts recoverable and so reduce the costs borne by the insurance mechanism. These court decisions can adversely affect an insurer's profitability. They also create pressure on rates charged for coverages adversely affected, and this can cause a legislative response resulting in rate suppression that can unfavorably impact an insurer.

The Terrorism Risk Insurance Act of 2002 and its successors, the Terrorism Risk Insurance Extension Act of 2005 and the Terrorism Risk Insurance Program Reauthorization Act of 2007 (collectively, the "Terrorism Acts"), was extended until 2020. Under the Terrorism Acts, commercial property and casualty insurers like State Auto Group, in exchange for making terrorism insurance available, may be entitled to be reimbursed by the Federal Government for a portion of their aggregate losses. As required by the Terrorism Acts, we offer policyholders in specific lines of commercial insurance the option to elect terrorism coverage. In order for a loss to be covered under the Terrorism Acts, the loss must meet the aggregate industry loss minimum and must be the result of an act of terrorism as certified by the Secretary of the Treasury. For 2015, the aggregate industry loss minimum was $100.0 million and, beginning in 2016, increases by $20.0 million annually to $200.0 million in 2020. The Terrorism Acts require insurance carriers to retain 15% of any claims from a certified terrorist event in excess of the federally mandated deductible in 2015 subject to an annual industry-wide cap of $100.0 billion. This retention started increasing on January 1, 2016, by 1% each calendar year until it reaches 20% in 2020. The federally mandated deductible represents 20% of direct earned premium for the covered lines of business of the prior year. Policyholders may choose to reject terrorism coverage (terrorism coverage is mandatory for workers' compensation). If the policyholder rejects coverage for certified acts of terrorism, we will cover only such acts of terrorism that are not certified acts under the Terrorism Acts and continue to apply policy exclusions that may limit any coverage from loss due to nuclear, biological or chemical agents. Our current commercial property reinsurance excludes certified acts of foreign terrorism and loss due to nuclear, biological or chemical agents. Insurers participating in the Terrorism Acts are required to provide information regarding insurance coverage for terrorism losses, including; (i) lines of business with exposure to such losses; (ii) premiums earned on such coverage; (iii) geographical location of exposures; (iv) pricing of such coverage; (v) the take-up rate for such coverage; and (vi) the amount of private reinsurance for acts of terrorism purchased. See "Risk Factors-Terrorism" in Item 1A of this Form 10-K.

The Federal Insurance Office ("FIO") was established in 2010 by the enactment of the Dodd-Frank Act. The FIO is a separate office within the United States Department of Treasury. The primary objective of the FIO is to monitor all aspects of the insurance industry, including identifying issues or gaps in the regulation of insurers that could contribute to a systemic crisis in the insurance industry or the United States financial system. The FIO also coordinates and develops federal policy on prudential aspects of international insurance matters, including representing the United States in the International Association of Insurance Supervisors, assists in negotiating certain international agreements, monitors access to affordable insurance by traditionally underserved communities and consumers, minorities, and low- and moderate-income persons, and assists in the administration of the terrorism risk insurance program; however, the FIO has no authority as a regulator or supervisor of insurance companies.

EMPLOYEES

As of March 8, 2019, we had 1,854 employees. Our employees are not covered by any collective bargaining agreement. We consider the relationship with our employees to be good.

AVAILABLE INFORMATION

Our website address is www.StateAuto.com. Through this website (found by clicking the “Investors” link, then the “All SEC Filings” link), we make available, free of charge, our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, proxy and information statements and all amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (the “Exchange Act”), as soon as reasonably practicable after we electronically file such material with the Securities and Exchange Commission (the “SEC”). Also available on our website is information pertaining to our corporate governance, including the charters of each of our standing committees of our Board of Directors, our corporate governance guidelines, our employees’ code of business conduct and our directors’ ethical principles.

Any of the materials we file with the SEC may also be read and copied at the SEC’s Public Reference Room at 100 F Street, NE, Washington, DC 20549. Information on the operation of the SEC’s Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov.

Executive Officers of the Registrant

Name of Executive Officer and Position(s) with Company	Age(1)	Principal Occupation(s) During the Past Five Years	An Executive Officer of the Company Since(2)
Michael E. LaRocco, Chairman, President and Chief Executive Officer	62	President and Chief Executive Officer of STFC and State Auto Mutual, 5/15 to present; Chairman of the Board of STFC, 1/16 to present; chief executive officer of Business Insurance Direct LLC, 10/11 to 4/15; chief executive officer of AssureStart Insurance Agency LLC, 1/13 to 7/14; chief executive officer of Fireman's Fund Insurance Company, 3/08 to 7/11.	2015
Steven E. English, Senior Vice President, Chief Financial Officer	58	Senior Vice President of STFC and State Auto Mutual, 8/13 to present; Vice President of STFC and State Auto Mutual, 5/06 to 7/13; Chief Financial Officer of STFC and State Auto Mutual, 12/06 to present.	2006
Jason E. Berkey, Senior Vice President, Personal Lines	44	Senior Vice President of Personal Lines of STFC and State Auto Mutual, 9/17 to present; Vice President of STFC and State Auto Mutual, 10/15 to 9/17; vice president of American Insurance Group	2017

		(“AIG”), 1/04 to 7/15.	
Melissa A. Centers, Senior Vice President, Secretary and General Counsel	47	Senior Vice President, Secretary and General Counsel of STFC, 11/15 to present; General Counsel and Secretary of State Auto Mutual, 11/15 to present; Assistant Secretary of STFC and State Auto Mutual, 11/12 to 11/15; Associate General Counsel of STFC and State Auto Mutual, 3/12 to 11/15; Assistant General Counsel of STFC and State Auto Mutual, 6/10 to 3/12.	2015
Kim B. Garland, Senior Vice President, Director of Commercial Lines	53	Senior Vice President of Commercial Lines of STFC and State Auto Mutual, 9/17 to present; Senior Vice President of Standard Lines of STFC and State Auto Mutual, 8/15 to 9/17; chief product officer of AIG consumer division, 1/13 to 12/14; chief underwriting officer of AIG’s global consumer insurance division, 12/12 to 1/13; president and chief executive officer of United Guaranty Corporation (“UGC”), an affiliate of AIG,	2015

		2/12 to 12/12; chief operating officer of UGC, 6/09 to 12/12.	
Elise D. Spriggs, Senior Vice President, Associate and External Relations	48	Senior Vice President, Associate and External Relations of STFC and State Auto Mutual, 10/17 to present; Senior Vice President, External and Government Affairs of STFC and State Auto Mutual, 3/16 to present; vice president and director of government relations, 7/11 to 6/15. Attorney, Carpenter, Lipps & Leland LLP, 06/15 to 03/16.	2016
Paul M. Stachura, Senior Vice President, Chief CARE Officer	61	Senior Vice President and Chief CARE Officer of STFC and State Auto Mutual, 9/15 to present; chief claims officer, of QBE Holdings, Inc., 5/13 to 9/15; chief claims and risk services officer of Fireman's Fund Insurance Company, 5/05 to 4/13.	2015
Gregory A. Tacchetti, Senior Vice President, Chief Information and Strategy Officer	50	Senior Vice President and Chief Information and Strategy Officer of STFC and State Auto Mutual, 8/15 to present; chief executive officer of AssureStart Insurance Agency LLC, 7/14 to 12/14; chief operating	2015

		officer of AssureStart Insurance Agency LLC, 10/11 to 6/14; senior vice president and chief administrative officer of Fireman's Fund Insurance Company, 2008 to 10/11.	
Scott A. Jones, Vice President, Chief Investment Officer	54	Vice President and Chief Investment Officer of STFC and State Auto Mutual, 3/12 to present; Assistant Vice President of STFC and State Auto Mutual, 8/09 to 3/12.	2012
Matthew S. Mrozek, Vice President, Chief Actuarial Officer	50	Vice President and Chief Actuarial Officer of STFC and State Auto Mutual, 3/09 to present.	2015
Matthew R. Pollak, Vice President, Chief Accounting Officer and Treasurer	53	Vice President, Chief Accounting Officer and Treasurer of STFC and State Auto Mutual, 4/13 to present; vice president, corporate finance and accounting of American Safety Insurance Holdings, Ltd. 2/10 to 4/13.	2013

(1) Age as of March 15, 2019.

(2) Each of the foregoing officers has been designated by our Board of Directors as an executive officer for purposes of Section 16 of the Exchange Act.

Item 1A. Risk Factors

Statements contained in this Form 10-K may be "forward-looking" within the meaning of Section 21E of the Exchange Act. Such forward-looking statements are subject to certain risks and uncertainties that could cause our operating results to differ materially from those projected. The following factors, among others, in some cases have affected, and in the future could affect, our actual financial performance. If any risks or uncertainties discussed below develop into actual events, then such events could have a material adverse effect on our business, reputation, liquidity, capital resources, financial position or results of operations. In that case, the market price of our stock could decline materially.

In the discussion below, we have organized risks according to categories of risk factors; however, many of the risks may have correlations and ramifications in more than one category. For example, the timely availability of sufficient, reliable data and information is included in Underwriting and Pricing, yet may also affect a number of risk factor categories. The categories, therefore, should be viewed as a starting point for understanding the significant risks we face, not as a limitation on the potential impact of risks.

The risk factors might affect, alter, or change actions we take in developing or executing our strategies, including, but not limited to capital management. We employ a number of risk management approaches to reduce our exposure to risk, all of which have inherent limitations. The failure of our risk management actions could have material adverse effects on our business, reputation, liquidity, capital resources, financial position or results of operations.

The following list of risk factors is not exhaustive and others may exist or develop. This information should be carefully considered together with the other information included in this report and in other reports and materials we file with the SEC, as well as news releases and other information we publicly disseminate from time to time.

RESERVES

If our estimated liability for losses and loss expenses is incorrect, our loss reserves may be inadequate to cover our ultimate liability for losses and loss expenses and may have to be increased.

We establish loss reserves based on actuarial estimates of the amount to be paid in the future to settle all claims incurred as of the end of the accounting period. We maintain loss reserves to cover our estimated ultimate unpaid liability for losses and loss expenses with respect to reported and unreported claims incurred as of the end of each accounting period. Loss reserves do not represent an exact calculation of the liability, but instead represent estimates, generally using actuarial projection techniques at a given accounting date. Our loss reserve estimates are expectations of what the ultimate settlement and administration of claims will cost based on our assessment of facts and circumstances then known, historical settlement patterns, estimates of trends in claims severity and frequency, legal theories of liability and other factors. Variables in the loss reserve estimation process can be affected by both internal and external events, such as changes in claims handling procedures, trends in loss costs, economic inflation, legal developments and legislative changes. Many of these items are not directly quantifiable, particularly on a prospective basis. Additionally, there may be a significant reporting lag, or changes in the report lag, between the occurrence of an insured event and the time a claim is actually reported to us. We refine loss reserve estimates in a regular, ongoing process as historical loss experience develops and additional claims are reported and settled. We record adjustments to loss reserves in the results of operations for the periods in which the estimates are changed. In establishing loss reserves, we take into account estimated recoveries for reinsurance, salvage and subrogation.

Because estimating loss reserves is an inherently uncertain process, currently established loss reserves may not be adequate. If we conclude the estimates are incorrect and our loss reserves are inadequate, we are obligated to increase them. An increase in loss reserves results in an increase in losses, reducing our net income for the period in which the deficiency is identified. Accordingly, an increase in loss reserves could have a material adverse effect on our results of operations, liquidity and financial condition.

CATASTROPHE LOSSES AND GEOGRAPHIC CONCENTRATIONS

The occurrence of catastrophic events could cause volatility in our results of operations and could materially reduce our level of profitability and adversely affect our liquidity and financial position.

Our insurance operations expose us to claims arising out of catastrophic events. We have experienced, and will in the future experience, catastrophe losses that may cause substantial volatility in our financial results for any fiscal quarter or year and could materially reduce our level of profitability or harm our financial condition, which in turn could adversely affect our ability to write new business. Catastrophes can be caused by various natural events, including hurricanes, hailstorms, tornadoes, windstorms, earthquakes, severe winter weather, fires and man-made events, none of which are within our control. Catastrophe losses can vary widely and could significantly impact our results. The frequency and severity of catastrophes are inherently unpredictable. Additionally, catastrophe losses incurred by residual markets or pooling mechanisms (such as wind pools) in certain states could trigger assessments to us. Such assessments could be material and may not be recoupable, depending on the applicable state mechanism.

The magnitude of loss from a catastrophe is a function of the severity of the event and the total amount of insured exposure in the affected area. Accordingly, we can sustain significant losses from less severe catastrophes, such as localized windstorms, when they affect areas where our insured exposure is concentrated. Although catastrophes can cause losses in a variety of our property and casualty lines, most of our catastrophe claims in the past have related to homeowners, allied lines, commercial property and commercial multi-peril coverages. The geographic distribution of our business subjects us to catastrophe exposure from severe thunderstorms, tornadoes and hail, as well as earthquakes and hurricanes affecting the United States.

Increases in the value and geographic concentration of insured properties and the effects of inflation could increase the severity of claims from catastrophic events in the future. In addition, states have from time to time passed legislation that limits the ability of insurers to manage catastrophe risk, such as legislation prohibiting insurers from withdrawing from catastrophe-prone areas or refusing to enforce policy provisions such as hurricane deductibles. Although we attempt to reduce the impact of catastrophes on our business by controlling concentrations of exposures in catastrophe prone areas and through the purchase of reinsurance, such reinsurance may prove inadequate if a major catastrophic loss exceeds the reinsurance limit, or we incur a number of smaller catastrophes that, individually, fall below the reinsurance retention level.

Along with others in the industry, we utilize catastrophe models developed by third party vendors to help assess and manage our exposure to catastrophe losses. Such models assume various conditions and probability scenarios and use historical information about catastrophic events, along with detailed information about our business. While we use modeling information in connection with our pricing and risk management activities, there are limitations with respect to the models' usefulness in predicting losses in any reporting period. Such limitations are evidenced by the occurrence of significant variations in estimates between models and modelers; material increases or decreases in model results due to changes and refinements of the underlying data elements and assumptions; and differences observed between the results of actual event conditions and modeled expectations. Climate change, to the extent it affects changes in weather patterns, could impact the frequency or severity of weather events. Some industry commentators have expressed concerns that hydraulic fracturing or "fracking," a process which involves drilling deep underground wells and injecting water, chemicals and sand into the rock formations in order to extract oil and gas, may cause seismic activity which, among other things, may affect the frequency of earthquakes. We view fracking as a potential emerging risk facing the industry.

Our ongoing catastrophe management efforts could negatively impact growth to the extent constraints on property exposures are deemed necessary in certain territories. In addition, due to the potential impact on cross-selling opportunities, new business growth in auto or other lines of business could be negatively affected.

A severe catastrophic event, pandemic or terrorist attack somewhere in the world may not result in material insurance losses to us. However, our investment portfolio, reinsurers or the general economy could be negatively affected, resulting in a material adverse effect on our business, liquidity, capital resources, financial position or results of operations.

UNDERWRITING AND PRICING

Our financial results depend primarily on our ability to underwrite risks effectively and to charge adequate rates to policyholders.

Our financial condition, cash flows and results of operations depend on our ability to underwrite and set rates adequately for a full spectrum of risks, across a number of lines of insurance. Rate adequacy is necessary to generate sufficient premium to pay losses, loss adjustment expenses and underwriting expenses and to earn a profit.

Our ability to underwrite and set rates effectively is subject to a number of risks and uncertainties, including, without limitation:

- the timely availability of sufficient, reliable data;
- our ability to conduct a complete and accurate analysis of available data;
- our ability to timely recognize changes in trends and to project both the severity and frequency of losses with reasonable accuracy;

• uncertainties which are generally inherent in estimates and assumptions;

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•our ability to project changes in certain operating expense levels with reasonable accuracy;
•the development, selection and application of appropriate rating formula or other pricing methodologies;
•our use of predictive modeling or other underwriting tools to assist with correctly and consistently achieving the intended results in underwriting and pricing;
•our ability to establish and consistently follow company underwriting guidelines;
•our ability to innovate with new product and/or pricing strategies, and the success of those innovations on implementation;
•our ability to secure regulatory approval of premium rates on an adequate and timely basis and effectively implement such rate changes;
•our ability to accurately predict consumer behavior, such as policyholder retention;
•our ability to properly classify our new and renewal business;
•unanticipated court decisions, legislation or regulatory action;
•unanticipated changes or execution problems in our claim settlement practices, including our ability to recognize and respond to fraudulent or inflated claims;
•changing driving patterns for auto exposures including distracted driving; changing weather patterns (including those which may be related to climate change) for property exposures;
•technological innovations in automobiles, such as accident avoidance systems and advances leading to autonomous cars;
•changes in the medical sector of the economy; including healthcare reform cost shifting and other factors;
•unanticipated changes in auto repair costs, auto parts prices and used car prices;
•impact of inflation and other factors, such as demand surge on cost of construction materials, labor and other expenditures;
•our ability to monitor and manage property concentration in catastrophe prone areas, such as hurricane, earthquake and wind/hail regions; and
•the general state of the economy in the states in which we operate.

Such risks may result in our rates being based on inadequate or inaccurate data or inappropriate assumptions or methodologies, and may cause our estimates of future changes in the frequency or severity of claims to be incorrect. As a result, we could underprice risks, which would negatively affect our margins, or we could overprice risks, which could reduce our competitiveness. In either event, our operating results, financial condition and cash flows could be materially adversely affected.

CREDIT AND FINANCIAL STRENGTH RATINGS

A downgrade in our financial strength ratings may negatively affect our business and reputation and a downgrade in our credit rating could negatively affect the cost and availability of debt financing.

Insurance companies are subject to financial strength ratings produced by external rating agencies. Higher ratings generally indicate financial stability and a strong ability to pay claims. Ratings are assigned by rating agencies to insurers based upon factors that they believe are relevant to policyholders and creditors. Ratings are important to maintaining public confidence in our Company and in our ability to market our products. A downgrade in our financial strength ratings could, among other things, negatively affect our ability to sell certain insurance products, our relationships with agents and our ability to compete.

Although other rating agencies cover the property and casualty industry, we believe our ability to write business is most influenced by our rating from A.M. Best. According to A.M. Best, its ratings are designed to assess an insurer’s financial strength and ability to meet ongoing obligations to policyholders. The State Auto Group’s current financial strength rating from A.M. Best is A- (Excellent) with a stable outlook.

Generally, credit ratings affect the cost, type and availability of debt financing. Higher rated securities receive more favorable pricing and terms relative to lower rated securities at the time of issue. The State Auto Group's current credit rating from A.M. Best is bbb- with a stable outlook.

Depending on future results and developments, we may not be able to maintain our current ratings.

DIVIDENDS

There can be no assurance that we will continue to pay cash dividends consistent with current or past levels.

We have a history of consistently paying cash dividends to our shareholders; however, the future payment of cash dividends will depend upon a variety of factors, such as our results of operations, financial condition and cash requirements, as well as the ability of our insurance subsidiaries to make distributions to STFC. State insurance laws restrict the payment of dividends by insurance companies to their shareholders. In addition, competitive pressures generally require insurance companies to maintain insurance financial strength ratings. Such restrictions and other requirements and factors may affect the ability of our insurance subsidiaries to make dividend payments to STFC. Limits on the ability of our insurance subsidiaries to pay dividends could adversely affect STFC's liquidity, including STFC's ability to pay cash dividends to shareholders.

TECHNOLOGY AND TELECOMMUNICATION SYSTEMS

Our business success and profitability depend, in part, on effective information technology and telecommunication systems. If we are unable to keep pace with the rapidly developing technological advancements in the insurance industry, our ability to compete effectively could be impaired.

We depend in large part on our technology and telecommunication systems for conducting business and processing claims. Our business success is dependent on maintaining the effectiveness of existing technology and telecommunication systems and on their continued development and enhancement to support our business processes and strategic initiatives in a cost effective manner.

If we are unable to effectively execute our top initiatives and projects, we may not meet organizational objectives due to cost overruns, missed project milestones, defects and/or failing to deliver the desired business value.

An ongoing challenge during system development and enhancement is the effective and efficient utilization of our current technology in view of a constantly changing technological landscape. There can be no assurance that the development of current technology for future use will not result in our being competitively disadvantaged, especially with those carriers that have greater resources. If we are unable to keep pace with the advancements being made in technology, our ability to compete with other insurance companies who have advanced technological capabilities will be negatively affected. Further, if we are unable to effectively execute and update or replace our key legacy technology and telecommunication systems as they become obsolete or as emerging technology renders them competitively inefficient, our competitive position and/or cost structure could be adversely affected.

System implementations are complex processes requiring extensive planning and coordination among multiple stakeholder groups. During 2018, we continued the rollout of our "State Auto Connect" digital quote and issue platform, having launched 27 of 28 states in which we write private passenger auto and homeowners business by the end of 2018. We launched this platform in the remaining personal lines state in January 2019. During 2018, we launched new business owners' policies, commercial auto, and small commercial umbrella products in all but two states. We plan to complete the rollout of these lines of business in the two remaining states in 2019. Farm and ranch, farm auto and farm umbrella products have been added to the State Auto Connect platform and will be rolled out to agents in 2019. We intend to launch State Auto Connect for middle market commercial in late 2019 or early 2020, and workers' compensation in 2020. These new technology platforms are intended to provide us with quicker speed to market, improve ease of doing business for our policyholders and agents, lower our costs for maintenance and product introductions, and provide greater operational efficiency. However, even with our best planning and efforts and the involvement of third party expertise, there can be no assurance that the expected benefits will be realized upon implementation or that the transition will be completed within the planned time frame or budget. Such risks are also present in other key initiatives and projects planned for 2019 and beyond.

If we experience difficulties with outsourcing, or other third party relationships, our ability to conduct business might be negatively impacted.

From time to time we may outsource certain other business, information technology or administrative functions, or otherwise rely on certain third parties for the performance of such functions, for efficiency and cost saving purposes. If we fail to develop and implement our sourcing strategies or our third party providers fail to perform as expected, we may experience operational difficulties, increased costs, and a loss of business that may have a material adverse effect on our results of operations or financial condition.

VENDOR MANAGEMENT

Loss of key vendor relationships or failure of a vendor to perform as anticipated or to protect personal information of our customers, claimants or employees could negatively affect our operations.

We rely on services and products provided by various vendors. In the event that one or more of our vendors becomes unable to continue to provide products or services as anticipated, we may suffer operational impairment and financial loss. If one or more of our vendors fail to protect personal information of our customers, claimants or employees, we may incur operational impairments, or could be exposed to litigation, compliance costs or reputation damage.

CYBERSECURITY THREATS

Our highly automated and networked organization is subject to cyberterrorism and a variety of other cybersecurity threats. These threats come in a variety of forms, such as viruses and malicious software. Such threats can be difficult to prevent or detect, and if experienced, could interrupt or damage our operations, harm our reputation or have a material adverse effect on our operations.

Our technology and telecommunications systems are highly integrated and connected with other networks. Cyber-attacks involving these systems could be carried out remotely from multiple sources and could interrupt, damage or otherwise adversely affect the operation of these critical systems. Threats to data security have risen in recent years due to new technologies, the use of the internet and telecommunications to conduct financial transactions and the increased sophistication and resources of hackers, activists and other external parties.

In addition, to access our online services, our customers may use devices or software that are beyond our control environment and which may provide additional avenues for attackers to gain access to confidential information. Although we have information security procedures and controls in place, our technologies, systems, networks, and customers' devices and software may become the target of cyber-attacks or information security breaches that could result in the unauthorized release, gathering, monitoring, misuse, loss, change, or destruction of our or our customers' confidential, proprietary and other information (including personal identifying information of individuals), or otherwise disrupt our or our customers' or other third parties' business operations.

We and others in our industry are regularly the subject of attempts by attackers to gain unauthorized access to our networks, systems, and data, or to obtain, change, or destroy confidential data (including personal identifying information of individuals) through a variety of means, including computer viruses, malware, and phishing. In the future, these attacks may result in unauthorized individuals obtaining access to our confidential information or that of our customers, or otherwise accessing, damaging, or disrupting our systems or infrastructure.

We are continuously developing and enhancing our controls, processes, and practices designed to protect our systems, computers, software, data, and networks from attack, damage, or unauthorized access. This continued development and enhancement will require us to expend additional resources, including the investigation and remediation of any information security vulnerabilities that may be detected. Despite our ongoing investments in security resources, talent, and business practices, we are unable to assure that these security measures will be effective. Additionally, as part of our technology strategy, we utilize U.S., off-shore and cloud vendors. Controls employed by these vendors may prove inadequate.

The risk committee of the Board of Directors oversees the Company’s cybersecurity risk mitigation strategy. On a quarterly basis, a written report is prepared and presented to the risk committee which provides an overview of the Company’s cybersecurity program, including management’s assessment of the program’s maturity utilizing a standardized framework and investments we have made in the program and how we expect them to enhance the maturity of the program. The presentation also includes a discussion of major cybersecurity events in the news.

If our systems and infrastructure were to be breached, damaged, or disrupted, or if we were to experience a loss of our confidential information or that of our customers, we could be subject to serious negative consequences, including disruption of our operations, damage to our reputation, a loss of trust in us on the part of our customers, vendors or other counterparties, client attrition, reimbursement or other costs, increased compliance costs, litigation exposure and legal liability and regulatory fines or penalties. Any of these could materially and adversely affect our results of operations, our financial condition, and/or our share price. We maintain cyber liability insurance coverage to offset certain potential losses, subject to policy limits, such as liability to others, costs of related crisis management, data extortion, applicable forensics and certain regulatory defense costs, fines and penalties.

BUSINESS CONTINUITY

Our business depends on the uninterrupted operation of our facilities, systems and business functions, including our information technology, telecommunications and other business systems. Our business continuity and disaster recovery plans may not sufficiently address all contingencies.

Our business is highly dependent upon our ability to execute, in an efficient and uninterrupted fashion, necessary business functions, such as Internet support and 24-hour claims contact centers, processing new and renewal business, receiving and processing payment receipts and processing and paying claims. A shut-down of or inability to access one or more of our facilities, power outages, a major failure of the Internet, a pandemic, or a failure of one or more of our information technology, telecommunications or other systems could significantly impair our ability to perform such functions on a timely basis. In addition, because our information technology and telecommunications systems interface with and depend on third party systems, we could experience service denials if demand for such service exceeds capacity, or if our system or a third party system fails or experiences an interruption. If sustained or repeated, such a business interruption, systems failure or service denial could result in a deterioration of our ability to write and process new and renewal business, provide customer service, receive premium payments, pay claims in a timely manner or perform other necessary corporate functions. This could result in a materially adverse effect on our business results and liquidity and may cause reputational damage.

We have established a business continuity plan that is designed to continue our core business operations in the event that normal business operations cannot be performed due to a catastrophic event. While we continue to test and assess our business continuity plan to meet the needs of our core business operations and address multiple business interruption events, there is no assurance that we will be able to perform our core business operations upon the occurrence of such an event, which may result in a material adverse effect on our reputation, financial position and results of operations.

REINSURANCE

Reinsurance may not be available, collectible or adequate to protect us against losses, or may cause us to constrain the amount of business we underwrite in certain lines of business and locations.

We use reinsurance to help manage our exposure to insurance risks and to manage our capital. There can be no assurance that our use of reinsurance effectively meets our strategic business objectives. Reinsurance may not be adequate to protect us against losses and may not be available to us in the future at commercially reasonable rates. The availability, policy conditions and cost of reinsurance are subject to prevailing market conditions and loss experience, which can affect our business volume and profitability. Although the reinsurer is liable to us to the extent of the ceded reinsurance, we remain liable as the direct insurer on all risks reinsured. Ceded reinsurance arrangements do not eliminate our obligation to pay claims. As a result, we are subject to counterparty risk with respect to our ability to recover amounts due from reinsurers. In addition, the magnitude of losses in the reinsurance industry resulting from catastrophes may adversely affect the financial strength of certain reinsurers, which may result in our inability to collect or recover reinsurance. Reinsurers also may reserve their right to dispute coverage with respect to specific claims.

CYCLICAL NATURE OF THE INDUSTRY

The property and casualty insurance industry is cyclical, which may cause fluctuations in our operating results.

The property and casualty insurance industry has been historically characterized by periods of intense price competition due to excess underwriting capacity, as well as periods of shortages of underwriting capacity that result in higher prices and more restrictive contract and/or coverage terms. The periods of intense price competition may adversely affect our operating results, and the cyclical nature of the industry may cause fluctuations in our operating results. While we may adjust prices during periods of intense competition, it remains our strategy to allow for acceptable profit levels and to decline coverage in situations where pricing or risk would not result in acceptable expected returns. Accordingly, our commercial lines of business tend to contract during periods of severe competition and price declines and expand when market pricing allows an acceptable return. This can cause volatility in our premium revenues. Policyholder reaction to price competition may result in the movement of business and volatility of premium revenues.

The personal lines products are influenced by a collection of loss cost trends. Driving patterns including behavioral changes like distracted driving, along with inflation in the cost of auto repairs and medical care and increasing litigation of liability claims are some of the more important factors that affect loss cost trends. Inflation in the cost of building materials and labor costs and demand caused by weather-related catastrophic events affect personal lines homeowners loss cost trends. We may be unable to increase premiums at the same pace as coverage costs increase. Accordingly, profit margins initially decline in periods of increasing loss costs.

ECONOMIC CONDITIONS

Economic conditions may adversely affect our business.

A challenging national and global economy may adversely impact our business and results of operations. While the volatility of the economic climate makes it difficult for us to predict the overall impact of economic conditions on our business and results of operations, our business may be impacted in a variety of ways.

Economic conditions affect consumer behavior. For example, a decrease in gas prices may result in consumers driving more miles, leading to a possible increase in auto claim frequency. Negative economic conditions may cause consumers and businesses to decrease their spending, which may impact the demand for insurance products. For example, declining automotive sales and weaknesses in the housing market generally impact the purchase of our personal auto and homeowners insurance products by consumers and business insurance products by businesses involved in these industries. High levels of unemployment have a tendency to cause the number of workers' compensation claims to increase, as laid-off and unemployed workers may seek workers' compensation benefits to replace their lost healthcare benefits. Similarly, uninsured and underinsured motorist claims may rise. Vacated homes and business properties pose increased insurance industry risk.

Volatility and weakness in the financial and capital markets may negatively impact the value of our investment portfolio. Economic strains on states and municipalities could result in downgrades or defaults of certain municipal obligations.

We may be adversely affected by business difficulties, bankruptcies and impairments of other parties with whom we do business, such as independent agents, key vendors and suppliers, reinsurers or banks, which increases our credit risk and other counterparty risks. Bankruptcies among our current business insurance customers can negatively affect our retention. Reductions in new business start-ups may negatively affect the number of future potential business insurance customers.

In response to economic conditions, the United States federal government and other governmental and regulatory bodies have taken action and may take additional actions to address such conditions. There can be no assurance as to what impact such actions or future actions will have on the financial markets, economic conditions or our Company.

In addition, government spending and monetary policies or other factors may cause the rate of inflation to increase in the future. Inflation can have a significant negative impact on property and casualty insurers because premium rates are established before the amount of losses and loss expenses are known. When establishing rates, we attempt to anticipate increases from inflation subject to the limitations of modeling economic variables. Premium rates may prove to be inadequate due to low trend assumptions arising from the use of historical data. Even when general inflation is relatively modest, price inflation on the goods and services purchased by insurance companies in settling claims can steadily increase. Reserves may develop adversely and become inadequate. Retentions and deductibles may be exhausted more quickly. Interest rate increases in an inflationary environment could cause the values of our fixed income investments to decline.

Adverse capital and credit market conditions may negatively affect our ability to meet unexpected liquidity needs or to obtain credit on acceptable terms.

In the event that we need access to additional capital to pay our operating expenses, make payments on our indebtedness, pay for capital expenditures or fund acquisitions, our ability to obtain such capital may be constrained and the cost of any such capital may be significant. Our ability to obtain additional financing will depend on numerous factors, such as market conditions, the general availability of credit, the overall availability of credit to our industry, our credit ratings and credit capacity, as well as lenders' perception of our long- or short-term financial prospects. Our access to funds may also be constrained if regulatory authorities or rating agencies take negative actions. If certain factors were to occur, our internal sources of liquidity may prove to be insufficient and we may not be able to successfully obtain additional financing on satisfactory terms.

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DISTRIBUTION SYSTEM

Our retail agents, who are part of the independent agency distribution channel, are our sole distribution method for our personal and commercial insurance products. Our exclusive use of such distribution may constrain our ability to grow at a comparable pace to our competitors that utilize multiple distribution channels. In addition, consumers may prefer to purchase insurance products through other means, such as the internet, rather than through agents.

We market our insurance products exclusively through independent, non-exclusive insurance agents, whereas some of our competitors sell their insurance products through direct marketing techniques, the internet or "captive" insurance agents who sell products exclusively for one insurance company. Throughout its history, the State Auto Group has supported the independent agency system as our distribution channel. However, we recognize that although the number of distribution locations has expanded and the size of many agencies has grown, the number of individual independent agencies in the industry has dramatically shrunk over the past decade due to agency purchases, consolidations, bankruptcies and agent retirements. We also recognize that it may become more difficult to expand the number of independent agencies representing us. If we are unsuccessful in maintaining and increasing our agency representation, our sales and results of operations could be adversely affected.

The retail agents that market and sell our products also sell products of our competitors. These agents may recommend our competitors' products over our products or may stop selling our products altogether. When price competition is intense, our premium production may be negatively impacted by the fact our independent agent distribution force has products to sell from other carriers that may be more willing to lower prices to grow top line sales. Consequently, we must remain focused on attracting and partnering with agents to market and sell our products. We have expanded our retail agents to include network agents, which are traditional retail agents that have affiliated with a group, and corporate-owned agents, which are geographically diverse retail locations with common ownership. We compete for productive agents primarily on the basis of our financial position, support services, ease of doing business, compensation and product features. Although we make efforts to ensure we have strong relationships with our retail agents, we may not be successful and our sales and results of operations could be adversely affected.

In addition, consumers are increasingly using the internet and other alternative channels to purchase insurance products. While our website provides a significant amount of information about our insurance products, consumers cannot purchase insurance through our website. Instead, consumers must contact one of our independent agents to purchase our insurance products or make changes to their policies. We have expanded our distribution channel to include platform agents. These agents are accessed by clients via the Internet and do not have retail locations. Nevertheless, our distribution system may place us at a disadvantage with consumers who prefer to purchase insurance products only online.

Additionally, in any given period we may drive a significant portion of our business from a limited number of agents and the loss of any of these relationships could have a significant impact on our ability to market our products and services. Likewise, in certain jurisdictions, when the insured remits payments to the agent in full, our premiums are considered to have been paid in full, notwithstanding that we may or may not have actually received the premiums from the agent. Consequently, we assume a degree of risk associated with certain agents with whom we transact business.

REGULATION

Our business is heavily regulated, and changes in regulation may reduce our profitability and limit our growth.

We are subject to extensive regulation in the states in which we conduct business. This regulation is generally designed to protect the interests of policyholders, as opposed to shareholders and other investors, and relates to authorization for lines of business, capital and surplus requirements, investment limitations, underwriting limitations, transactions with affiliates, dividend limitations (see "Regulation-Dividends" in Item 1), changes in control, premium rates and a variety of other financial and non-financial components of an insurance company's business. The NAIC and state insurance regulators are constantly examining laws and regulations, generally focusing on modifications to holding company regulations, interpreting existing laws and developing new laws.

From time to time, some states in which we conduct business have considered or enacted laws that may alter or increase state authority to regulate insurance companies and insurance holding companies. In other situations, states in which we conduct business have considered or enacted laws that impact the competitive environment and marketplace for property and casualty insurance.

Nearly all states require licensed insurers to participate in guaranty funds through assessments covering a portion of insurance claims against impaired or insolvent insurers. An increase in the magnitude of impaired companies could result in an increase in our share of such assessments. Residual market or pooling arrangements exist in many states to provide certain types of insurance coverage to those that are otherwise unable to find private insurers willing to insure them. Licensed insurers voluntarily writing such coverage are required to participate in these residual markets or pooling mechanisms. Such participation exposes us to possible assessments, some of which could be material to our results of operations. The potential availability of recoupments or premium rate increases, if applicable, may not offset such assessments in the financial statements nor do so in the same fiscal periods.

From time to time, some of the states in which we operate consider legislation restricting or banning the use of credit scoring in rating and/or risk selection in personal lines of business. Similarly, several states have considered restricting insurers' rights to use loss history information maintained in various databases by insurance support organizations. These tools help us price our products more fairly and enhance our ability to compete for business that we believe will be profitable. Such regulations would limit our ability, as well as the ability of all other insurance carriers operating in any affected jurisdiction, to take advantage of these tools.

Currently the federal government does not directly regulate the insurance business. However, in recent years the state insurance regulatory framework has come under increased federal scrutiny. Congress and some federal agencies from time to time investigate the current condition of insurance regulation in the United States to determine whether to impose federal regulation or to allow an optional federal charter, similar to banks. In addition, changes in federal legislation and administrative policies in several areas, including changes in the Gramm-Leach-Bliley Act, financial services regulation and federal taxation, or repeal of McCarran-Ferguson Act (which largely exempts the insurance industry from the federal antitrust laws), could significantly impact the insurance industry and us.

The Federal Insurance Office was established in 2010 by the enactment of the Dodd-Frank Act. The Federal Insurance Office is a separate office within the United States Department of Treasury. The primary objective of the Federal Insurance Office is to monitor all aspects of the insurance industry. The Federal Insurance Office also coordinates and develops federal policy on international insurance matters, including representing the United States in the International Association of Insurance Supervisors, assists in negotiating certain international agreements, monitors access to affordable insurance by traditionally underserved communities and consumers, minorities, and low- and moderate-income persons, and assists in the administration of the terrorism risk insurance program. However, the Federal Insurance Office lacks regulatory authority, and it is not clear how this federal office will coordinate and interact with the NAIC or state insurance regulators.

Although we do not write health insurance, rules affecting health care services can affect insurance we write, including workers' compensation, commercial and personal automobile and liability insurance. The enactment of the Patient Protection and Affordable Care Act of 2010 and additional health care reform legislation may have an impact on various aspects of our business. In addition, we may be impacted as a business enterprise by potential tax issues and changes in employee benefits. We will continue to monitor and assess the impact of health care legislation or regulations, or changing interpretations, at the federal or state levels.

We cannot predict with certainty the effect any enacted, proposed or future state or federal regulation or NAIC initiatives may have on the conduct of our business. Furthermore, there can be no assurance that the regulatory requirements applicable to our business will not become more stringent in the future or result in materially higher costs than current requirements. For example, concerns over climate change may prompt federal, state or local laws intended to protect the environment. Changes in the regulation of our business may reduce our profitability, limit our growth or otherwise adversely affect our operations.

We could be adversely affected if our controls designed to assure compliance with guidelines, policies, and legal and regulatory standards, including financial and regulatory reporting, are ineffective. Our business is dependent on our ability to regularly engage in a large number of insurance underwriting, claim processing, personnel and human resources, and investment activities, many of which are complex. These activities often are subject to internal guidelines and policies, as well as legal and regulatory requirements. No matter how well designed and executed, control systems provide only reasonable assurance that the system objectives will be met. If our controls are not effective, it could lead to financial loss, unexpected risk exposures or damage to our reputation.

Tax legislation initiatives or challenges to our tax positions could adversely affect our results of operations and financial condition.

We are subject to the tax laws and regulations of the United States federal, state and local governments. Tax legislative initiatives by these governmental bodies, including actions by departments of insurance, taxing authorities and other state and local agencies, to change the current tax structure or to increase taxes, assessments and other revenue-generating fees may increase the cost of doing business in those jurisdictions.

From time to time, various legislative initiatives are enacted or proposed that could materially impact our financial statements or tax positions. The Tax Cuts and Jobs Act of 2017 (the “TCJA”), a comprehensive federal tax reform initiative, was enacted into law in December 2017. Among other things, the TCJA reduced the corporate tax rate to 21 percent effective January 1, 2018. As a result of the TCJA, we revalued our deferred tax assets and liabilities for the year ended 2017. This revaluation resulted in the recognition of $43.5 million of provisional deferred tax expense. During 2018 additional guidance was received from the Internal Revenue Service, which guidance did not result in a material change in our original assessment of the impact to TCJA to our financial statements.

There can be no assurance that our effective tax rate or tax positions will not be adversely affected by the TCJA or other enacted or proposed tax initiatives. In addition, United States federal, state and local tax laws and regulations are extremely complex and subject to varying interpretations. There can be no assurance that our tax positions will not be challenged by relevant tax authorities or that we would be successful in any such challenge.

CLAIM AND COVERAGE DEVELOPMENTS

Developing claim and coverage issues in our industry are uncertain and may adversely affect our insurance operations.

As industry practices and legislative, judicial and regulatory conditions change, unexpected and unintended issues related to claims and coverage may develop. These issues could have an adverse effect on our business by either extending coverage beyond our underwriting intent or by increasing the frequency or severity of claims. The premiums we charge for our insurance products are based upon certain risk expectations. When legislative, judicial or regulatory authorities expand the burden of risk beyond our expectations, the premiums we previously charged or collected may no longer be sufficient to cover the risk, and we do not have the ability to retroactively modify premium amounts. Furthermore, our reserve estimates do not take into consideration a major retroactive expansion of coverage through legislative or regulatory actions or judicial interpretations.

An emerging risk faced by the property and casualty industry is commonly referred to as the opioid crisis. Numerous lawsuits have been filed on behalf of states, counties and municipalities alleging a variety of claims and generally seek compensatory damages caused by the opioid crisis. In general, defendants named in these lawsuits have been major pharmaceutical companies, wholesale distributors, retail pharmacies and doctors. Since these lawsuits are at early stages, we are unable to predict the outcome of these lawsuits or their impact to our financial results.

Court decisions have had, and are expected to continue to have, significant impact on the property and casualty insurance industry. These decisions may increase the level of risk which insurers are expected to assume in a number of ways, such as by eliminating exclusions, increasing limits of coverage, creating rights in claimants not intended by the insurer and interpreting applicable statutes expansively to create obligations on insurers not originally considered when the statute was passed. In some cases, court decisions have been applied retroactively. Court decisions have also negated legal reforms passed by state legislatures.

We have seen instances of political pressure exerted to force or persuade insurers to provide extra-contractual coverage, such as foregoing the use of deductibles.

There is also a growing trend of plaintiffs targeting property and casualty insurers, including us, in putative class action litigation relating to claim-handling and other practices, particularly with respect to the handling of personal lines auto and homeowners claims.

There are concerns that the focus on climate change and global warming could affect court decisions or result in litigation, including potential matters arising from federal, state or local laws intended to protect the environment. Other environmental concerns could also create or affect potential liability exposures.

Many of these issues are beyond our control. The effects of these and other unforeseen claims and coverage issues are extremely hard to predict and could materially harm our business and results of operations.

LITIGATION

We may suffer losses from litigation, which could materially and adversely affect our operating results or cash flows and financial condition.

As is typical in our industry, we face risks associated with litigation of various types, including disputes relating to insurance claims under our policies, as well as other general commercial and corporate litigation. Litigation is subject to inherent uncertainties and in the event of an unfavorable outcome in one or more litigation matters, the ultimate liability may be in excess of amounts currently reserved and may be material to our operating results or cash flows for a particular quarter or annual period and to our financial condition.

TERRORISM

Terrorist attacks, and the threat of terrorist attacks, and ensuing events could have an adverse effect on us.

Terrorism, both within the United States and abroad, and military and other actions and heightened security measures in response to these types of threats, may cause loss of life, property damage, reduced economic activity, and additional disruptions to commerce. Terrorist attacks could cause losses from insurance claims related to the property and casualty insurance operations of the State Auto Group, as well as a decrease in our stockholders' equity, net income and/or revenue.

The Terrorism Acts require the federal government and the insurance industry to share the risk of insured losses on future acts of terrorism that are certified by the U.S. Secretary of the Treasury. We are required to participate in the Terrorism Acts as a result of our commercial insurance business. In addition, under the Terrorism Acts, terrorism coverage is mandatory for all primary workers' compensation policies. Insureds with non-workers' compensation commercial policies, however, have the option to accept or decline our terrorism coverage. In 2018, over 90% of our commercial lines non-workers' compensation policyholders purchased terrorism coverage. Although the Terrorism Acts mitigate our exposure to a large-scale terrorist attack, our deductible is substantial and losses could have a material adverse effect on our results of operations, financial condition and liquidity.

In addition, some of the assets in our investment portfolio may be adversely affected by declines in the equity markets and economic activity caused by the continued threat of terrorism, ongoing military and other actions and heightened security measures. We cannot predict at this time the extent to which industry sectors in which we maintain investments may suffer losses as a result of potentially decreased commercial and economic activity, or how any such decrease might impact the ability of companies within the affected industry sectors to pay interest or principal on their securities, or how the value of any underlying collateral might be affected.

Furthermore, our reinsurers could experience significant losses as a result of terrorist attacks, potentially jeopardizing their ability to pay losses ceded to them and reducing the availability of reinsurance. Our current commercial property reinsurance excludes certified acts of foreign terrorism and loss due to nuclear, biological or chemical agents.

INVESTMENTS

The performance of our investment portfolios is subject to various investment risks, such as market, credit, concentration, liquidity, and interest rate risks. Such risks could result in material adverse effects to our results of operations, cash flows and financial position.

Like other property and casualty insurance companies, we depend on income from our investment portfolio for a portion of our revenues and earnings and are therefore subject to market risk, credit risk, concentration risk, liquidity risk and the risk that we will incur losses due to adverse changes in equity, interest, commodity or foreign currency exchange rates and prices. Our primary market risk exposures are to changes in interest rates and equity prices. Low interest rate environments put downward pressure on investment income. Increases in interest rates could cause the values of our fixed income portfolios to decline, with the magnitude of the decline depending on the duration of our portfolio. Individual securities in our fixed income portfolio are subject to credit risk and default. Downgrades in the credit ratings of fixed maturities can have a significant negative effect on the market valuation of such securities. For example, budget strains on certain states and local governments could negatively affect the credit quality and ratings of their issued securities.

Our fixed income portfolio includes certain securities with call features permitting them to be redeemed by the issuers prior to stated maturity. Reinvestment risk exists with such securities as it may not be possible to reinvest the proceeds from the called securities at equivalent yields.

If the fixed income or equity portfolios, or both, were to be impaired by market, sector or issuer-specific conditions to a substantial degree, our liquidity, financial position and financial results could be materially adversely affected. Under these circumstances, our income from these investments could be materially reduced, and declines in the value of certain securities could further reduce our reported earnings and capital levels. A decrease in value of our investment portfolio could also put our insurance subsidiaries at risk of failing to satisfy regulatory minimum capital requirements. If we were not at that time able to supplement our subsidiaries' capital from STFC or by issuing debt or equity securities on acceptable terms, our business could be materially adversely affected. Also, a decline in market rates of fixed income securities or a decline in the fair value of equity securities could cause the investments in our pension plans to decrease, resulting in additional expense and increasing required contributions to the pension plan.

In addition, our investments are subject to risks inherent in the nation's and world's capital markets. The functioning of those markets, the values of the investments held by us and our ability to liquidate investments on favorable terms or short notice may be adversely affected if those markets are disrupted or otherwise affected by local, national or international events, such as power outages, system failures, wars or terrorist attacks or by recessions or depressions, a significant change in inflation expectations, a significant devaluation of governmental or private sector credit, currencies or financial markets and other factors or events.

Changes in tax laws impacting marginal tax rates and/or the preferred tax treatment of municipal obligations under current law, could adversely affect the market value of municipal obligations. Since a portion of our investment portfolio is invested in tax-exempt municipal obligations, any such changes in tax law could adversely affect the value of the investment portfolio.

EMPLOYEES

Our ability to attract, develop and retain talented employees, managers and executives, and to maintain appropriate staffing levels, is critical to our success, as is our ability to effectively plan for the succession and transition of key executives and subject matter experts.

Our success depends on our ability to attract, train, develop and retain talented, ethical, diverse employees, including executives and other key managers in a specialized industry. The loss of certain key officers and employees or the failure to attract and develop talented new executives and managers could have a materially adverse effect on our business. Effective succession planning is important to assure the timely, competent replacement of retiring or transitioning senior executives and other departing management talent and subject matter experts.

Our success also depends on our ability to maintain and improve the effectiveness of our staff. Our ability to do so may be impaired as a result of a variety of internal and external factors which affect employees and the employment marketplace, as well as our ability to recognize and respond to changing trends and other circumstances that affect our employees. In addition, we must forecast the changing business environments (for multiple business units and in many geographic markets) with reasonable accuracy and adjust hiring programs and/or employment levels accordingly. Our failure to recognize the need for such adjustments, or the failure or inability to react appropriately on a timely basis, could lead either to over-staffing (which would adversely affect our cost structure) or under-staffing (impairing our ability to execute and effectively service our business) in one or more business units or locations. In either event, our financial results could be materially adversely affected.

CONTROL BY OUR PARENT COMPANY

State Auto Mutual owns a significant interest in us and may exercise its control in a manner detrimental to the interests of other STFC shareholders.

As of December 31, 2018, State Auto Mutual owned approximately 59.9% of the voting power of our Company. Therefore, State Auto Mutual has the power to direct our affairs and is able to determine the outcome of substantially all matters required to be submitted to shareholders for approval, including the election of all our directors. State Auto Mutual could exercise its control over us in a manner detrimental to the interests of other STFC shareholders.

COMPETITION

Our industry is highly competitive, which could adversely affect our sales and profitability.

The property and casualty insurance business is highly competitive, and we compete with a large number of other insurers. Some of our competitors have well-established national reputations and brands supported by extensive media advertising. Some of our competitors have substantially greater financial, technical and operating resources and market share than us. We may not be able to effectively compete, which could adversely affect our sales and profitability. We believe that competition in our lines of business is based primarily on price, service, commission structure, product features, technology, use of telematics, financial strength ratings, producer relationships, reputation and name or brand recognition. Market developments such as usage-based auto insurance or new entrants into the insurance marketplace could potentially result in reduced market share or adverse selection. Several automobile manufacturers have announced plans to begin marketing autonomous vehicles in the coming years. Some manufacturers have indicated that liability coverage may be included as part of the purchase price of the vehicle. Over time, as the sale of autonomous vehicles becomes more common, sales of our commercial and private passenger auto liability products may be impacted. The growth in mobile communications and the prominence of social media as a source of information for consumers are recent examples of significant developments in the marketplace which may adversely affect our competitive position. Social media, for example, could be potentially utilized in a manner which negatively affects our reputation with current or prospective policyholders and agents.

Our competitors sell through various distribution channels, including independent agents, captive agents and directly to the consumer. We compete not only for personal and business insurance customers, but also for independent agents to market and sell our products. Some of our competitors offer a broader array of products, have more competitive pricing or have higher claims paying ability ratings. In addition, other financial institutions are now able to offer services similar to our own as a result of the Gramm-Leach-Bliley Act.

The increased transparency that arises from information available from the use of tools, such as comparative rater software, could work to our disadvantage. The competitive environment for certain lines of business, such as personal auto insurance, puts pressure on achieving sustainable profit margins. We may have difficulty differentiating our products or becoming among the lowest cost providers. Expense efficiencies are important to maintaining and increasing our growth and profitability. If we are unable to efficiently execute and realize future expense efficiencies, it could affect our ability to establish competitive pricing and could have a negative effect on new business growth and retention of existing policyholders.

CHANGES IN ACCOUNTING STANDARDS

Changes in accounting standards issued by the FASB or other standard-setting bodies may adversely affect our results of operations and financial condition.

Our financial statements are prepared in accordance with GAAP, FASB, AICPA and other accounting standard-setting bodies may periodically issue changes to, interpretations of or guidance with respect to GAAP. The adoption of such guidance may have an adverse effect on our results of operations and financial position. See Note 1 to our consolidated financial statements included in Item 8 of this Form 10-K regarding adoption of recent accounting pronouncements.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

We share our operating facilities with State Auto Mutual pursuant to the terms of the 2005 Management Agreement. Our corporate headquarters are located in Columbus, Ohio, in buildings owned by State Auto Mutual that contain approximately 280,000 square feet of office space. State Auto Mutual also owns and leases other office facilities in numerous locations throughout the State Auto Group’s geographical areas of operation.

Item 3. Legal Proceedings

We are involved in lawsuits in the ordinary course of our business arising out of or otherwise related to our insurance policies. Additionally, from time to time we may be involved in lawsuits, including class actions, in the ordinary course of business but not arising out of or otherwise related to our insurance policies. These lawsuits are in various stages of development. We generally will contest these matters vigorously but may pursue settlement if appropriate. Based on currently available information, we do not believe it is reasonably possible that any such lawsuit or related lawsuits will be material to our results of operations or have a material adverse effect on our consolidated financial position or cash flows.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for the Registrant's Common Equity, Related Shareholder Matters, and Issuer Purchases of Equity Securities

Market Information; Holders of Record

Our common shares are traded on the NASDAQ Global Select Market under the symbol STFC. As of March 8, 2019, there were 1,046 shareholders of record of our common shares.

Market Price Ranges and Dividends Declared on Common Shares

Initial Public Offering—June 28, 1991 – $2.25[1] The following table sets forth information with respect to the high and low sale prices of our common shares for each quarterly period for the past two years as reported by NASDAQ, along with the amount of cash dividends declared by us with respect to our common shares for each quarterly period for the past two years:

2018	**High**		**Low**		**Dividend**	
First Quarter	**$**	**30.40**	**$**	**25.92**	**$**	**0.10**
Second Quarter	**34.31**		**27.59**		**0.10**	
Third Quarter	**32.96**		**28.57**		**0.10**	
Fourth Quarter	**35.05**		**28.75**		**0.10**	

2017	High		Low		Dividend	
First Quarter	$	27.97	$	23.60	$	0.10
Second Quarter	27.62		23.89		0.10	
Third Quarter	27.00		22.11		0.10	
Fourth Quarter	30.85		24.84		0.10	

(1) Adjusted for stock splits.

See Item 7 of this Form 10-K, "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Considerations," for information regarding regulatory restrictions on the payment of dividends to State Auto Financial by its insurance subsidiaries.

Performance Graph

The line graph below compares the total return on $100.00 invested on December 31, 2013, in STFC's shares, the CRSP Total Return Index for the NASDAQ Stock Market ("NASDAQ Index"), and the CRSP Total Return Index for NASDAQ insurance stocks ("NASDAQ Ins. Index"), with dividends reinvested.

	2013	2014	2015	2016	2017	**2018**
STFC	100.00	104.61	96.94	126.22	137.10	**160.26**
NASDAQ Index	100.00	113.40	119.89	128.89	165.29	**158.87**
NASDAQ Ins. Index	100.00	108.54	115.55	133.62	137.87	**126.14**

Item 6. Selected Consolidated Financial Data

(dollars and shares in millions, except per share data)	Year ended December 31				
	2018	2017	2016	2015	2014
Statement of Income Data — GAAP Basis:					
Earned premiums	**$ 1,238.0**	1,276.1	1,291.1	1,275.9	1,068.7
Net investment income	**$ 84.9**	78.8	74.7	71.7	74.7
Total revenues	**$ 1,275.8**	1,422.3	1,404.6	1,374.0	1,167.3
Net income (loss)	**$ 12.8**	(17.8)	19.2	52.3	102.2
Earned premium (decline) growth	**(3.0)%**	(1.2)%	1.2%	19.4%	1.3%
Return on average invested assets(1)	**3.2 %**	3.1%	3.1%	3.1%	3.5%
Balance Sheet Data — GAAP Basis:					
Total investments	**$ 2,598.9**	2,689.7	2,612.6	2,471.7	2,357.9
Total assets	**$ 2,895.9**	3,019.1	2,973.4	2,841.1	2,782.9
Total notes payable	**$ 122.0**	122.1	122.1	100.5	100.5
Total stockholders' equity	**$ 818.5**	835.0	850.5	843.2	825.5
Common shares outstanding	**43.3**	42.4	41.8	41.3	40.9
Return on average equity	**1.5 %**	(2.1)%	2.3%	6.3%	12.9%
Debt to capital ratio	**13.0%**	12.8%	12.6%	10.6%	10.9%
Per Common Share Data — GAAP Basis:					
Basic EPS	**$ 0.30**	(0.42)	0.46	1.27	2.50
Diluted EPS	**$ 0.29**	(0.42)	0.46	1.26	2.48
Cash dividends per share	**$ 0.40**	0.40	0.40	0.40	0.40
Book value per share	**$ 18.91**	19.68	20.34	20.40	20.16
Common Share Price:					

High	**$ 35.05**	30.85	27.42	27.37	25.43
Low	**$ 25.92**	22.11	17.84	20.01	18.35
Close at December 31	**$ 34.04**	29.12	26.81	20.59	22.22
Close price to book value per share	**1.80**	1.48	1.32	1.01	1.10
GAAP Ratios:					
Loss and LAE ratio	**64.3%**	72.0	73.0	67.8	72.0
Expense ratio	**36.3%**	35.7	33.3	33.7	34.2
Combined ratio	**100.6%**	107.7	106.3	101.5	106.2
Statutory Ratios:					
Loss and LAE ratio	**64.5%**	72.1	73.1	68.4	71.7
Expense ratio	**36.7%**	35.1	33.5	33.8	34.5
Combined ratio	**101.2%**	107.2	106.6	102.2	106.3
Net premiums written to surplus	**1.4**	1.5	1.5	1.6	1.5

(1) Invested assets include investments and cash equivalents

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Capitalized terms used in this Item 7 and not otherwise defined have the meanings ascribed to such terms under the caption "Important Defined Terms Used in this Form 10-K" which immediately precedes Part I of this Form 10-K. This discussion should be read in conjunction with the consolidated financial statements and notes thereto included in Item 8 of this Form 10-K and the narrative description of our business contained in Item 1 of this Form 10-K.

OVERVIEW

State Auto Financial is a property and casualty insurance holding company. Our insurance subsidiaries are part of the State Auto Group and Pooling Arrangement described below. The State Auto Group markets its insurance products throughout the United States primarily through independent agencies, which include retail agencies and brokers. Our Pooled Companies are rated A- (Excellent) by A.M. Best.

State Auto Financial's principal subsidiaries are State Auto P&C, Milbank and SA Ohio, each of which is a property and casualty insurance company, and Stateco, which provides investment management services to affiliated insurance companies.

Our reportable insurance segments are personal insurance, commercial insurance and specialty insurance. These insurance segments are aligned with the reporting lines to our principal operating decision makers. Investment operations is also a reportable segment. As described in more detail below, we have exited our specialty business, which will result in the elimination of our specialty insurance segment and its related underwriting results from the State Auto Group. See “Personal and Commercial Insurance” and “Specialty Insurance” in Item 1 of this Form 10-K for more information about our insurance segments.
We evaluate the performance of our insurance segments using industry financial measurements determined under SAP and certain measures determined under GAAP. We evaluate our investment operations segment based on investment returns of assets managed. Financial information about our segments for 2018 is set forth in this Item 7 and in Note 17 to our consolidated financial statements included in Item 8 of this Form 10-K.

EXECUTIVE SUMMARY

In 2018 an important milestone in our journey was achieved with our combined personal and commercial insurance segments reporting 12.5% net written premium growth and a SAP combined ratio of 98.6, along with 7.1 points of improvement in our GAAP combined ratio over 2017. These achievements were the result of significant, sustained efforts to return the Company to underwriting profitability. Our results in 2018 were an important step forward and provide us with a positive outlook for 2019.

Insurance Operations

We made significant progress during 2018 in addressing concerns that have impacted our underwriting results since 2012. We are more competitive thanks to our new digital platform and new products, which has allowed us to increase the number and type of distribution partners, including those who specialize in online and digital distribution. These new distribution partners now account for a growing part of our new business and, with our long standing independent agency partners, give us a strong distribution force. As a result, we believe we are now better positioned to consistently deliver an underwriting profit.

While our improved 2018 results were driven primarily by personal lines, our commercial lines grew and made progress towards underwriting profitability. In 2017, we announced our intention to exit all of our specialty business, and by the end of 2018, this work was largely complete. As a result, we are now an organization focused on writing personal auto and homeowners, small and middle market commercial, farm and ranch and workers’ compensation insurance.

Claims

Our Claims and Risk Engineering ("CARE") associates continue to identify and implement improvements to our claim handling capabilities. We are increasingly utilizing technology to streamline and improve the claim process. At the same time, we recognize that personal interactions remain important and are focused on improving all aspects of the claim experience for customers.

Technology

As of January 2019, we completed the rollout of our digital quote and issue platform for personal lines, small commercial and commercial auto. We are now an exclusively digital insurance company for new customers for these products. The new platform, which includes new products and rates, and incorporates advanced data analytics provides us the ability to more efficiently match rate to risk. We intend to introduce farm and ranch insurance on the new technology platform in 2019, followed by middle market commercial and workers’ compensation.

Culture

To succeed, we must have a culture that enables us to move quickly and effectively, with our agents and customers at the forefront. We have worked to build a culture that encourages openness, candor, transparency, creativity and challenge – on a foundation of trust and respect. State Auto associates are encouraged to act like owners by participating, asking questions, challenging assumptions and proposing solutions. Our culture also includes a shared commitment to the communities in which we live and work. Our success will be measured not only in our business performance, but in the difference we are able to make in our communities.

Moving forward
Our focus in 2019 will be on operational excellence which means getting better at everything we do, every day. Technology, data and analytics will empower and drive our success, and will continue to be the areas in which we invest. We will improve our digital technology platform with ongoing updates and enhancements that address issues or market needs. We believe we are very well positioned to take advantage of growing disruption within the P&C market, and deliver sustained, consistent profitable growth.

POOLING ARRANGEMENT
The STFC Pooled Companies and the Mutual Pooled Companies participate in a quota share reinsurance pooling arrangement referred to as the "Pooling Arrangement." Under the Pooling Arrangement, State Auto Mutual assumes premiums, losses and expenses from each of the Pooled Companies and in turn cedes to each of the Pooled Companies a specified portion of premiums, losses and expenses based on each of the Pooled Companies' respective pooling percentages. State Auto Mutual then retains the balance of the pooled business.
The following table sets forth the participants and their participation percentages in the Pooling Arrangement. There were no changes to the participants or to their participation percentages during 2018.

STFC Pooled Companies:	
State Auto P&C	51.0 %
Milbank	14.0
SA Ohio	—
Total STFC Pooled Companies	65.0
State Auto Mutual Pooled Companies:	
State Auto Mutual	34.5
SA Wisconsin	—
Meridian Security	—
Patrons Mutual	0.5
RIC	—
Plaza	—
American Compensation	—
Bloomington Compensation	—
Total State Auto Mutual Pooled Companies	35.0 %

We anticipate that the STFC Pooled Companies will maintain a 65% participation percentage in the Pooling Arrangement for the foreseeable future. However, under applicable governance procedures, if the Pooling Arrangement were to be amended, management would make recommendations to the Independent Committees of the Board of Directors of both State Auto Mutual and STFC. The Independent Committees review and evaluate such factors as they deem relevant and recommend any appropriate pooling change to the Board of Directors of both State Auto Mutual and STFC subject to regulatory approval by each participant's respective domiciliary insurance department. The Pooling Arrangement is terminable by any of our Pooled Companies at any time by any party by giving twelve months' notice to the other parties and their respective domiciliary insurance departments. None of our

Pooled Companies currently intends to terminate the Pooling Arrangement.

Under the terms of the Pooling Arrangement, all subject premiums, incurred losses, loss expenses and other underwriting expenses are prorated among our Pooled Companies on the basis of their participation in the pool. By spreading the underwriting risk, the Pooling Arrangement is designed to produce more uniform and stable underwriting results for each of our Pooled Companies than any one company would experience individually. This has the effect of providing each of our Pooled Companies with a similar mix of pooled property and casualty insurance business on a net basis.

RESULTS OF OPERATIONS

Summary

The following table sets forth certain key performance indicators we use to monitor our operations for the years ended December 31, 2018, 2017 and 2016:

($ millions, except per share data)	**2018**	2017	2016
GAAP Basis:			
Total revenues	**$ 1,275.8**	$ 1,422.3	$ 1,404.6
Income before federal income taxes	**$ 12.9**	$ 35.0	$ 18.8
Net income (loss)	**$ 12.8**	$ (17.8)	$ 19.2
Stockholders' equity	**$ 818.5**	$ 835.0	$ 850.5
Book value per share	**$ 18.91**	$ 19.68	$ 20.34
Return on average equity	**1.5 %**	(2.1)%	2.3 %
Debt to capital ratio	**13.0%**	12.8%	12.6%
Cat loss and ALAE ratio	**5.8 %**	9.7 %	6.3 %
Non-cat loss and LAE ratio	**58.5%**	62.3%	66.7%
Loss and LAE ratio	**64.3%**	72.0%	73.0%
Expense ratio	**36.3%**	35.7%	33.3%
Combined ratio	**100.6%**	107.7%	106.3%
Premiums written growth	**(4.7)%**	(1.7)%	1.6 %
Investment yield	**3.2 %**	3.1 %	3.1 %
SAP Basis:			
Cat loss and ALAE ratio	**5.8 %**	9.7 %	6.3 %
Non-cat loss and ALAE ratio	**52.7%**	56.7%	60.9%
ULAE ratio	**6.0 %**	5.7 %	5.9 %
Loss and LAE ratio	**64.5%**	72.1%	73.1%
Expense ratio	**36.7%**	35.1%	33.5%
Combined ratio	**101.2%**	107.2%	106.6%
	1.4	1.5	1.5

Net premiums
written to
surplus

Our 2018 net income was $12.8 million compared to a net loss of $17.8 million and net income of $19.2 million in 2017 and 2016, respectively. Our 2018 net income reflected improved underwriting results, driven by our personal and commercial segments and our exit of specialty business. Improved underwriting results were offset by a net investment loss of $49.7 million, primarily due to the adoption of ASU 2016-01 effective January 1, 2018 (see further discussion below). Our 2017 results included a provisional net charge of $43.5 million resulting from revaluing our deferred tax assets and liabilities as a result of the enactment of the TCJA.

The following highlights significant factors that impacted 2018 results as compared to 2017 and 2016:

•Earned premiums in 2018 were $1,238.0 million compared to $1,276.1 million and $1,291.1 million in 2017 and 2016, respectively. Earned premiums declined in 2018 compared to 2017 due to our exit of specialty business, partially offset by growth in the personal insurance segment. Earned premiums declined in 2017 compared to 2016 due to (i) underwriting and pricing decisions within the commercial insurance segment to improve overall profitability and (ii) our exit of program business in 2016.

•The SAP cat loss and ALAE ratio for 2018 was 5.8% compared to 9.7% and 6.3% for 2017 and 2016, respectively. The 2018 cat loss ratio improved when compared to the same 2017 and 2016 periods primarily due to less severe weather events in 2018. The 2017 cat loss ratio increased when compared to 2016 primarily driven by (i) Hurricanes Harvey and Irma during the third quarter of 2017 and (ii) widespread storms that impacted the Ohio Valley region, South Carolina, Texas, Mississippi and Georgia during the first quarter of 2017.

•The SAP non-catastrophe loss and ALAE ratio for 2018 was 52.7% compared to 56.7% and 60.9% for 2017 and 2016, respectively. The 2018 loss ratio improvement of 4.0 points compared to 2017 was attributable to 6.2 points, or $76.6 million, of favorable development of prior accident year losses and loss adjustment expenses in 2018 compared to 3.2 points, or $41.4 million, of favorable development in 2017. Favorable development in 2018 included $79.7 million of favorable development in the personal and commercial insurance segments due primarily to lower than anticipated severity emerging from multiple accident years with the majority of favorable development from the 2016 and 2017 accident years. The 2017 favorable development included $44.0 million of favorable development in the commercial insurance segment. All commercial insurance products developed favorably due primarily to lower than anticipated severity emerging from the 2014 to 2017 accident years. In addition, the 2018 non-catastrophe loss and ALAE ratio was impacted by 1.0 point of improvement from the current accident year when compared to 2017. The 2017 loss ratio improved 4.2 points compared to 2016, primarily due to favorable development in 2017 compared to 1.9 points, or $24.7 million, of adverse development in 2016.
•Net investment losses were $49.7 million in 2018 compared to net investment gains of $65.1 million and $36.5 million in 2017 and 2016, respectively. Net investment losses in 2018 were impacted by $57.4 million of unrealized losses from equity securities and other invested assets due to the adoption of ASU 2016-01 on January 1, 2018, which requires changes in fair value for equity securities and other invested assets still held to be reported through net income. Net realized gains for 2018 declined compared to 2017 and 2016 due to (i) fewer sales transactions and (ii) the impact of the adoption of ASU 2016-01. Net realized gains in 2017 were impacted by (i) net realized gains of $18.5 million from the sale of our U.S. small-cap equity portfolio and (ii) sales within our U.S. large-cap equity portfolio. The proceeds from the sale of our U.S. small-cap equity portfolio were reinvested in U.S. small-cap focused mutual and exchange traded funds. Net realized gains in 2016 were impacted by the recognition of a $12.0 million gain from the redemption of a limited partnership investment in international equities.

Correction of Prior Period Misstatement

During the first quarter of 2018, management identified an error in the inputs for its calculations of deferred acquisition costs ("DAC") in prior years, which resulted in an overstatement of our reported DAC asset. Additionally, management revised previously disclosed financial information related to accounting for its pension and postretirement benefits. We had been pooling the net liabilities and the unrecognized actuarial gains and losses along with prior service costs recorded in accumulated other comprehensive income for pension and postretirement benefits to affiliated companies pursuant to a quota share reinsurance agreement or pooling agreement. However, management has determined that such pooling is not appropriate for these items. Amounts recognized as pension expense continue to be appropriately pooled in each period presented. As a result, our balance sheet has been revised to reverse the impact of pooling these items by increasing the reported pension and postretirement benefits liability and reducing reported stockholders' equity by recording additional unrecognized actuarial losses and prior service costs within accumulated other comprehensive income at each reported balance sheet date. For additional information, see Note 2 of our condensed consolidated financial statements included in Item 8 of this Form 10-K.

Insurance Segments

We measure our top-line growth for our insurance segments based on net written premiums, which provide us with an indication of how well we are doing in terms of revenue growth before it is actually earned. Our policies provide a fixed amount of coverage for a stated period of time, often referred to as the “policy term.” As such, our written premiums are recognized as earned ratably over the policy term. The unearned portion of written premiums, called unearned premiums, is reflected on our balance sheet as a liability and represents our obligation to provide coverage for the unexpired term of the policies.

Insurance industry regulators require our insurance subsidiaries to report their financial condition and results of operations using SAP. We use SAP financial results, along with industry standard financial measures determined on a SAP basis and certain measures determined on a GAAP basis, to internally monitor the performance of our insurance segments and reward our employees.

One of the more significant differences between GAAP and SAP is that SAP requires all underwriting expenses to be expensed immediately and not deferred over the same period that the premium is earned. In converting SAP underwriting results to GAAP underwriting results, acquisition costs are deferred and amortized over the periods the related written premiums are earned. For a discussion of deferred acquisition costs, see the “Critical Accounting

Policies—Deferred Acquisition Costs" section included in this Item 7.

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The accounting for pension benefits also contributes to the difference between our GAAP loss and expense ratios and our SAP loss and expense ratios. For a discussion of our pension and postretirement benefit obligations, see the “Critical Accounting Policies – Pension and Postretirement Benefit Obligations” section included in this Item 7.
All references to financial measures or components thereof in this discussion are calculated on a GAAP basis, unless otherwise noted.
Summary of Key Indicators of Insurance Segment Results
The following table sets forth certain key performance indicators for our insurance segments for the years ended December 31, 2018, 2017 and 2016:

($ in millions)

2018	Personal	Commercial	Specialty	Total
Net written premiums	**$ 726.5**	**$ 469.8**	**$ 14.0**	**$ 1,210.3**
Net earned premiums	**673.9**	**464.3**	**99.8**	**1,238.0**
Losses and LAE incurred:				
Cat loss and ALAE	**48.7**	**21.6**	**1.4**	**71.7**
Non-cat loss and ALAE:				
Prior accident years non-cat loss and ALAE	**(32.8)**	**(46.9)**	**3.1**	**(76.6)**
Current accident year non-cat loss and ALAE	**384.6**	**274.4**	**70.6**	**729.6**
Total non-cat loss and ALAE	**351.8**	**227.5**	**73.7**	**653.0**
Total Loss and ALAE	**400.5**	**249.1**	**75.1**	**724.7**
ULAE	**41.8**	**26.1**	**5.5**	**73.4**
Total Loss and LAE	**442.3**	**275.2**	**80.6**	**798.1**
Underwriting expenses	**228.3**	**197.5**	**18.8**	**444.6**
Net underwriting gain (loss)	**$ 3.3**	**$ (8.4)**	**$ 0.4**	**$ (4.7)**
Cat loss and ALAE ratio	**7.2 %**	**4.6 %**	**1.4 %**	**5.8 %**
Non-cat loss and ALAE				

ratio:				
Prior accident years non-cat loss and ALAE ratio	**(4.9)%**	**(10.1)%**	**3.1 %**	**(6.2)%**
Current accident year non-cat loss and ALAE ratio	**57.1%**	**59.1 %**	**70.8 %**	**58.9%**
Total non-cat loss and ALAE ratio	**52.2%**	**49.0 %**	**73.9 %**	**52.7%**
Total Loss and ALAE ratio	**59.4%**	**53.6 %**	**75.3 %**	**58.5%**
ULAE ratio	**6.2 %**	**5.6 %**	**5.5 %**	**6.0 %**
Total Loss and LAE ratio	**65.6%**	**59.2 %**	**80.8 %**	**64.5%**
Expense ratio	**31.4%**	**42.0 %**	**133.7%**	**36.7%**
Combined ratio	**97.0%**	**101.2%**	**214.5%**	**101.2%**

($ in millions)

2017	Personal	Commercial	Specialty	Total
Net written premiums	$ 610.0	$ 453.6	$ 206.7	$ 1,270.3
Net earned premiums	580.6	455.7	239.8	1,276.1
Losses and LAE incurred:				
Cat loss and ALAE	43.4	26.7	53.9	124.0
Non-cat loss and ALAE:				
Prior accident years non-cat loss and ALAE	(1.6)	(44.0)	4.2	(41.4)
Current accident year non-cat loss and ALAE	336.8	276.2	151.7	764.7
Total non-cat loss and ALAE	335.2	232.2	155.9	723.3
Total Loss and ALAE	378.6	258.9	209.8	847.3
ULAE	37.7	25.3	9.5	72.5
Total Loss and LAE	416.3	284.2	219.3	919.8
Underwriting expenses	187.3	182.1	76.5	445.9
Net underwriting loss	$ (23.0)	$ (10.6)	$ (56.0)	$ (89.6)
Cat loss and ALAE ratio	7.5 %	5.9 %	22.5 %	9.7 %
Non-cat loss and ALAE ratio:				
Prior accident years non-cat loss and ALAE ratio	(0.3)%	(9.6) %	1.7 %	(3.2)%
Current accident year non-cat loss	58.0 %	60.5 %	63.5 %	59.9 %

and ALAE ratio				
Total non-cat loss and ALAE ratio	57.7 %	50.9 %	65.2 %	56.7 %
Total Loss and ALAE ratio	65.2 %	56.8 %	87.7 %	66.4 %
ULAE ratio	6.5 %	5.6 %	3.9 %	5.7 %
Total Loss and LAE ratio	71.7 %	62.4 %	91.6 %	72.1 %
Expense ratio	30.7 %	40.2 %	37.0 %	35.1 %
Combined ratio	102.4 %	102.6 %	128.6 %	107.2 %

($ in millions)

2016	Personal	Commercial	Specialty	Total
Net written premiums	$ 576.9	$ 459.4	$ 256.2	$ 1,292.5
Net earned premiums	578.2	472.6	240.3	1,291.1
Losses and LAE incurred:				
Cat loss and ALAE	48.5	25.6	7.5	81.6
Non-cat loss and ALAE:				
Prior accident years non-cat loss and ALAE	9.0	(5.1)	20.8	24.7
Current accident year non-cat loss and ALAE	327.7	281.5	152.9	762.1
Total non-cat loss and ALAE	336.7	276.4	173.7	786.8
Total Loss and ALAE	385.2	302.0	181.2	868.4
ULAE	36.8	29.5	9.4	75.7
Total Loss and LAE	422.0	331.5	190.6	944.1
Underwriting expenses	166.8	172.8	93.0	432.6
Net underwriting loss	$ (10.6)	$ (31.7)	$ (43.3)	$ (85.6)
Cat loss and ALAE ratio	8.4 %	5.4 %	3.1 %	6.3 %
Non-cat loss and ALAE ratio:				
Prior accident years non-cat loss and ALAE ratio	1.5 %	(1.1) %	8.7 %	1.9 %
Current accident year non-cat loss	56.7 %	59.6 %	63.6 %	59.0 %

and ALAE ratio				
Total non-cat loss and ALAE ratio	58.2 %	58.5 %	72.3 %	60.9 %
Total Loss and ALAE ratio	66.6 %	63.9 %	75.4 %	67.2 %
ULAE ratio	6.3 %	6.2 %	3.9 %	5.9 %
Total Loss and LAE ratio	72.9 %	70.1 %	79.3 %	73.1 %
Expense ratio	28.9 %	37.6 %	36.3 %	33.5 %
Combined ratio	101.8 %	107.7 %	115.6 %	106.6 %

Personal Insurance Segment
The following table sets forth certain key performance indicators by major product line of business for our personal insurance segment for the years ended December 31, 2018, 2017 and 2016:
Table 1
($ in millions)

2018	Personal Auto	Homeowners	Other Personal	Total
Net written premiums	**$ 424.8**	**$ 273.1**	**$ 28.6**	**$ 726.5**
Net earned premiums	**402.0**	**248.8**	**23.1**	**673.9**
Losses and LAE incurred:				
Cat loss and ALAE	**4.9**	**41.3**	**2.5**	**48.7**
Non-cat loss and ALAE:				
Prior accident years non-cat loss and ALAE	**(24.4)**	**(7.3)**	**(1.1)**	**(32.8)**
Current accident year non-cat loss and ALAE	**265.8**	**106.6**	**12.2**	**384.6**
Total non-cat loss and ALAE	**241.4**	**99.3**	**11.1**	**351.8**
Total Loss and ALAE	**246.3**	**140.6**	**13.6**	**400.5**
ULAE	**24.9**	**16.1**	**0.8**	**41.8**
Total Loss and LAE	**271.2**	**156.7**	**14.4**	**442.3**
Underwriting expenses	**126.1**	**91.6**	**10.6**	**228.3**
Net underwriting gain (loss)	**$ 4.7**	**$ 0.5**	**$ (1.9)**	**$ 3.3**
Cat loss and ALAE ratio	**1.2 %**	**16.6 %**	**11.0 %**	**7.2 %**
Non-cat loss and ALAE ratio:				
Prior accident years non-cat	**(6.1)%**	**(2.9) %**	**(4.9)%**	**(4.9)%**

loss and ALAE ratio				
Current accident year non-cat loss and ALAE ratio	**66.1%**	**42.9 %**	**52.8 %**	**57.1%**
Total non-cat loss and ALAE ratio	**60.0%**	**40.0 %**	**47.9 %**	**52.2%**
Total Loss and ALAE ratio	**61.2%**	**56.6 %**	**58.9 %**	**59.4%**
ULAE ratio	**6.2 %**	**6.4 %**	**3.3 %**	**6.2 %**
Total Loss and LAE ratio	**67.4%**	**63.0 %**	**62.2 %**	**65.6%**
Expense ratio	**29.7%**	**33.6 %**	**36.9 %**	**31.4%**
Combined ratio	**97.1%**	**96.6 %**	**99.1 %**	**97.0%**

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Table 2

($ in millions)

2017	Personal Auto	Homeowners	Other Personal	Total
Net written premiums	$ 363.2	$ 227.9	$ 18.9	$ 610.0
Net earned premiums	341.0	220.7	18.9	580.6
Losses and LAE incurred:				
Cat loss and ALAE	7.9	34.4	1.1	43.4
Non-cat loss and ALAE:				
Prior accident years non-cat loss and ALAE	(4.4)	1.5	1.3	(1.6)
Current accident year non-cat loss and ALAE	241.6	87.7	7.5	336.8
Total non-cat loss and ALAE	237.2	89.2	8.8	335.2
Total Loss and ALAE	245.1	123.6	9.9	378.6
ULAE	21.7	14.8	1.2	37.7
Total Loss and LAE	266.8	138.4	11.1	416.3
Underwriting expenses	104.2	76.0	7.1	187.3
Net underwriting (loss) gain	$ (30.0)	$ 6.3	$ 0.7	$ (23.0)
Cat loss and ALAE ratio	2.3 %	15.6 %	5.7 %	7.5 %
Non-cat loss and ALAE ratio:				
Prior accident years non-cat loss and ALAE ratio	(1.3)%	0.7 %	7.0 %	(0.3)%
	70.8 %	39.7 %	39.5 %	58.0 %

Current accident year non-cat loss and ALAE ratio				
Total non-cat loss and ALAE ratio	69.5 %	40.4 %	46.5 %	57.7 %
Total Loss and ALAE ratio	71.8 %	56.0 %	52.2 %	65.2 %
ULAE ratio	6.4 %	6.7 %	6.5 %	6.5 %
Total Loss and LAE ratio	78.2 %	62.7 %	58.7 %	71.7 %
Expense ratio	28.7 %	33.4 %	37.4 %	30.7 %
Combined ratio	106.9 %	96.1 %	96.1 %	102.4 %

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Table 3

($ in millions)

2016	Personal Auto	Homeowners	Other Personal	Total
Net written premiums	$ 333.5	$ 223.0	$ 20.4	$ 576.9
Net earned premiums	330.3	226.8	21.1	578.2
Losses and LAE incurred:				
Cat loss and ALAE	7.0	40.4	1.1	48.5
Non-cat loss and ALAE:				
Prior accident years non-cat loss and ALAE	7.9	0.5	0.6	9.0
Current accident year non-cat loss and ALAE	236.0	83.7	8.0	327.7
Total non-cat loss and ALAE	243.9	84.2	8.6	336.7
Total Loss and ALAE	250.9	124.6	9.7	385.2
ULAE	20.4	15.0	1.4	36.8
Total Loss and LAE	271.3	139.6	11.1	422.0
Underwriting expenses	89.7	69.7	7.4	166.8
Net underwriting (loss) gain	$ (30.7)	$ 17.5	$ 2.6	$ (10.6)
Cat loss and ALAE ratio	2.1 %	17.8 %	5.1 %	8.4 %
Non-cat loss and ALAE ratio:				
Prior accident years non-cat loss and ALAE ratio	2.4 %	0.3 %	2.2 %	1.5 %
	71.4 %	36.9 %	38.9 %	56.7 %

Current accident year non-cat loss and ALAE ratio				
Total non-cat loss and ALAE ratio	73.8 %	37.2 %	41.1 %	58.2 %
Total Loss and ALAE ratio	75.9 %	55.0 %	46.2 %	66.6 %
ULAE ratio	6.1 %	6.6 %	6.8 %	6.3 %
Total Loss and LAE ratio	82.0 %	61.6 %	53.0 %	72.9 %
Expense ratio	26.9 %	31.2 %	36.8 %	28.9 %
Combined ratio	108.9 %	92.8 %	89.8 %	101.8 %

In October 2016, we launched State Auto Connect for our personal auto and homeowners products in five states. State Auto Connect is a fully digital quote and issue platform that incorporates advanced data analytics and updated pricing models, enabling us to offer new products and coverages. The platform enables our agents to submit, quote, bind, issue and bill policies through a completely digital and integrated platform. We continued the rollout of State Auto Connect throughout 2017 and 2018. The final state rollout was completed in January 2019.

Net written premiums for the year ended December 31, 2018 increased 19.1% compared to 2017 (Tables 1 - 2). Premium growth was driven by personal auto rate increases as well as new business growth for both personal auto and homeowners resulting in higher levels of policies in force for both personal auto and homeowners for the year ended December 31, 2018 compared to 2017. We did experience a decline in retention, which was impacted by cumulative rate actions taken in personal auto.

Net written premiums for the year ended December 31, 2017 increased 5.7% compared to 2016 (Tables 2 - 3) driven by (i) rate increases for our personal auto product implemented beginning in 2016 and continuing throughout 2017 and (ii) new business growth in personal auto and homeowners. The new business growth experienced during 2017 was due to production generated through State Auto Connect.

The SAP catastrophe loss ratio for the year ended December 31, 2018 was 7.2%, compared to 7.5% in 2017 and 8.4% in 2016 (Tables 1 - 3). During 2018, catastrophe losses were primarily related to wind and hail storms with approximately one-third of the losses in the states of Texas and Colorado. During 2017, we were primarily impacted by (i) Hurricanes Harvey and Irma and (ii) widespread storms that affected the Ohio Valley region, South Carolina, Texas, Mississippi and Georgia. The 2016 results were impacted by (i) storms in Texas, primarily wind and hail, (ii) Hurricane Matthew, and (iii) wildfires in Tennessee.

The SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2018 was 52.2%, compared to 57.7% in 2017 and 58.2% in 2016. (Tables 1 - 3). The SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2018 improved 5.5 points when compared to 2017 (Tables 1 - 2).

The personal auto SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2018 improved 9.5 points when compared to 2017 (Tables 1 - 2). Favorable development of prior accident year losses improved the 2018 loss ratio by 6.1 points compared to 1.3 points in 2017. The 2018 prior accident year favorable development related primarily to the 2016 and 2017 accident years. The 2018 current accident year loss and ALAE ratio improved 4.7 points compared to 2017, primarily due to cumulative rate and underwriting actions, as well as improved claim handling efficiency.

The homeowners SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2018 improved 0.4 points when compared to 2017 (Tables 1 - 2) primarily attributable to favorable development of prior accident year losses of 2.9 points compared to adverse development of 0.7 points 2017. Partially offsetting the 2018 improvement was a 3.2 point increase in the 2018 current accident year ratio when compared to 2017. The 2018 ratio reflects an increase in non-catastrophe weather when compared to 2017.

The SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2017 improved 0.5 points when compared to 2016 (Tables 2 -3).The 2017 results were impacted by favorable development of prior accident year losses of $4.4 million in personal auto compared to adverse development of $7.9 million in 2016. The 2017 favorable development was attributable to lower than expected bodily injury severity, primarily from accident years 2015 and 2016.

Commercial Insurance Segment

The following table sets forth certain key performance indicators by major product line of business for our commercial insurance segment for the years ended December 31, 2018, 2017 and 2016:

Table 4

($ in millions)

2018	Commercial Auto	Small Commercial Package	Middle Market Commercial	Workers' Comp	Farm & Ranch	Other Commercial	Total
Net written premiums	**$ 77.1**	**$ 119.2**	**$ 118.8**	**$ 89.0**	**$ 46.8**	**$ 18.9**	**$ 469.8**
Net earned premiums	**75.1**	**120.9**	**114.4**	**90.7**	**45.0**	**18.2**	**464.3**
Losses and LAE incurred:							
Cat loss and ALAE	**0.2**	**10.7**	**7.2**	**—**	**3.3**	**0.2**	**21.6**
Non-cat loss and ALAE							
Prior accident years non-cat loss and ALAE	**(8.4)**	**(9.6)**	**(12.2)**	**(13.3)**	**(2.7)**	**(0.7)**	**(46.9)**
Current accident year non-cat loss and ALAE	**47.3**	**68.8**	**71.5**	**56.5**	**22.1**	**8.2**	**274.4**
Total non-cat loss and ALAE	**38.9**	**59.2**	**59.3**	**43.2**	**19.4**	**7.5**	**227.5**
Total Loss and ALAE	**39.1**	**69.9**	**66.5**	**43.2**	**22.7**	**7.7**	**249.1**
ULAE	**4.2**	**6.2**	**5.6**	**7.2**	**1.8**	**1.1**	**26.1**
Total Loss and LAE	**43.3**	**76.1**	**72.1**	**50.4**	**24.5**	**8.8**	**275.2**
Underwriting expenses	**35.8**	**53.6**	**49.5**	**29.1**	**21.3**	**8.2**	**197.5**
Net underwriting (loss) gain	**$ (4.0)**	**$ (8.8)**	**$ (7.2)**	**$ 11.2**	**$ (0.8)**	**$ 1.2**	**$ (8.4)**
Cat loss and ALAE ratio	**0.3 %**	**8.8 %**	**6.3 %**	**— %**	**7.3 %**	**1.2 %**	**4.6 %**
Non-cat loss and ALAE ratio							
Prior accident years non-cat loss and ALAE ratio	**(11.2)%**	**(7.9) %**	**(10.6)%**	**(14.7)%**	**(6.0)%**	**(4.1) %**	**(10.1)%**
Current accident year non-cat loss and ALAE ratio	**63.0 %**	**56.9 %**	**62.5 %**	**62.3%**	**49.2%**	**45.3 %**	**59.1%**
Total non-cat loss and ALAE	**51.8 %**	**49.0 %**	**51.9 %**	**47.6%**	**43.2%**	**41.2 %**	**49.0%**

ratio							
Total Loss and ALAE ratio	**52.1 %**	**57.8 %**	**58.2 %**	**47.6%**	**50.5%**	**42.4 %**	**53.6%**
ULAE ratio	**5.6 %**	**5.1 %**	**4.9 %**	**7.9 %**	**3.9 %**	**5.9 %**	**5.6 %**
Total Loss and LAE ratio	**57.7 %**	**62.9 %**	**63.1 %**	**55.5%**	**54.4%**	**48.3 %**	**59.2%**
Expense ratio	**46.5 %**	**44.9 %**	**41.6 %**	**32.7%**	**45.6%**	**43.3 %**	**42.0%**
Combined ratio	**104.2%**	**107.8%**	**104.7%**	**88.2%**	**100.0%**	**91.6 %**	**101.2%**

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Table 5

($ in millions)

2017	Commercial Auto	Small Commercial Package	Middle Market Commercial	Workers' Comp	Farm & Ranch	Other Commercial	Total
Net written premiums	$ 73.5	$ 123.8	$ 111.1	$ 88.4	$ 42.6	$ 14.2	$ 453.6
Net earned premiums	76.2	127.4	109.1	88.8	39.6	14.6	455.7
Losses and LAE incurred:							
Cat loss and ALAE	0.8	12.4	8.4	—	5.1	—	26.7
Non-cat loss and ALAE							
Prior accident years non-cat loss and ALAE	(8.9)	(11.4)	(8.2)	(8.9)	(0.9)	(5.7)	(44.0)
Current accident year non-cat loss and ALAE	53.6	72.5	58.8	59.1	23.9	8.3	276.2
Total non-cat loss and ALAE	44.7	61.1	50.6	50.2	23.0	2.6	232.2
Total Loss and ALAE	45.5	73.5	59.0	50.2	28.1	2.6	258.9
ULAE	4.5	6.1	4.8	6.7	2.1	1.1	25.3
Total Loss and LAE	50.0	79.6	63.8	56.9	30.2	3.7	284.2
Underwriting expenses	31.5	55.7	42.5	28.4	16.3	7.7	182.1
Net underwriting (loss) gain	$ (5.3)	$ (7.9)	$ 2.8	$ 3.5	$ (6.9)	$ 3.2	$ (10.6)
Cat loss and ALAE ratio	1.1 %	9.7 %	7.7 %	— %	13.0 %	0.1 %	5.9 %
Non-cat loss and ALAE ratio							
Prior accident years non-cat loss and ALAE ratio	(11.7)%	(9.0) %	(7.5) %	(10.0)%	(2.2)%	(38.7)%	(9.6)%
Current accident year non-cat loss and ALAE ratio	70.3 %	57.0 %	53.9 %	66.5%	60.1%	57.1 %	60.5%
Total non-cat loss and ALAE ratio	58.6 %	48.0 %	46.4 %	56.5%	57.9%	18.4 %	50.9%
Total Loss and ALAE ratio	59.7 %	57.7 %	54.1 %	56.5%	70.9%	18.5 %	56.8%

ULAE ratio	5.9 %	4.8 %	4.4 %	7.6 %	5.5 %	7.0 %	5.6 %
Total Loss and LAE ratio	65.6 %	62.5 %	58.5 %	64.1%	76.4%	25.5 %	62.4%
Expense ratio	43.0 %	45.0 %	38.3 %	32.1%	38.2%	54.4 %	40.2%
Combined ratio	108.6%	107.5%	96.8 %	96.2%	114.6%	79.9 %	102.6%

Table 6

($ in millions)

2016	Commercial Auto	Small Commercial Package	Middle Market Commercial	Workers' Comp	Farm & Ranch	Other Commercial	Total
Net written premiums	$ 79.0	$ 125.6	$ 108.8	$ 92.0	$ 37.0	$ 17.0	$ 459.4
Net earned premiums	88.3	127.5	110.5	93.8	35.5	17.0	472.6
Losses and LAE incurred:							
Cat loss and ALAE	0.8	12.9	8.4	—	3.5	—	25.6
Non-cat loss and ALAE							
Prior accident years non-cat loss and ALAE	3.6	(0.6)	(0.4)	(4.2)	(1.7)	(1.8)	(5.1)
Current accident year non-cat loss and ALAE	66.5	65.9	62.2	62.7	16.1	8.1	281.5
Total non-cat loss and ALAE	70.1	65.3	61.8	58.5	14.4	6.3	276.4
Total Loss and ALAE	70.9	78.2	70.2	58.5	17.9	6.3	302.0
ULAE	4.8	6.9	6.0	8.4	2.2	1.2	29.5
Total Loss and LAE	75.7	85.1	76.2	66.9	20.1	7.5	331.5
Underwriting expenses	30.5	51.3	43.0	26.7	14.1	7.2	172.8
Net underwriting (loss) gain	$ (17.9)	$ (8.9)	$ (8.7)	$ 0.2	$ 1.3	$ 2.3	$ (31.7)
Cat loss and ALAE ratio	1.0 %	10.1 %	7.6 %	— %	9.9 %	— %	5.4 %
Non-cat loss and ALAE ratio							
Prior accident years non-cat loss and ALAE ratio	4.1 %	(0.4) %	(0.3) %	(4.5)%	(5.1)%	(9.9) %	(1.1)%
Current accident year non-cat loss and ALAE ratio	75.3 %	51.6 %	56.2 %	66.8%	45.9%	47.1 %	59.6%
Total non-cat loss and ALAE ratio	79.4 %	51.2 %	55.9 %	62.3%	40.8%	37.2 %	58.5%
Total Loss and ALAE ratio	80.4 %	61.3 %	63.5 %	62.3%	50.7%	37.2 %	63.9%

ULAE ratio	5.5 %	5.3 %	5.3 %	9.0 %	6.0 %	7.6 %	6.2 %
Total Loss and LAE ratio	85.9 %	66.6 %	68.8 %	71.3%	56.7%	44.8 %	70.1%
Expense ratio	38.5 %	40.8 %	39.5 %	29.1%	38.1%	42.4 %	37.6%
Combined ratio	124.4%	107.4%	108.3%	100.4%	94.8%	87.2 %	107.7%

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In October 2017, we launched State Auto Connect for new business in one state for our commercial auto and small commercial package products. Similar to the State Auto Connect platform for our personal insurance products, the State Auto Connect commercial lines platform is completely digital and incorporates data analytics and more sophisticated pricing models compared to our legacy underwriting systems. The platform enables our agents to submit, quote, bind, issue and bill policies through a completely digital and integrated platform. During 2018, we completed the rollout of State Auto Connect for commercial auto, and in January 2019 we finished the rollout of State Auto Connect in our remaining state for small commercial package. We anticipate launching our farm and ranch product in State Auto Connect during the first half of 2019 and plan to expand the product offering to include middle market commercial and workers' compensation.

Net written premiums for the year ended December 31, 2018 increased 3.6% compared to 2017 (Tables 4 - 5), due to rate increases and new business growth in commercial auto and middle market commercial, and rate increases in farm & ranch. Partially offsetting the increase in net written premiums was a decline in new business for small commercial package.

Net written premiums for the year ended December 31, 2017 decreased 1.3% compared to 2016 (Tables 5 - 6), as new business premium growth was offset by a decline in renewal premiums. While overall new business premium for commercial insurance products increased 6.6% compared to 2017, new business policy counts declined 8.3%. The new business premium growth reflects the impact of rate and other actions taken beginning in 2016 and continuing into 2017. With the exception of workers' compensation, new business premiums for each of the remaining commercial insurance products increased in 2017 compared to 2016. Renewal premiums and policy counts both declined in 2017 compared to 2016 due to (i) rate actions to improve profitability in commercial auto, (ii) more competitive market conditions in workers' compensation, and (iii) our continued focus on underwriting discipline across our commercial insurance products.

The SAP catastrophe loss and ALAE ratio for the year ended December 31, 2018 was 4.6% compared to 5.9% and 5.4% in 2017 and 2016, respectively (Tables 4 - 6). Weather-related catastrophe events for the year ended December 31, 2018 were less severe than catastrophe events impacting our 2017 and 2016 results. The 2017 commercial insurance segment's cat loss and ALAE ratios were impacted by the same events described in the preceding personal insurance segment discussion.

The commercial insurance segment SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2018 was 49.0% compared to 50.9% and 58.5% in 2017 and 2016, respectively (Tables 4 - 6). The 1.9 point improvement in the 2018 ratio compared to 2017 (Tables 4 - 5) was due to (i) a 1.4 point improvement in the current accident year ratio when compared to 2017 and (ii) greater favorable development of 10.1 points in 2018 compared to 9.6 points in 2017. The 7.6 point improvement in the 2017 ratio compared to 2016 (Tables 5 - 6) was primarily driven by (i) greater favorable development of prior accident year losses compared to the same 2016 period, and (ii) pricing, underwriting and claims improvements implemented throughout the last three years, including improved risk classification, rate increases and reductions in claims leakage.

The commercial auto SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2018 improved 6.8 points when compared to 2017 (Tables 4 - 5) primarily due to 7.3 points of improvement in the current accident year ratio attributable to fewer large losses compared to 2017. The non-catastrophe loss and ALAE ratio for 2018 was impacted by less favorable development of prior accident year losses of 11.2 points compared to favorable development of 11.7 points in 2017. The 2017 commercial auto ratio improved 20.8 points compared to 2016 (Tables 5 - 6) primarily due to favorable development of prior accident year losses of $8.9 million compared to adverse development of $3.6 million in 2016. The majority of the 2017 favorable development was driven by lower than anticipated bodily injury severity from accident years 2014 and 2015.

The small commercial package SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2018 increased 1.0 points compared to 2017 (Tables 4 -5) driven by less favorable development of prior accident year losses of 7.9 points compared to 9.0 points in 2017. The 2017 small commercial package ratio improved 3.2 points when compared to the same 2016 period primarily driven by greater favorable development of prior accident year losses compared to 2016.

The middle market commercial SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2018 increased 5.5 points compared to 2017 (Tables 4 - 5). The increase in the non-catastrophe loss and ALAE ratio was driven by an increase in current accident year losses of 8.6 points, partially offset by greater favorable development of prior accident year losses of 10.6 points compared to 7.5 points in 2017. The 2018 ratio was impacted by (i) elevated claim frequency, (ii) an increase in weather-related claims, and (iii) large fire losses when compared to 2017. The 2017 middle market commercial ratio improved 9.5 points compared to 2016 (Tables 5 - 6) primarily driven by greater favorable development of prior accident year losses compared to 2016. The 2017 favorable development was attributable to lower than anticipated liability severity from accident years 2014 and 2015.

The workers' compensation SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2018 improved 8.9 points compared to 2017 (Tables 4 - 5) primarily driven by greater favorable development of prior accident year losses of 14.7 points compared to 10.0 points in 2017. The 2018 favorable development of prior accident year losses occurred primarily within accident years 2015, 2016, and 2017. Additionally, the 2018 current accident year ratio improved 4.2 points when compared to 2017 reflecting better experience. The 2017 workers' compensation ratio improved 5.8 points compared to 2016 (Tables 5 - 6) primarily driven by greater favorable development of prior accident year losses compared to 2016. The 2017 favorable development occurred primarily within accident years 2015 and 2016. While lower than anticipated severity accounted for the majority of the development, lower than expected frequency contributed as well.

The farm and ranch SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2018 improved 14.7 points compared to 2017 (Tables 4 - 5) driven by improvement in the current accident year ratio of 10.9 points compared to 2017. The 2018 current accident year loss ratio reflects lower severity compared to 2017 which was impacted by an elevated level of large fire losses. The 2018 ratio improvement was also impacted by greater favorable development of prior accident year losses of 6.0 points compared to 2.2 points in 2017. The 2017 farm and ranch ratio increased 17.1 points compared to 2016 (Tables 5 - 6) primarily driven by large fire losses.

Specialty Insurance Segment

The following table sets forth certain key performance indicators for our specialty insurance segment for the years ended December 31, 2018, 2017 and 2016:

Table 7

($ in millions)

2018	E&S Property	E&S Casualty	Programs	Total
Net written premiums	**$ (5.6)**	**$ 20.5**	**$ (0.9)**	**$ 14.0**
Net earned premiums	**10.2**	**69.8**	**19.8**	**99.8**
Losses and LAE incurred:				
Cat loss and ALAE	**1.7**	**—**	**(0.3)**	**1.4**
Non-cat loss and ALAE				
Prior accident years non-cat loss and ALAE	**(0.8)**	**2.7**	**1.2**	**3.1**
Current accident year non-cat loss and ALAE	**3.6**	**53.0**	**14.0**	**70.6**
Total non-cat loss and ALAE	**2.8**	**55.7**	**15.2**	**73.7**
Total Loss and ALAE	**4.5**	**55.7**	**14.9**	**75.1**
ULAE	**0.3**	**3.4**	**1.8**	**5.5**

Total Loss and LAE	**4.8**	**59.1**	**16.7**	**80.6**
Underwriting expenses	**4.0**	**12.9**	**1.9**	**18.8**
Net underwriting gain (loss)	**$ 1.4**	**$ (2.2)**	**$ 1.2**	**$ 0.4**
Cat loss and ALAE ratio	**17.0 %**	**— %**	**(1.7)%**	**1.4 %**
Non-cat loss and ALAE ratio				
Prior accident years non-cat loss and ALAE ratio	**(8.0)%**	**3.9 %**	**6.0 %**	**3.1 %**
Current accident year non-cat loss and ALAE ratio	**35.6 %**	**76.0 %**	**70.6 %**	**70.8%**
Total non-cat loss and ALAE ratio	**27.6 %**	**79.9 %**	**76.6 %**	**73.9%**
Total Loss and ALAE ratio	**44.6 %**	**79.9 %**	**74.9 %**	**75.3%**
ULAE ratio	**2.9 %**	**4.9 %**	**9.2 %**	**5.5 %**
Total Loss and LAE ratio	**47.5 %**	**84.8 %**	**84.1 %**	**80.8%**
Expense ratio	**(71.5)%**	**63.1 %**	**(213.7)%**	**133.7%**
Combined ratio	**(24.0)%**	**147.9%**	**(129.6)%**	**214.5%**

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Table 8

($ in millions)

2017	E&S Property	E&S Casualty	Programs	Total
Net written premiums	$ 30.1	$ 110.3	$ 66.3	$ 206.7
Net earned premiums	40.5	103.1	96.2	239.8
Losses and LAE incurred:				
Cat loss and ALAE	52.6	0.1	1.2	$ 53.9
Non-cat loss and ALAE				
Prior accident years non-cat loss and ALAE	3.0	0.5	0.7	$ 4.2
Current accident year non-cat loss and ALAE	9.6	71.5	70.6	$ 151.7
Total non-cat loss and ALAE	12.6	72.0	71.3	155.9
Total Loss and ALAE	65.2	72.1	72.5	209.8
ULAE	0.1	3.7	5.7	9.5
Total Loss and LAE	65.3	75.8	78.2	219.3
Underwriting expenses	17.1	39.2	20.2	76.5
Net underwriting loss	$ (41.9)	$ (11.9)	$ (2.2)	$ (56.0)
Cat loss and ALAE ratio	130.1%	0.1 %	1.2 %	22.5%
Non-cat loss and ALAE ratio				
Prior accident years non-cat loss and ALAE ratio	7.5 %	0.4 %	0.7 %	1.7 %
	23.7 %	69.4 %	73.7 %	63.5%

Current accident year non-cat loss and ALAE ratio				
Total non-cat loss and ALAE ratio	31.2 %	69.8 %	74.4 %	65.2 %
Total Loss and ALAE ratio	161.3 %	69.9 %	75.6 %	87.7 %
ULAE ratio	— %	3.6 %	5.9 %	3.9 %
Total Loss and LAE ratio	161.3 %	73.5 %	81.5 %	91.6 %
Expense ratio	57.0 %	35.5 %	30.4 %	37.0 %
Combined ratio	218.3 %	109.0 %	111.9 %	128.6 %
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Table 9

($ in millions)

2016	E&S Property	E&S Casualty	Programs	Total
Net written premiums	$ 44.4	$ 99.6	$ 112.2	$ 256.2
Net earned premiums	40.4	91.0	108.9	240.3
Losses and LAE incurred:				
Cat loss and ALAE	6.9	0.1	0.5	7.5
Non-cat loss and ALAE				
Prior accident years non-cat loss and ALAE	1.9	4.6	14.3	20.8
Current accident year non-cat loss and ALAE	11.6	60.7	80.6	152.9
Total non-cat loss and ALAE	13.5	65.3	94.9	173.7
Total Loss and ALAE	20.4	65.4	95.4	181.2
ULAE	(0.4)	4.3	5.5	9.4
Total Loss and LAE	20.0	69.7	100.9	190.6
Underwriting expenses	20.4	35.5	37.1	93.0
Net underwriting loss	$ —	$ (14.2)	$ (29.1)	$ (43.3)
Cat loss and ALAE ratio	17.0 %	0.1 %	0.5 %	3.1 %
Non-cat loss and ALAE ratio				
Prior accident years non-cat loss and ALAE ratio	4.7 %	5.1 %	13.1 %	8.7 %
	28.8 %	66.7 %	74.0 %	63.6%

Current accident year non-cat loss and ALAE ratio				
Total non-cat loss and ALAE ratio	33.5 %	71.8 %	87.1 %	72.3 %
Total Loss and ALAE ratio	50.5 %	71.9 %	87.6 %	75.4 %
ULAE ratio	(0.9) %	4.7 %	5.1 %	3.9 %
Total Loss and LAE ratio	49.6 %	76.6 %	92.7 %	79.3 %
Expense ratio	45.6 %	35.6 %	33.1 %	36.3 %
Combined ratio	95.2 %	112.2 %	125.8 %	115.6 %

We have exited the specialty of business, either through a series of renewal rights transactions or by placing lines of business into run-off, which will result in the elimination of the specialty insurance segment and its related underwriting results from the State Auto Group. We stopped writing specialty business on a net basis in 2018, and as a result, in 2019, the specialty insurance segment will no longer be a reportable segment. However, exposure to the risks underlying this business will continue as the premiums are earned through mid-2019.

As a result of our decision to exit specialty business, the specialty insurance segment's net written premiums for the year ended December 31, 2018 decreased compared to the same 2017 and 2016 periods (Tables 7 - 9).

Net written premiums for the year ended December 31, 2017 decreased 19.3% compared to 2016 (Tables 8 - 9). The change was primarily driven by (i) our third quarter 2016 decision to exit program business and (ii) a decline in E&S property net written premiums due to our 2017 decision to exit E&S property business and continued competitiveness within the catastrophe-exposed property market. These decreases were partially offset by new business growth in E&S casualty, primarily driven by increased production from our umbrella and gas & propane distribution underwriting teams.

As earned premiums for the specialty insurance segment continues to run-off, the related loss and LAE ratios will reflect increasing volatility. The SAP catastrophe loss and ALAE ratio for 2018 was 1.4% compared to 22.5% and 3.1% in 2017 and 2016, respectively (Tables 7 - 9). The 2017 SAP cat loss and ALAE ratio reflects the impact of Hurricane’s Harvey and Irma, which added 21.2 points, or $50.6 million, to the cat loss ratio. The 2016 SAP cat loss ratio reflects the impact of Hurricane Matthew which added 2.4 points, or $5.9 million, to the cat loss ratio.

The specialty insurance segment SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2018 was 73.9% compared to 65.2% and 72.3% in 2017 and 2016, respectively (Tables 7 - 9). The 2018 non-cat loss and ALAE ratio was impacted by 3.1 points of adverse development from prior accident years compared to 1.7 points and 8.7 points in 2017 and 2016, respectively. The 2018 adverse development was due to (i) adverse development in E&S casualty within our healthcare and umbrella books of business and (ii) adverse development in programs driven by increased ultimate loss estimates for commercial auto liability and contractors liability coverages. The 2017 adverse development was due to higher than anticipated severity for liability coverages on Florida package business in run-off in E&S property and was related primarily to accident years 2013 - 2016. The 2016 development was primarily driven by (i) elevated severity trends within programs with commercial auto exposures and (ii) increases to prior accident year ultimate loss and ALAE estimates for the run-off healthcare line of business within E&S casualty.

Loss and LAE Development

Losses and loss expenses for a calendar year represent the combined estimated ultimate liability for claims occurring in the current calendar year along with any change in the estimated ultimate liability for claims occurring in prior years. The following table sets forth the provision for losses and loss expenses for those claims occurring in the current and prior years, along with the GAAP loss and LAE ratio for the years ended December 31, 2018, 2017 and 2016:

($ millions)	**2018**		**% GAAP Loss and LAE Ratio**	2017		% GAAP Loss and LAE Ratio	2016		% GAAP Loss and LAE Ratio
Provision for losses and loss expenses occurring:									
Current year	**$**	**876.6**	**70.8%**	$	964.9	75.7%	$	915.3	70.9%
Prior years	**(80.2)**		**(6.5)%**	(46.6)		(3.7)%	27.0		2.1%
Total losses and loss expenses	**$**	**796.4**	**64.3%**	$	918.3	72.0%	$	942.3	73.0%

As shown above, the impact on 2018 loss and loss expenses attributable to prior years was $80.2 million, or favorable development in the estimated ultimate liability for prior years' claims.

The following table sets forth a tabular presentation of the development of the ultimate liability of prior accident years by line of business for the years ended December 31, 2018, 2017 and 2016:

($ millions)	**2018**	2017	2016
	(Redundancy)/Deficiency		
Non-cat loss and ALAE:			
Personal Insurance Segment:			
Personal Auto	**$ (24.4)**	$ (4.4)	$ 7.9
Homeowners	**(7.3)**	1.5	0.5
Other Personal	**(1.1)**	1.3	0.6
Personal Insurance Segment	**(32.8)**	(1.6)	9.0
Commercial Insurance Segment:			
Commercial Auto	**(8.4)**	(8.9)	3.6
Small Commercial Package	**(9.6)**	(11.4)	(0.6)
Middle Market Commercial	**(12.2)**	(8.2)	(0.4)
Workers' Compensation	**(13.3)**	(8.9)	(4.2)
Farm & Ranch	**(2.7)**	(0.9)	(1.7)
Other Commercial	**(0.7)**	(5.7)	(1.8)
Commercial Insurance Segment	**(46.9)**	(44.0)	(5.1)
Specialty Insurance Segment:			
E&S Property	**(0.8)**	3.0	1.9
E&S Casualty	**2.7**	0.5	4.6
Programs	**1.2**	0.7	14.3
Specialty Insurance Segment	**3.1**	4.2	20.8
Cat Loss and ALAE	**3.5**	(2.0)	(1.4)

ULAE	**(7.1)**		(3.2)		3.7	
Total	**$**	**(80.2)**	$	(46.6)	$	27.0

For further information, see the discussion below and the "Personal Insurance Segment", "Commercial Insurance Segment" and "Specialty Insurance Segment" sections of "Results of Operations – Insurance Segments" included in this Item 7

The following table sets forth a tabular presentation of the development of the ultimate liability by accident year for the year ended December 31, 2018:

($ millions)

Accident Year	**2018**	
	(Redundancy)/Deficiency	
2008 and prior	**$**	**2.9**
2009	**(1.7)**	
2010	**(0.7)**	
2011	**(2.0)**	
2012	**(3.4)**	
2013	**(10.8)**	
2014	**(7.1)**	
2015	**(8.1)**	
2016	**(12.8)**	
2017	**(36.5)**	
Total	**$**	**(80.2)**

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While emergence by accident year includes normal fluctuations due to the uncertainty associated with loss reserve development and claim settlement, the more notable items contributing to 2018 development were as follows:
•The commercial insurance segment non-catastrophe loss and ALAE reserves contributed $46.9 million of favorable development, driven by workers' compensation, middle market commercial, small commercial package, and commercial auto, which contributed $13.3 million, $12.2 million, $9.6 million and $8.4 million, respectively. Favorable development in these lines was driven by lower than anticipated severity emerging from multiple accident years.
•The personal insurance segment non-catastrophe loss and ALAE reserves contributed $32.8 million of the favorable development, driven by personal auto and homeowners which contributed $24.4 million and $7.3 million, respectively, of favorable development, primarily due to lower than anticipated bodily injury severity from the prior two accident years.
•ULAE was $7.1 million lower than anticipated in the reserves at December 31, 2017.
•The specialty insurance segment non-catastrophe loss and ALAE reserves accounted for $3.1 million of adverse development, which was driven by E&S casualty and programs with adverse development of $2.7 million and $1.2 million, respectively. E&S casualty adverse development was primarily due to higher ultimate loss estimates for healthcare and umbrella product lines, with the development being spread across accident years 2014 through 2017. For programs, adverse development was due primarily to higher ultimate loss estimates for certain programs with auto liability and contractors liability exposure. Slightly offsetting the adverse development was $0.8 million of favorable development in E&S property.
•Catastrophe reserves contributed $3.5 million of adverse development.
The following table sets forth a tabular presentation of the development of the ultimate liability by accident year for the year ended December 31, 2017:

($ millions)

Accident Year	2017 (Redundancy)/Deficiency	
2007 and prior	$	1.5
2008	(0.7)	
2009	(0.4)	
2010	(1.9)	
2011	(3.5)	
2012	(7.7)	
2013	(2.5)	
2014	(7.9)	
2015	(13.8)	
2016	(9.7)	
Total	$	(46.6)

While emergence by accident year includes normal fluctuations due to the uncertainty associated with loss reserve development and claim settlement, the more notable items contributing to 2017 development were as follows:
•The commercial insurance segment non-catastrophe loss and ALAE reserves contributed $44.0 million of favorable development, driven by small commercial package, workers' compensation, commercial auto and middle market commercial, which contributed $11.4 million, $8.9 million, $8.9 million and $8.2 million, respectively. Favorable development in these lines was driven by lower than anticipated severity emerging from multiple accident years.
•ULAE was $3.2 million lower than anticipated in the reserves at December 31, 2016.

•Catastrophe reserves contributed $2.0 million of favorable development.

•The personal insurance segment non-catastrophe loss and ALAE reserves contributed $1.6 million of the favorable development, driven by personal auto which contributed $4.4 million of favorable development, primarily due to lower than anticipated bodily injury severity from the prior two accident years. This was partially offset by homeowners and other personal, which contributed $1.5 million and $1.3 million of adverse development, respectively.
•The specialty insurance segment non-catastrophe loss and ALAE reserves accounted for $4.2 million of adverse development, which was driven by E&S property with adverse development of $3.0 million. E&S property adverse development was driven by higher than anticipated severity for liability coverages on the run-off Florida package business. For programs, adverse development was $0.7 million, with adverse development of $5.7 million attributable to accident years 2013-2015 mostly offset by favorable development of $5.0 million, primarily from accident years 2012 and 2011.
The following table sets forth a tabular presentation of the favorable development by accident year for the year ended December 31, 2016:

($ millions)

Accident Year	2016 *(Redundancy)/Deficiency*	
2006 and prior	$	3.4
2007	(3.3)	
2008	(1.7)	
2009	1.6	
2010	(0.5)	
2011	(1.7)	
2012	(1.9)	
2013	2.1	
2014	6.4	
2015	22.6	
Total	$	27.0

While emergence by accident year includes normal fluctuations due to the uncertainty associated with loss reserve development and claim settlement, the adverse development in 2016 resulted primarily from accident years 2015 and 2014. The more notable items contributing to 2016 development were as follows:
•The specialty insurance segment non-catastrophe loss and ALAE reserves accounted for $20.8 million of adverse development, which was driven by programs and E&S casualty with adverse development of $14.3 million and $4.6 million, respectively. Programs adverse development was driven by higher than expected severity in programs with commercial auto exposures. E&S casualty adverse development was driven by increased severity from the healthcare line, which was placed in run-off in the first quarter of 2016.
•The personal insurance segment non-catastrophe loss and ALAE reserves contributed $9.0 million of the adverse development, driven by personal auto which contributed $7.9 million of adverse development, primarily due to higher than anticipated bodily injury severity from the prior two accident years.
•ULAE was $3.7 million higher than anticipated in the reserves at December 31, 2015.
•The commercial insurance segment non-catastrophe loss and ALAE reserves contributed $5.1 million of favorable development, primarily driven by workers' compensation, other commercial, and farm & ranch, which contributed $4.2 million, $1.8 million, and $1.7 million respectively. Favorable development in these lines was driven by lower than anticipated severity emerging from multiple accident years. The favorable development was partially

offset by adverse development in commercial auto of $3.6 million, which was driven by higher than anticipated bodily injury severity from the prior two accident years.

- Catastrophe reserves contributed $1.4 million of favorable development.

The following table sets forth loss and loss expenses payable by major line of business at 2018 and 2017:

($ millions)	**2018**		2017		$ Change	
Personal Insurance Segment:						
Personal auto	**$**	**173.2**	$	191.8	$	(18.6)
Homeowners	**53.2**		50.5		2.7	
Other Personal	**14.1**		13.8		0.3	
Total Personal Insurance Segment	**240.5**		256.1		(15.6)	
Commercial Insurance Segment:						
Commercial Auto	**78.9**		92.1		(13.2)	
Small Commercial Package	**120.0**		124.5		(4.5)	
Middle Market Commercial	**147.2**		151.4		(4.2)	
Workers' Compensation	**195.4**		193.4		2.0	
Farm & Ranch	**12.9**		16.4		(3.5)	
Other Commercial	**27.5**		26.5		1.0	
Total Commercial Insurance Segment	**581.9**		604.3		(22.4)	
Specialty Insurance Segment:						
E&S Property	**33.1**		64.8		(31.7)	
E&S Casualty	**186.8**		176.8		10.0	
Programs	**99.0**		150.5		(51.5)	
Total Specialty Insurance Segment	**318.9**		392.1		(73.2)	
Total losses and loss expenses payable net of reinsurance recoverable on	**$**	**1,141.3**	$	1,252.5	$	(111.2)

losses and loss expenses payable

The loss and loss expenses payable at December 31, 2018 decreased $111.2 million from the loss and loss expenses payable at December 31, 2017, primarily due to the settlement of claims from Hurricanes Harvey and Irma in E&S property and the run-off of programs business.
We conduct quarterly reviews of loss development reports and make judgments in determining the reserves for ultimate losses and loss expenses payable. Several factors are considered by us when estimating ultimate liabilities, including consistency in relative case reserve adequacy, consistency in claims settlement practices, recent legal developments, historical data, actuarial projections, exposure changes, anticipated inflation, current business conditions, catastrophe developments, late reported claims and other reasonableness tests.
The risks and uncertainties inherent in our estimates include, but are not limited to, actual settlement experience different from historical data trends, changes in business and economic conditions, court decisions creating unanticipated liabilities, ongoing interpretation of policy provisions by the courts, inconsistent decisions in lawsuits regarding coverage and additional information discovered before settlement of claims. Our results of operations and financial condition would be impacted, perhaps significantly, in the future if the ultimate payments required to settle claims vary from the liability currently recorded. For a discussion of our reserving methodologies, see “Critical Accounting Policies – Losses and Loss Expenses Payable” included in this Item 7.

Acquisition and Operating Expenses

Our GAAP acquisition and operating expenses were $449.8 million in 2018 compared to $455.2 million and $430.1 million in 2017 and 2016, respectively. Acquisition and operating expenses for 2018 decreased when compared to 2017 primarily due to our exit of specialty business, partially offset by (i) an increase in agent and associate incentive compensation, (ii) an increase in report ordering costs and (iii) the impact of our technology investments, including amortization and system and infrastructure support. Acquisition and operating expenses for 2017 increased compared to 2016, primarily due to (i) the impact of our technology investments, including amortization and system and infrastructure support and (ii) an increase in agent incentive compensation.

Investment Operations Segment

Our investment portfolio and the investment portfolios of other members of the State Auto Group are managed by our subsidiary, Stateco. Stateco utilizes its own personnel to invest in fixed maturities, U.S. large-cap equities, U.S. small-cap equity funds, international equity funds, master limited partnership ("MLP") funds and exchange traded funds ("ETF"). In addition, Stateco uses an outside investment manager who invests in international funds. The Investment and Finance Committee (the “Committee”) of our Board of Directors establishes the investment policies to be followed by Stateco. Our primary investment objectives are to maintain adequate liquidity and capital to meet our responsibilities to policyholders, grow long term economic surplus to increase our capital position, maintain a consistent level of income to support operations and manage investment risk. Our current investment strategy does not rely on the use of derivative financial instruments.

Our decision to make a specific investment is influenced primarily by the following factors: (a) investment risks; (b) general market conditions; (c) relative valuations of investment vehicles; (d) general market interest rates; (e) our liquidity requirements at any given time; and (f) our current federal income tax position and relative spread between after tax yields on tax exempt and taxable fixed maturity investments.

We have investment policy guidelines with respect to purchasing fixed maturity investments for our insurance subsidiaries which preclude purchases of bonds that are rated below investment grade by a recognized rating service. Our fixed maturity portfolio is composed of high quality, investment grade issues, comprised mostly of debt issues rated A, or higher. We obtain investment ratings from nationally recognized ratings agencies. If there is a split rating, we assign the lowest rating obtained. At December 31, 2018, there was one fixed maturity investment rated below investment grade in our available-for-sale investment portfolio. This security is rated below investment grade due to a rating downgrade subsequent to the purchase of the security.

Our internally managed equity portfolio invests in U.S. large-cap companies across many different industries, selected based upon their potential for appreciation. This diversification across companies and industries reduces volatility in the value of the large-cap equity portfolio. Our investment policy guidelines limit the purchase of a specific stock to no more than 5.0% of the market value of the stock at the time of purchase, and no individual company’s equity holding should exceed 5.0% of the total equity portfolio. In addition, we also invest in dividend-paying exchange traded funds and mutual funds which add to the diversification of the portfolio by allowing us to invest in a large number of companies via one security.

Our externally managed equity portfolio invests in international funds. External managers are permitted to manage the portfolios according to their own respective portfolio objectives. In selecting our outside investment managers we confirm that their portfolio objectives, including risk tolerance, are acceptable to us; however, there may be slight differences in their objectives when compare to how we manage our large-cap equity holdings.

At December 31, 2018, our investments in fixed maturities, equity securities and certain other invested assets are carried at fair value. The unrealized holding gains or losses of our available-for-sale fixed maturities, net of applicable deferred taxes, are included as a separate component of stockholders’ equity as accumulated other comprehensive income and as such are not included in the determination of net income.

Effective January 1, 2018, we adopted Accounting Standards Update (ASU) No. 2016-01 which, among other things requires unrealized gains and losses for equity securities and other invested assets previously identified as available-for-sale to be recognized in net income. Previously, the unrealized gains and losses for these securities were recognized in other comprehensive income. Accordingly, changes in the fair value of equity securities and other invested assets are reported in "net investment (loss) gain" in the condensed consolidated statements of income for the year ended December 31, 2018.

Composition of Investment Portfolio

The following table sets forth the composition of our investment portfolio at carrying value at December 31, 2018 and 2017:

($ millions)	**2018**	**% of Total**	2017	% of Total
Cash and cash equivalents	**$ 59.8**	**2.2 %**	$ 91.5	3.3 %
Fixed maturities, at fair value:				
Fixed maturities	**2,017.1**	**75.9 %**	2,037.0	73.2 %
Treasury inflation-protected securities	**142.4**	**5.4 %**	155.8	5.6 %
Total fixed maturities	**2,159.5**	**81.3 %**	2,192.8	78.8 %
Notes receivable from affiliate (1)	**70.0**	**2.6 %**	70.0	2.5 %
Equity securities:				
Large-cap securities	**77.2**	**2.9 %**	96.8	3.5 %
Mutual and exchange traded funds	**237.8**	**8.9 %**	268.5	9.7 %
Total equity securities	**315.0**	**11.8 %**	365.3	13.2 %
Other invested assets:				
International instruments	**38.5**	**1.5 %**	45.2	1.6 %
Other invested	**10.3**	**0.4 %**	10.8	0.4 %

assets						
Total other invested assets		**48.8**	**1.9%**		56.0	2.0%
Other invested assets, at cost		**5.6**	**0.2%**		5.6	0.2%
Total portfolio	**$**	**2,658.7**	**100.0%**	$	2,781.2	100.0%

[(1)] In May 2009, we entered into two separate Credit Agreements with State Auto Mutual. Under these Credit Agreements, State Auto Mutual borrowed a total of $70.0 million from us on an unsecured basis. Interest is payable semi-annually at a fixed annual interest rate of 7.00%. Principal is payable May 2019.

The following table sets forth the amortized cost and fair value of available-for-sale fixed maturities by contractual maturity at December 31, 2018:

($ millions)	Amortized Cost		Fair Value	
Due in 1 year or less	**$**	**165.0**	**$**	**164.3**
Due after 1 year through 5 years	**653.8**		**641.6**	
Due after 5 years through 10 years	**208.9**		**208.6**	
Due after 10 years	**370.6**		**373.1**	
U.S. government agencies residential mortgage-backed securities	**789.9**		**771.9**	
Total	**$**	**2,188.2**	**$**	**2,159.5**

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

At December 31, 2018, our equity portfolio consisted of approximately 42 different large-cap stocks and 16 mutual and exchange traded funds. The largest single fund holding was 22.2% of the equity portfolio based on fair value and the top ten positions accounted for 72.6% of the equity portfolio. At December 31, 2017, our equity portfolio consisted of approximately 42 different large-cap stocks and 15 mutual and exchange traded funds. The largest single fund holding was 20.2% of the equity portfolio based on fair value and the top ten positions accounted for 71.1% of the equity portfolio. During the fourth quarter of 2017, we sold our externally-managed small-cap holdings and reinvested the proceeds into small-cap focused mutual funds and ETFs.

Market Risk

Our primary market risk exposures are to changes in market prices for equity securities and changes in interest rates and credit ratings for fixed maturity securities. Our fixed maturity securities are subject to interest rate risk whereby the value of the securities varies as market interest rates change. We manage this risk by closely monitoring the duration of the fixed maturity portfolio. The duration of the fixed maturity portfolio was approximately 4.23 and 4.23 as of December 31, 2018 and 2017, respectively. The following table sets forth our interest rate risk and the effects of a parallel change in interest rates on the fair value of the available-for-sale fixed maturity portfolio at December 31, 2018:

($ millions)	Fair Value				
	-200 bps Change	-100 bps Change	Actual	+100 bps Change	+200 bps Change
Fixed maturities:					
U.S. treasury securities and obligations of U.S. government agencies	$ 469.7	$ 450.2	$ 432.4	$ 416.2	$ 401.3
Obligations of states and political subdivisions	449.0	432.2	414.6	392.8	367.0
Corporate securities	572.4	556.8	540.6	524.5	508.9
U.S. government agencies mortgage-backed securities	833.9	806.5	771.9	732.5	693.6
Balance as of December 31, 2018	$ 2,325.0	$ 2,245.7	$ 2,159.5	$ 2,066.0	$ 1,970.8

This table summarizes only the effects that a parallel change in interest rates could have on the fixed maturity portfolio. Changes in rates would also change the value of our liabilities and possibly other financial assets. We caution the reader that this analysis does not take into account nonparallel changes in interest rates. It is likely that some rates would increase or decrease more than others depending upon market conditions at the time of the change. This nonparallel change would alter the value of the fixed maturity portfolio. The analysis is also limited in that it does not take into account any actions that might be taken by us in response to these changes. As a result, the actual impact of a change in interest rates and the resulting fixed maturity values may differ significantly from what is shown in the table.

We believe that the fixed maturity portfolio's exposure to credit risk is minimal as approximately 65.8% of the bonds we own are rated AA or better. We do not intend to change our investment policy or the quality of our fixed maturity investments. The fixed maturity portfolio is managed in a laddered-maturity style and considers business mix and liability payout patterns to ensure adequate cash flow to meet claims as they are presented. We also manage liquidity risk by maintaining sufficient cash balances, owning some agency and U.S. Treasury securities at all times, purchasing bonds of major issuers, and purchasing bonds that are part of a medium or large issue. The fixed maturity portfolio does not have any direct exposure to either exchange rate risk or commodity risk. We do not rely on the use of derivative financial instruments. We categorize our fixed maturities as available-for-sale in order to provide us greater flexibility in managing our portfolio. We do not maintain a trading portfolio.

There are no mortgage backed securities in our fixed maturity portfolio which may be labeled sub-prime mortgage backed securities. We invest only in mortgage backed securities issued by a federal agency or that are U.S. Government guaranteed. Specifically, at December 31, 2018, approximately $771.9 million, or 35.7%, of our fixed maturity available-for-sale investment portfolio was in either GNMA pools, which are guaranteed by the full faith and credit of the U.S. Government, or FNMA or Freddie Mac pools.

The following table sets forth the credit ratings of our municipal securities based on ratings by nationally recognized rating agencies at December 31, 2018:

($ millions)

Rating	Total fair value		%
AAA	**$**	**35.0**	**8.4**
AA*	**268.2**		**64.7**
A	**101.8**		**24.6**
BBB	**9.6**		**2.3**
Total	**$**	**414.6**	**100.0**

* Our AA rating category includes securities that have been either pre-funded or escrowed to maturity.

We believe our Muni Portfolio is well diversified by issuer and state. We have 5.8% invested in securities which have been either pre-refunded or escrowed to maturity bonds. No single issuer comprises more than 5.0% of our Muni Portfolio. For the bonds that are not in the pre-refunded category, no more than 13.0% is concentrated in any one state. We believe our Muni Portfolio is invested within the strongest sectors of the municipal bond market. Revenue bonds represent 58.8% of our Muni Portfolio and state and local government general obligation bonds make up 21.7% of our Muni Portfolio. Our credit research is an important part of our investment management process, and we continually monitor all holdings for any signs of deterioration. We believe that our municipal holdings will maintain their high credit quality and that the issuers will be able to make all principal and interest payments as they come due.

At December 31, 2018, our large-cap equity portfolio had a weighted beta of 0.98 using the S&P 500 Index as the benchmark. At December 31, 2018, our mutual and exchange traded funds portfolio had a weighted beta of 0.99 using the S&P 500 Index and the CRSP US Small Cap Index as benchmarks. Beta estimates the degree the portfolio's price will fluctuate based on a given movement in the market index. The following tables set forth what changes might occur in the value of the large-cap equity portfolio and the mutual fund and ETF portfolio given a change in the respective index at December 31, 2018:

Large-cap equity portfolio:					
Fair value ($ millions)	$ 92.3	$ 84.7	$ 77.2	$ 69.6	$ 62.0
Change in S&P 500 Index	+20%	+10%	—	-10%	-20%
Value as % of original value	120%	110%	100%	90 %	80 %

Mutual fund and ETF portfolio:					
Fair value ($ millions)	$ 284.9	$ 261.4	$ 237.8	$ 214.3	$ 190.7
Change in Index	+20%	+10%	—	-10%	-20%
Value as % of original value	120%	110%	100%	90 %	80 %

The above analysis is limited in that it does not take into account any actions that might be taken by us in response to these changes. As a result, the actual impact of a change in equity market prices and the resulting equity values may differ significantly from what is shown in the table. By investing in mostly large-cap issues we hope to limit liquidity risk in the equity portfolio. The U.S. large-cap equity portfolio does not have any direct exposure to exchange rate risk since we do not directly hold any foreign stocks. We constantly monitor the equity portfolio holdings for any credit risk issues that may arise. We do not invest in any commodity futures or commodity oriented mutual funds.

At December 31, 2018, we have one international fund which is included in other invested assets. The international fund had a beta of 0.70 using the MSCI EAFE Index as a benchmark. The following table sets forth what changes might occur in the value of Funds 1 given a change in the MSCI EAFE Index at December 31, 2018:

International fund:					
Fair value *($ millions)*	$ 44.0	$ 41.3	$ 38.5	$ 35.9	$ 33.2
Change in MSCI EAFE Index	+20%	+10%	—	-10%	-20%
Value as % of original value	114%	107%	100%	93 %	86 %

The above analysis does not take into account any actions that might be taken by the portfolio managers in response to these changes. As a result, the actual impact of a change in international equity market prices and the resulting international equity value may differ significantly from what is shown in the table above.

Investment Operations Revenue

The following table sets forth the components of net investment income for the years ended December 31, 2018, 2017 and 2016:

($ millions)	Year Ended December 31		
	2018	2017	2016
Gross investment income:			
Fixed maturities	**$ 65.3**	$ 63.2	$ 63.4
Equity securities	**13.4**	10.5	7.3
Other	**7.2**	6.3	5.6
Total gross investment income	**85.9**	80.0	76.3
Less: Investment expenses	**1.0**	1.2	1.6
Net investment income	**$ 84.9**	$ 78.8	$ 74.7
Average invested assets (at cost)	**$ 2,691.1**	$ 2,561.1	$ 2,443.0
Annualized investment yield	**3.2%**	3.1%	3.1%
Annualized investment yield, after tax	**2.6%**	2.2%	2.3%
Net investment income, after tax	**$ 69.3**	$ 57.0	$ 55.7
Effective tax rate	**18.3%**	27.7%	25.5%

Our investment operations revenue for the year ended December 31, 2018 was primarily impacted by an increase in dividend income when compared to the same 2017 and 2016 periods. The dividend income increase was due to higher dividends from our MLP holdings.

The following table sets forth realized gains (losses) and the proceeds received on sale for our investment portfolio for the years ended December 31, 2018, 2017 and 2016:

($ millions)	**2018**	2017	2016

	Realized gains (losses)	**Proceeds received on sale**	Realized gains (losses)	Proceeds received on sale	Realized gains (losses)	Proceeds received on sale
Realized gains:						
Fixed maturities	**$ 2.0**	**$ 98.0**	$ 2.8	$ 184.8	$ 2.8	$ 211.6
Equity securities	**6.6**	**88.5**	66.7	243.2	29.2	147.0
Other invested assets	**—**	**—**	0.2	1.1	12.1	0.8
Total realized gains	**$ 8.6**	**$ 186.5**	$ 69.7	$ 429.1	$ 44.1	$ 359.4
Realized losses:						
Equity securities:						
Sales	**$ (0.9)**	**$ 9.3**	$ (1.1)	$ 9.5	$ (0.8)	$ 6.0
OTTI	**—**	**—**	(3.5)	—	(4.5)	—
Fixed maturities:						
OTTI	**—**	**—**	—	—	(2.3)	—
Other invested assets	**—**	**1.2**	—	—	—	—
Total realized losses	**$ (0.9)**	**$ 10.5**	$ (4.6)	$ 9.5	$ (7.6)	$ 6.0
Net realized gains on investments	**$ 7.7**	**$ 197.0**	$ 65.1	$ 438.6	$ 36.5	$ 365.4

Net realized gains decreased $57.4 million in 2018 when compared to 2017, while net realized gains for 2017 increased $28.6 million when compared to 2016. Net realized gains for 2018 declined compared to 2017 and 2016 due to (i) fewer sales transactions and (ii) the impact of the adoption of ASU 2016-01. Net realized gains in 2017 were impacted by (i) realized gains of $18.5 million from the sale of our U.S. small-cap equity portfolio and (ii) sales within our U.S. large-cap equity portfolio. The proceeds from the sale of our U.S. small-cap equity portfolio were reinvested in U.S. small-cap focused mutual and exchange traded funds. During the fourth quarter of 2016, we redeemed a limited partnership investment in international equities that had been classified as other invested assets. The redemption proceeds were reinvested in an international equity mutual fund classified as an equity security. We recognized a gain of $12.0 million on the redemption. Out of the total proceeds related to this redemption and reinvestment, $44.0 million was non-cash and therefore excluded from net cash used in investing activities in the consolidated statements of cash flows.

When a fixed maturity security has been determined to have an other-than-temporary decline in fair value, the impairment charge is separated into an amount representing the credit loss, which is recognized in earnings, and the amount related to non-credit factors, which is recognized in accumulated other comprehensive income. See "Critical Accounting Policies – Investments" included in this Item 7 for OTTI impairment indicators. Future increases or decreases in fair value, if not other-than-temporary, are included in accumulated other comprehensive income (loss). We recognized $2.3 million of OTTI on our fixed maturity portfolio during 2016. We did not recognize any impairments on our fixed maturity portfolio during 2018 or 2017.
The following table sets forth the realized losses related to OTTI on our investment portfolio recognized for the years ended December 31, 2017 and 2016:

($ millions)	**2018**		2017		2016	
	Number of positions	Total impairment	Number of positions	Total impairment	Number of positions	Total impairment
Equity securities:						
Large-cap securities	—	$ —	1	$ (1.5)	2	$ (0.6)
Small-cap securities	—	—	22	(2.0)	28	(3.9)
Fixed maturities	—	—	—	—	1	(2.3)
Total OTTI	—	$ —	23	$ (3.5)	31	$ (6.8)

Gross Unrealized Investment Gains and Losses
Based upon our review of our investment portfolio at December 31, 2018, we determined that there were no individual investments with an unrealized holding loss that had a fair value significantly below cost continually for more than one year. The following table sets forth detailed information on our available-for-sale investment portfolio by lot at fair value for our gross unrealized holding gains (losses) at December 31, 2018:

($ millions, except number of positions)	Cost or amortized cost	Gross unrealized holding gains	Number of gain positions	Gross unrealized holding losses	Number of loss positions	Fair value
Fixed Maturities:						
U.S. treasury securities and obligations of U.S. government agencies	**$ 438.4**	**$ 3.2**	**12**	**$ (9.2)**	**42**	**$ 432.4**
Obligations of states and political subdivisions	**408.2**	**7.3**	**82**	**(0.9)**	**15**	**414.6**
Corporate securities	**551.7**	**0.6**	**21**	**(11.7)**	**61**	**540.6**
U.S. government agencies mortgage-backed securities	**789.9**	**3.3**	**35**	**(21.3)**	**88**	**771.9**
Total available-for-sale	**$ 2,188.2**	**$ 14.4**	**150**	**$ (43.1)**	**206**	**$ 2,159.5**

fixed maturities

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The following table sets forth our unrealized holding gains by investment type, net of deferred tax that was included as a component of accumulated comprehensive income at December 31, 2018 and 2017, and the change in unrealized holding gains, net of deferred tax, for the year ended December 31, 2018:

($ millions)	**2018**	2017	$ Change
Available-for-sale investments			
Unrealized holding (losses) gains:			
Fixed maturities	**$ (28.7)**	$ 19.7	$ (48.4)
Equity securities (1)	—	46.7	(46.7)
Other invested assets (1)	—	30.2	(30.2)
Unrealized (losses) gains	**(28.7)**	96.6	(125.3)
Deferred federal income tax benefit (liability)	**6.0**	(30.6)	36.6
Unrealized (losses) gains, net of tax	**$ (22.6)**	$ 66.0	$ (88.7)

(1) Effective January 1, 2018, we adopted Accounting Standards Update (ASU) No. 2016-01 and equity securities and other invested assets are no longer classified as available-for-sale with unrealized gains and losses recognized in other comprehensive income, rather, changes in the fair value of equity securities and other invested assets are now recognized in net income.

Fair Value Measurements

We primarily use one independent nationally recognized pricing service in developing fair value estimates. We obtain one price per security, and our processes and control procedures are designed to ensure the value is accurately recorded on an unadjusted basis. Through discussions with the pricing service, we gain an understanding of the methodologies used to price the different types of securities, that the data and the valuation methods utilized are appropriate and consistently applied, and that the assumptions are reasonable and representative of fair value. To validate the reasonableness of the valuations obtained from the pricing service, we compare to other fair value pricing information gathered from other independent pricing sources. See Note 4, “Fair Value of Financial Instruments” to our consolidated financial statements included in Item 8 of this Form 10-K for a presentation of our available-for-sale investments within the fair value hierarchy at December 31, 2018.

Other Items

Income Taxes

For the year ended December 31, 2018, the federal income tax expense was $0.1 million compared to an income tax expense of $52.8 million for 2017 and an income tax benefit of $0.4 million for 2016. Our effective tax rate for 2018 was 0.5% compared with 150.7% in 2017 and (2.3%) in 2016. The change in our effective tax rate in 2018 when compared to 2017 was primarily due to the revaluation of our net deferred tax asset as a result of the enactment of the TCJA in 2017. The revaluation of our deferred tax asset resulted in a provisional deferred tax charge of $43.5 million in 2017.

See “Critical Accounting Policies — Income Taxes” included in this Item 7. See Note 10, “Federal Income Taxes” to our consolidated financial statements included in Item 8 of this Form 10-K for a reconciliation between our actual federal income tax expense (benefit) and the amount computed at the indicated statutory rate for the years ended December 31, 2018, 2017 and 2016.

LIQUIDITY AND CAPITAL RESOURCES

General

Liquidity refers to our ability to generate adequate amounts of cash to meet our short and long-term needs. Our primary sources of cash are premiums, investment income, investment sales and the maturity of fixed income security investments. The significant outflows of cash are payments of claims, commissions, premium taxes, operating expenses, income taxes, dividends, interest and principal payments on debt and investment purchases. The cash outflows may vary due to uncertainties regarding settlement of large losses or catastrophe events. As a result, we continually monitor our investment and reinsurance programs to ensure they are appropriately structured to enable the insurance subsidiaries to meet anticipated short and long-term cash requirements without the need to sell investments to meet fluctuations in claim payments.

Liquidity

Our insurance subsidiaries must have adequate liquidity to ensure that their cash obligations are met. However, as discussed below, the STFC Pooled Companies do not have the day-to-day liquidity concerns normally associated with an insurance company due to their participation in, and the terms of, the Pooling Arrangement. In addition, State Auto P&C’s $100.0 million open line of credit with the Federal Home Loan Bank of Cincinnati (the “FHLB”) is available for general corporate purposes such as funding liquidity needs. See “Liquidity and Capital Resources – Borrowing Arrangements included in this Item 7.

Under the terms of the Pooling Arrangement, State Auto Mutual receives all premiums and pays all losses and expenses associated with the insurance business produced by the STFC Pooled Companies and the other pool participants, and then it settles the intercompany balances generated by these transactions with the pool participants within 60 days following each quarter end. We believe this provides State Auto Mutual with sufficient liquidity to pay losses and expenses of our insurance operations on a timely basis. When settling the intercompany balances, State Auto Mutual provides the pool participants with full credit for the premiums written net of losses paid during the quarter, retaining all receivable amounts from insureds and agents and reinsurance recoverable on paid losses from unaffiliated reinsurers. Any receivable amounts that are ultimately deemed to be uncollectible are charged-off by State Auto Mutual and allocated to the pool participant on the basis of its pooling percentage.

As a result of the Pooling Arrangement, we have an off-balance sheet credit risk related to the balances due to State Auto Mutual from insureds, agents and reinsurers, which are offset by the unearned premiums from the respective policies. While the total amount due to State Auto Mutual from policyholders and agents is significant, the individual amounts due are relatively small at the policyholder and agency level. Based on historical data, this credit risk exposure is not considered to be material to our financial position, though the impact to income on a quarterly basis may be material. The State Auto Group mitigates its exposure to this credit risk through its in-house collections unit for both personal and commercial accounts which is supplemented by third party collection service providers. The amounts deemed uncollectible by State Auto Mutual and allocated to the STFC Pooled Companies are included in the other expenses line item in the accompanying consolidated statements of income.

We generally manage our cash flows through current operational activity and maturing investments, without a need to liquidate any of our other investments. However, should our written premiums decline or paid losses increase significantly, or a combination thereof, our cash flows from operations could be impacted requiring us to liquidate investments. This action was not necessary in 2018, 2017 or 2016.

We maintain a portion of our investment portfolio in relatively short-term and highly liquid investments to ensure the immediate availability of funds to pay claims and expenses. At December 31, 2018 and 2017, we had $59.8 million and $91.5 million, respectively, in cash and cash equivalents, and $2,523.3 million and $2,614.1 million, respectively, of total investments. Our available-for-sale fixed maturities included $8.9 million and $9.3 million, respectively, of securities on deposit with insurance regulators, as required by law, at December 31, 2018 and 2017. In addition, substantially all of our fixed maturity and equity securities are traded on public markets. For a further discussion regarding investments, see "Results of Operations – Investments Operations Segment" included in this Item 7.

Net cash used in operating activities was $13.4 million in 2018, compared to net cash provided operating activities by $67.9 million and $113.5 million in 2017 and 2016, respectively. The change was primarily driven by (i) our decision to exit the specialty business which has resulted in the run-off of specialty premiums, and (ii) a higher level of paid losses.

Net cash used in investing activities was $16.0 million, $20.5 million and $127.6 million in 2018, 2017 and 2016, respectively. The change from 2018 compared to 2017 and 2016 was primarily driven by declines in (i) fixed maturities sales resulting from rising interest rates, and (ii) purchases and sales of equity securities because we are comfortable with the position of the current portfolio.

Net cash used in financing activities was $2.3 million and $7.0 million in 2018 and 2017, respectively, compared to net cash provided by financing activities of $7.1 million in 2016. The change was primarily driven by an increase in stock option exercises due to a higher stock price in 2018 compared to 2017 and 2016.

Borrowing Arrangements

FHLB Line of Credit

State Auto P&C has an Open Line of Credit Commitment (the "OLC") with the FHLB that provides State Auto P&C with a $100.0 million one-year open line of credit available for general corporate purposes. Draws under the OLC are to be funded at a daily variable rate advance with a term of no more than 180 days with interest payable monthly. All advances under the OLC are to be fully secured by a pledge of specific investment securities of State Auto P&C. As of December 31, 2018, no advances had been made under the OLC.

FHLB Loans

State Auto P&C has outstanding two term loans with the FHLB in the principal amounts of $21.5 million and $85.0 million, respectively (the "2016 FHLB Loan" and "2018 FHLB Loan", respectively). The 2016 FHLB Loan is a five-year term loan, but may be prepaid after three years with no prepayment penalty. The 2016 FHLB Loan provides for interest-only payments during its term, with principal due in full at maturity. The interest rate is fixed over the term of the loan at 1.73%. The 2018 FHLB Loan is a 15-year loan and provides for interest-only payments during its term, with principal due in full at maturity. The interest rate is fixed over the term of the loan at 3.96%. Prepayment of the 2018 FHLB Loan would require a prepayment fee. The 2018 FHLB Loan refinanced a prior loan from the FHLB. State Auto P&C incurred a $0.4 million prepayment fee which is included in interest expense in the condensed consolidated statements of income for the year ended December 31, 2018.

The 2016 and 2018 FHLB Loans are fully secured by a pledge of specific investment securities of State Auto P&C.

Subordinated Debentures

State Auto Financial's Delaware business trust subsidiary (the "Capital Trust") has outstanding $15.0 million liquidation amount of capital securities, due 2033. In connection with the Capital Trust's issuance of the capital securities and the related purchase by State Auto Financial of all of the Capital Trust's common securities (liquidation amount of $0.5 million), State Auto Financial has issued to the Capital Trust $15.5 million aggregate principal amount of unsecured Floating Rate Junior Subordinated Debt Securities due 2033 (the "Subordinated Debentures"). The sole assets of the Capital Trust are the Subordinated Debentures and any interest accrued thereon. Interest on the Capital Trust's capital and common securities is payable quarterly at a rate equal to the three-month LIBOR rate plus 4.20%, adjusted quarterly. The applicable interest rates for December 31, 2018 and 2017 were 6.94% and 5.68%, respectively.

Notes Payable Summary

The following table sets forth our notes payable at December 31, 2018:

($ millions)	Carrying Value		Fair Value		Interest Rate
Subordinated Debentures due 2033: issued $15.5 million, May 2003 with variable interest adjusting quarterly	**$**	**15.2**	**$**	**15.2**	**6.14%**
FHLB loan due 2033: issued $85.0 million, May 2018 with fixed interest	**85.3**		**89.0**		**3.96%**
FHLB loan due 2021: issued $21.5 million , September 2016 with fixed interest	**21.5**		**20.9**		**1.73%**
Total notes payable	**$**	**122.0**	**$**	**125.1**	

Related to our notes payable, our primary market risk exposure is to the change in interest rates and our credit rating. For a discussion regarding our credit ratings see “Liquidity and Capital Resources – Credit and Financial Strength Ratings” included in this Item 7. Based upon the notes payable carrying value at December 31, 2018, we had $15.2 million notes payable with variable interest and $85.3 million and $21.5 million of notes payable with interest fixed at 3.96% and 1.73%, respectively, which equated to approximately 12.5% variable interest debt and 87.5% fixed interest debt. Our decision to obtain fixed versus variable interest rate debt is influenced primarily by the following factors: (a) current market interest rates; (b) anticipated future market interest rates; (c) availability of fixed versus variable interest instruments; and (d) our currently existing notes payable fixed and variable interest rate position. See our contractual obligations table included in “Liquidity and Capital Resources –Contractual Obligations” included in this Item 7.

Reinsurance Arrangements

Members of the State Auto Group follow the customary industry practice of reinsuring a portion of their exposures and paying to the reinsurers a portion of the premiums received. Insurance is ceded principally to reduce net liability on individual risks or for individual loss occurrences, including catastrophic losses. Although reinsurance does not legally discharge the individual members of the State Auto Group from primary liability for the full amount of limits applicable under their policies, it does make the assuming reinsurer liable to the extent of the reinsurance ceded.

To minimize the risk of reinsurer default, the State Auto Group cedes only to third-party reinsurers who are rated A- or better by A.M. Best or Standard & Poor’s and also utilizes both domestic and international markets to diversify its credit risk. We utilize reinsurance to limit our loss exposure and contribute to our liquidity and capital resources.

Other Reinsurance Arrangements

Each member of the State Auto Group is party to working reinsurance treaties for casualty, workers' compensation and property lines with several reinsurers arranged through reinsurance intermediaries. These agreements are described in more detail below. We have also secured other reinsurance to limit the net cost of large loss events for certain types of coverage. The State Auto Group also makes use of facultative reinsurance for unique risk situations. The State Auto Group also participates in state insurance pools and associations. In general, these pools and associations are state sponsored and/or operated, impose mandatory participation by insurers doing business in that state, and offer coverage for hard-to-place risks at rates established by the state sponsor or operator, thereby transferring risk of loss to the participating insurers in exchange for premiums which may not be commensurate with the risk assumed.

Adverse Development Cover

The State Auto Group has an adverse development reinsurance agreement implemented at the end of 2014, providing $40.0 million of coverage for adverse claims development in excess of carried reserves as of November 30, 2014 for the terminated restaurant program business previously underwritten by a MGU-subsidiary of State Auto Mutual.

Property Catastrophe Treaty

Members of the State Auto Group maintain a property catastrophe excess of loss reinsurance agreement, covering property catastrophe related events affecting at least two risks. This property catastrophe reinsurance agreement renewed as of July 1, 2018. Under this reinsurance agreement, we retain the first $75.0 million of catastrophe loss, each occurrence, with a 5.0% co-participation on the next $125.0 million of covered loss, each occurrence. The reinsurers are responsible for 95.0% of the catastrophe losses excess of $75.0 million up to $200.0 million, each occurrence. The State Auto Group is responsible for catastrophe losses above $200.0 million.

Property Per Risk Treaty

As of July 1, 2018, the State Auto Group renewed the property per risk excess of loss reinsurance agreement. This reinsurance agreement provides individual property risk coverage for the State Auto Group for losses exceeding $4.0 million. Claims arising from named storms and earthquake for E&S property (currently in runoff) are excluded from this treaty. The reinsurers are responsible for 100.0% of the loss excess of the $4.0 million retention for property business up to $20.0 million of covered loss.

Casualty and Workers' Compensation Treaties

As of July 1, 2018, the State Auto Group renewed the casualty excess of loss reinsurance agreement. Under this reinsurance agreement, the State Auto Group is responsible for the first $3.0 million of losses that involve workers' compensation, auto liability, other liability and umbrella liability policies. This reinsurance agreement provides coverage up to $10.0 million, except for commercial umbrella policies which are covered for limits up to $15.0 million. E&S casualty and programs risks are not subject to this casualty excess of loss reinsurance agreement.

Also, certain unusual claim situations involving extra contractual obligations, excess of policy limits, LAE coverage and multiple policy or coverage loss occurrences arising from bodily injury liability, property damage, uninsured motorist and personal injury protection are covered by a Clash reinsurance agreement that provides for $30.0 million of coverage in excess of $10.0 million retention for each loss occurrence. This Clash reinsurance coverage sits above the $7.0 million excess of $3.0 million arrangement. Policies underwritten by the E&S casualty and programs units are not subject to this casualty excess of loss reinsurance agreement.

In addition, each company in the State Auto Group is party to a workers’ compensation catastrophe insurance agreement that provides additional reinsurance coverage for workers’ compensation losses involving multiple workers. Subject to $10.0 million of retention, reinsurers are responsible for 100.0% of the excess over $10.0 million up to $30.0 million of covered loss. For loss amounts over $30.0 million, the casualty excess of loss reinsurance agreement provides $20.0 million coverage in excess of $30.0 million. Workers’ compensation catastrophe coverage is subject to a “Maximum Any One Life” limitation of $10.0 million. This limitation means that losses associated with each worker may contribute no more than $10.0 million to covered loss under these agreements.

As of July 1, 2018, the State Auto Group terminated its reinsurance coverage for E&S casualty and program casualty risks on a run-off basis, meaning treaty coverage remains in place only for those E&S casualty and program casualty policies with effective dates prior to July 1, 2018, until the expiration of these policies.

Oil & Gas Quota Share

Effective March 1, 2018, the State Auto Group entered into a quota share agreement (the "Oil & Gas Quota Share") covering its gas & propane distribution book of business. The Oil & Gas Quota Share expires February 28, 2019. In accordance with this agreement, the State Auto Group ceded to external reinsurers (i) 100% of unearned premiums for this book of business as of the effective date and (ii) 100% of new and renewal policies issued on or after the effective date. In addition, the State Auto Group will receive a minimum ceding commission of 23.0% on premiums ceded under the Oil & Gas Quota Share.

The liability of the reinsurers under the Oil & Gas Quota Share will not exceed any of the following: $4.0 million as to any one occurrence with respect to property and auto physical damage losses (increased from $3.0 million effective July 1, 2018), $1.0 million as to any occurrence with respect to auto liability losses, and $1.0 million any occurrence or $2.0 million any aggregate with respect to general liability losses.

The rates for all of our treaty reinsurance agreements are negotiated annually.

Contractual Obligations

The following table sets forth our significant contractual obligations at December 31, 2018:

($ millions)	Total	Due 1 year or less	Due 1-3 years	Due 3-5 years	Due after 5 years
Direct loss and ALAE reserves[1]	$ 1,141.3	$ 481.7	$ 402.7	$ 134.1	$ 122.8
Notes payable[2]:					
FHLB loan due 2021: issued $21.5 million, September 2016 with fixed interest	21.5	—	21.5	—	—
FHLB loan due 2033; issued $85.0 million, May 2018 with fixed interest	85.0	—	—	—	85.0
Subordinated Debentures due 2033: issued $15.5, May 2003 with variable interest[3] adjusting quarterly	15.5	—	—	—	15.5
Total notes payable	122.0	—	21.5	—	100.5
Interest payable [2]:					
FHLB loan due 2021: issued $21.5 million, September 2016 with fixed interest	1.1	0.4	0.7	—	—
FHLB loan due 2033; issued $85.0 million, May 2018 with fixed interest	52.1	3.4	6.7	6.7	35.3
Subordinated Debentures due 2033: issued $15.5, May 2003 with variable interest[3] adjusting quarterly	16.8	1.1	2.2	2.2	11.3
Total interest payable	70.0	4.9	9.6	8.9	46.6
Postretirement benefits	19.4	2.3	4.3	3.9	8.9
Pension funding[4]	63.6	6.2	13.3	13.6	30.5
Total	$ 1,416.3	$ 495.1	$ 451.4	$ 160.5	$ 309.3

(1) We derived expected payment patterns separately for the direct loss and ALAE reserves. Amounts included the STFC Pooled Companies net additional share of transactions assumed from State Auto Mutual through the Pooling Arrangement. Under the current Pooling Arrangement, STFC will recover 35% of these payments. For a reconciliation of management's best estimate, see "Critical Accounting Policies – Losses and Loss Expenses Payable" included in this Item 7. These patterns were applied to the December 31, 2018, loss and ALAE payable to generate estimated annual incremental loss and ALAE payments for each subsequent calendar year. These amounts are based on historical payment patterns and do not represent actual contractual obligations. The actual payment amounts and the related timing of those payments could differ significantly from these estimates.

(2) For a discussion of these debt instruments, see "Liquidity and Capital Resources—Borrowing Arrangements" included in this Item 7.

(3) Interest on the subordinated debentures was calculated using an interest rate equal to the three-month LIBOR rate at December 31, 2018 of 2.7381% plus 4.20%, or 6.9381%.

(4) These amounts are estimates of ERISA minimum funding levels based on adjustments to prior year assumptions for our defined benefit pension plan and do not represent an estimate of our expected contributions. Funding levels generally are not determined until later in the year with respect to the contribution year. See Note 11, "Pension and Postretirement Benefits Plans" to our consolidated financial statements included in Item 8 of this Form 10-K for a tabular presentation of expected benefit payments from the State Auto Group's defined benefit pension plan.

The cost of leases and other purchase obligations of State Auto Mutual are allocated to us through the Pooling Arrangement.

Regulatory Considerations

At December 31, 2018, 2017 and 2016, each of our insurance subsidiaries was in compliance with statutory requirements relating to capital adequacy.

The NAIC utilizes a collection of analytical tools designed to assist state insurance departments with an integrated approach to screening and analyzing the financial condition of insurance companies operating in their respective states. One such set of analytical tools is 12 key financial ratios that are known in the insurance industry as the "IRIS" ratios. A "defined range" of results for each ratio has been established by the NAIC for solvency monitoring. While management utilizes each of these IRIS ratios in monitoring our insurance companies' operating performance on a statutory accounting basis (each of our insurance subsidiaries operates within the defined range for the other measures), the net premiums written to surplus or leverage ratio is monitored to ensure that each of our insurance subsidiaries continue to operate within the "defined range" of 3.0 to 1.0. The higher the leverage ratio, the more risk a company bears in relation to statutory surplus available to absorb losses. In considering this range, management also considers the distribution of net premiums between property and liability lines of business. A company with a larger portion of net premiums from liability lines should generally maintain a lower leverage ratio.

The following table sets forth the statutory leverage ratios for our insurance subsidiaries at December 31, 2018, 2017 and 2016:

Statutory Leverage Ratios	**2018**	2017	2016
State Auto P&C	**1.4**	1.5	1.5
Milbank	**1.7**	1.8	1.9
Weighted Average	**1.4**	1.6	1.5

State Auto P&C, Milbank and SA Ohio are subject to regulations and restrictions under which payment of dividends from statutory surplus can be made to State Auto Financial during the year without prior approval of regulatory authorities. Under the insurance regulations of Iowa and Ohio (the states of domicile), the maximum amount of dividends that we may pay out of earned surplus to shareholders within a twelve month period without prior approval of the Department is limited to the greater of 10% of the most recent year-end policyholders' surplus or net income for the twelve month period ending the 31st day of December of the previous year-end. Pursuant to these rules, $87.2 million is available for payment to State Auto Financial from its insurance subsidiaries in 2019 without prior approval. State Auto Financial received dividends from its insurance subsidiaries in the amount of $10.0 million, $15.0 million and $10.0 million in 2018, 2017 and 2016.

Our insurance subsidiaries are subject to risk-based capital ("RBC") requirements that have been adopted by individual states. These requirements subject insurers having statutory capital less than that required by the RBC calculation to varying degrees of regulatory action, depending on the level of capital inadequacy. The RBC formulas specify various weighting factors to be applied to financial balances or various levels of activity based on the perceived degree of risk. Regulatory compliance is determined by a ratio of total adjusted capital to authorized control level RBC. Generally no remedial action is required by an insurance company if its adjusted statutory surplus exceeds 200% of the authorized level RBC. At December 31, 2018, the ratio of total adjusted statutory capital to authorized control level of State Auto Financial's insurance subsidiaries ranged from 437% to 27,977%.

Credit and Financial Strength Ratings

As of June 12, 2018, the State Auto Group's financial strength rating from A.M. Best was A- (Excellent) with a stable outlook and its credit rating from A.M. Best was bbb- with a stable outlook.

The financial strength rating is for the State Auto Group and expresses the opinion of the rating agency as to the ability of the State Auto Group to meet its ongoing obligations to policyholders. The A.M. Best financial strength rating influences our ability to write insurance business as agents and policyholders generally prefer higher rated companies. Lower rated companies may be required to compete for agents and policyholders by offering higher commissions or lower premiums and expanded coverage, or a combination thereof.

We believe that these ratings provide a meaningful way for policyholders, agents, creditors, shareholders and others to compare us to our competitors. Our ratings are influenced by many factors, including operating and financial performance, asset quality, liquidity, financial leverage, exposure to catastrophe risks and operating leverage. Generally, credit ratings affect the cost, type and availability of debt financing. Higher rated securities receive more favorable pricing and terms relative to lower rated securities at the time of issue.

Our management considers how its overall strategy and decisions may influence the rating agencies' evaluation of our credit strength and capital position, which may in turn directly impact the credit and financial strength ratings assigned by those agencies. In its decision-making process with respect to significant transactions, such as reinsurance, financing and investing activities, and acquisitions, management takes into consideration the potential impact these decisions will have on our earnings volatility and capital position.

OTHER

Impact of Inflation

Inflation can have a significant impact on property and casualty insurers because premium rates are established before the amount of losses and loss expenses are known. When establishing rates, we attempt to anticipate increases from inflation subject to the limitations of modeling economic variables. Even when general inflation, as measured by the Consumer Price Index, has been relatively modest, as has been the case over the last several years, price inflation on the goods and services purchased by insurance companies in settling claims can steadily increase. For example, historically medical care costs have risen at a higher rate than general inflation over the last few years. Costs for building materials typically rise significantly following widespread natural catastrophes, such as what the industry experienced in areas affected by Superstorm Sandy in 2012. We continue to adjust our pricing projections to reflect current and anticipated changes in costs in all lines of business.

We consider inflation when estimating liabilities for losses and loss expenses, particularly for claims having a long period between occurrence and final settlement. The liabilities for losses and loss expenses are management's best estimates of the ultimate net cost of underlying claims and expenses and are not discounted for the time value of money. In times of high inflation, the normally higher yields on investment income may partially offset potentially higher claims and expenses.

CRITICAL ACCOUNTING POLICIES

Our significant accounting policies are more fully described in Note 1 of the notes to our consolidated financial statements included in Item 8 of this Form 10-K. In preparing the consolidated financial statements, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of the balance sheet, revenues and expenses for the period then ended and the financial entries in the accompanying notes to the financial statements. Such estimates and assumptions could change in the future as more information becomes known, which could impact the amounts reported and disclosed in this Item 7. We have identified the policies and estimates described below as critical to our business operations and the understanding of the results of our operations.

Investments

Our fixed maturity investments are classified as available-for-sale and carried at fair value. The unrealized holding gains or losses, net of applicable deferred taxes, are shown as a separate component of stockholders' equity in accumulated other comprehensive income (loss), and as such are not included in the determination of net income. Investment income is recognized when earned, and capital gains and losses are recognized when investments are sold. Effective January 1, 2018, we adopted Accounting Standards Update (ASU) No. 2016-01 that, among other things requires unrealized gains and losses for equity securities and other invested assets previously identified as available-for-sale to be recognized in net income. Previously, the unrealized gains and losses for these securities were recognized in other comprehensive income. Accordingly, changes in the fair value of equity securities and other invested assets are reported in "net investment (loss) gain" in the condensed consolidated statements of income for the year ended December 31, 2018.

We regularly monitor our investment portfolio for declines in value that are other-than-temporarily impaired ("OTTI"), an assessment that requires significant management judgment regarding the evidence known. Such judgments could change in the future as more information becomes known which could negatively impact the amounts reported herein. We consider the following factors when assessing our fixed maturity investments for OTTI: (i) the financial condition of the issuer including receipt of scheduled principal and interest cash flows; (ii) our intent to sell; and (iii) if it is more likely than not that we will be required to sell the investments before recovery. When a fixed maturity has been determined to have an other-than-temporary impairment, the impairment charge is separated into an amount representing the credit loss, which is recognized in earnings as a realized loss, and the amount related to non-credit factors, which is recognized in other comprehensive (loss) income. Future increases or decreases in fair value, if not other-than-temporary, are included in other comprehensive (loss) income.

Deferred Acquisition Costs

Acquisition costs, consisting of net commissions (including ceding commissions), premium taxes and certain underwriting expenses related to the successful acquisition or renewal of property and casualty business, are deferred and amortized over the same period in which the related premiums are earned. Ceding commissions relating to reinsurance agreements reimburse us for both deferrable and non-deferrable acquisition costs. To the extent these ceding commissions exceed the deferrable amount of acquisition costs, the excess is reported as a deferred liability and is included in other liabilities in our consolidated balance sheet. Excess ceding commissions are amortized in proportion to net revenue recognized on the underlying policies resulting in excess ceding commissions being recognized as a reduction of acquisition and operating expenses.

The method followed for computing the acquisition costs limits the amount of such deferred costs to their estimated realizable value. In determining estimated realizable value, the computation gives effect to the premium to be earned, losses and loss expenses expected to be incurred, and certain other costs expected to be incurred as premium is earned. Future changes in estimates, the most significant of which is expected losses and loss adjustment expenses, that indicate a reduction in expected future profitability may result in unrecoverable deferred acquisition costs. Anticipated investment income is considered in determining whether a premium deficiency exists.

Losses and Loss Expenses Payable

Our loss reserves reflect all unpaid amounts for claims that have been reported, as well as for IBNR claims. Our loss reserves are not discounted to present value.

Loss reserves are management's best estimates ("MBE") at a given point in time of what we expect to pay to settle all claims incurred as of that date based on known facts, circumstances and historical trends. Loss reserves at the individual claim level are established on either a case reserve basis or formula reserve basis depending on the type and circumstances of the loss. The case reserve amounts are determined by claims adjusters based on our reserving practices, which take into account the type of risk, the circumstances surrounding each claim and applicable policy provisions. The formula reserves are based on historical data for similar claims with provision for changes caused by inflation. Case reserves and formula reserves are reviewed on a regular basis, and as new data becomes available, estimates are updated resulting in adjustments to loss reserves. Generally, reported losses initially reserved on a formula basis and not settled after six months are case reserved at that time. The process for calculating the IBNR component of the loss reserve is to develop an estimate of the ultimate losses and loss expenses incurred, and subtract all amounts already paid or held as case or formula reserves.

The determination of ultimate losses and loss expenses integrates information and analysis provided by several disciplines within our Company, including claims, actuarial and accounting. This assessment requires considerable judgment in understanding how claims mature, which lines of business are the most volatile, and how trends change over time. Loss reserves represent an estimate at a given point in time based on many variables including historical and statistical information, inflation, legal developments, storm loss estimates and economic conditions. Although we consider many different sources of information, as well as a number of actuarial methodologies to estimate our loss reserves, there is no single method for determining the exact ultimate liability.

Our internal actuarial staff conducts quarterly reviews of loss development information to assist management in making estimates of ultimate losses and loss expenses. Several factors are considered in estimating ultimate liabilities including consistency in relative case reserve adequacy, consistency in claims settlement practices, recent legal developments, historical data, actuarial projections, exposure growth, current business conditions, catastrophe developments and late reported claims. In addition, reasonableness tests are performed on many of the assumptions underlying each reserving methodology, such as claim frequency, claim severity and loss ratios. Nonetheless, changes which are not contemplated do occur over time, and those changes are incorporated in subsequent valuations of our loss reserves.

We use a number of different methodologies to estimate the IBNR component of our loss reserves. Our loss reserves include amounts related to short-tail and long-tail lines of business. "Tail" refers to the time period between the occurrence of a loss and the settlement of the claim. In general, the longer the time span between the incidence of a loss and the settlement of the claim, the more the ultimate settlement amount can vary. The most common reserving methods and strengths and weaknesses of each are described below.

Short-Tail Business: For short-tail business, claims are typically settled within five years, and the most common actuarial estimates are based on techniques using link ratio projections of incurred losses, paid losses, claim counts and claim severities. Each of these methods is described below in detail. Separate projections are made for catastrophes that are in the very early stages of development based on specific information known through the reporting date.

Incurred Loss Development Method: The Incurred Loss Development Method is probably the most common actuarial method used in projecting indicated IBNR reserves. This method uses paid loss experience as well as the outstanding estimates (formula and case reserves) for claims that have been reported and are still open. With this method, a pattern of reported losses is estimated to project ultimate incurred values for each accident year. An important assumption underlying the Incurred Loss Development Method is that case reserve adequacy remains consistent over time. This method's advantage is its responsiveness to changes in reported losses, which is particularly valuable in the less mature accident years. The disadvantage of the Incurred Loss Development Method is that case reserve adequacy changes can distort the projections.

Paid Loss Development Method: The Paid Loss Development Method uses calculations that are very similar to the Incurred Loss Development Method. The key difference is that the data used in the paid method exclude case reserve estimates, so only paid losses are utilized. With this method, a payment pattern is estimated to project ultimate settlement values for each accident year, with an important underlying assumption that claims are settled at a consistent rate over time. Neither case reserves nor the rate at which claims are reported (except to the extent that the reporting pattern influences the payment pattern) is relevant to the results of this method. This method's advantage is that the estimates of ultimate loss are independent of case reserve adequacy and are unaffected by company changes in case reserving philosophy. The disadvantages are that (i) the paid method does not use all of the available information, (ii) in some cases the liability payment patterns require the application of very large development factors to relatively small payments in less mature accident years, and (iii) changes in the claims settlement rate will distort the projections.

Claim Counts and Severities Method: The Counts and Severities Method calculations are very similar to the development methods described above. The incurred claim counts reported to date are projected to an ultimate number. Similarly, the incurred loss severities are projected to an ultimate value. The ultimate incurred count is multiplied by the ultimate incurred severity, for each accident year, to arrive at the ultimate incurred loss estimate.

Long-Tail Business: For long-tail business, a material portion of claims may not be settled within five years. Reserve estimates for long-tail business use the same methods listed above along with several other methods as determined by the actuary. For example, premium-based methods may be used in developing ultimate loss estimates, including the Expected Loss Ratio and Bornhuetter-Ferguson methods described below.

Expected Loss Ratio Method: The Expected Loss Ratio Method generates indicated IBNR by multiplying an expected loss ratio by earned premiums, then subtracting incurred-to-date losses. For slower reporting lines of business, new products, or data that is very immature, the actual claim data is often too limited or too volatile for other projection methods. With this method the premiums are used as a measure of loss exposure, and the loss ratios can be derived from pricing expectations.

Incurred Bornhuetter-Ferguson Method: The Incurred Bornhuetter-Ferguson Method is a weighted average of the Expected Loss Ratio Method and the Incurred Loss Development Method, using the percentage of losses reported as the weight. This method is particularly useful where there is a low volume of data in the current accident period, or where the experience is volatile. In general, this method produces estimates that are similar to the Incurred Loss Development Method.

Paid Bornhuetter-Ferguson Method: The Paid Bornhuetter-Ferguson Method is a weighted average of the Expected Loss Ratio Method and the Paid Development Method, using the percentage of losses paid as the weight. In less mature accident periods in which payment activity is relatively low, this method produces estimates that are similar to the Expected Loss Ratio Method.

Selection Process: In determining which reserving method to use for a particular line of business or accident year, diagnostic tests of loss ratios and severity trends are considered, as well as the historical case reserve adequacy and claim settlement rate. In general, the Incurred Loss Development Method is used if the projections are stable, the data is credible, historical case reserve adequacy is consistent, and the loss ratios and loss severities are reasonable. Other reserving methods are considered as well for particular lines of business or accident years, along with supplemental information such as open claim counts and prior period development. For example, if more than one method provides a reasonable projection, the actuary may select an average of those methods. There is considerable judgment applied in the analysis of the historical patterns and in applying business knowledge of our underwriting and claims functions.

Reserve ranges provide a quantification of the variability in the loss reserve projections. The primary determinant in estimating the loss reserve range boundaries are the variances measured within the historical reserving data for the various lines of business. Reserves consider the expected variation to establish an appropriate position within a range. At December 31, 2018, loss and loss expenses payable are $1,141.3 million, within an estimated range of $994.2 million to $1,181.3 million.

The potential impact of the loss reserve variability on net income can be illustrated using the range end points and carried reserve amounts listed above. For example, if ultimate losses reach a level corresponding to the high point of the range, $1,181.3 million, the reserve increase of $40.0 million corresponds to an after-tax decrease of $31.6 million in net income, assuming a tax rate of 21%. Likewise, should ultimate losses decline to a level corresponding to the low point of the range, $994.2 million, the $147.1 million reserve decrease would add $116.2 million of after-tax net income. The loss reserve range noted above represents a range of reasonably likely reserves, not a range of all possible reserves. Therefore, the ultimate losses could reach levels corresponding to reserve amounts outside the range provided.

An important assumption underlying certain loss reserve estimation methods for casualty lines is that the loss cost trends underlying historical data will continue into the future. To estimate the sensitivity of reserves to an unexpected change in inflation, projected calendar year payment patterns were applied to the December 31, 2018, workers' compensation loss and ALAE reserve to generate estimated annual incremental loss and ALAE payments for each subsequent calendar year. Then, for purposes of sensitivity testing, an additional annual loss cost trend of 5% was added to the trend implicitly embedded in the estimated payment pattern, and revised incremental loss and ALAE payments were calculated. This type of inflationary increase could arise from a variety of sources including tort law changes, development of new medical procedures, social inflation, and other inflationary changes in costs beyond assumed levels.

The estimated cumulative impact that this additional, unexpected 5% increase in the loss cost trend would have on our results of operations over the lifetime of the underlying claims in workers' compensation is an increase of $111.7 million on reserves, or a $88.2 million reduction to net income, assuming a tax rate of 21%. Inflation changes have much more impact on the longer tail commercial lines like workers' compensation, and much less impact on the shorter tail personal lines.

In addition to establishing loss reserves, as described above, we establish reserves for ULAE. Historical patterns of paid ULAE relative to paid loss are analyzed along with historical claim counts including claims opened, claims closed, and claims remaining open. The product of this analysis is an estimate of the relationship, or ratio, between ULAE and loss underlying the current loss reserves. This ratio is applied to the current outstanding loss reserves to estimate the required ULAE reserve. Consequently, this component of the loss expense reserve has a proportional relationship to the overall claim inventory and held loss reserves. The method assumes that the underlying claims process and mix of business do not change materially from period to period.

The following table sets forth a reconciliation of MBE of our direct loss and LAE reserve to our net losses and loss expenses payable at December 31, 2018 and 2017. The STFC Pooled Companies net additional share of transactions assumed from State Auto Mutual through the Pooling Arrangement for the years ended December 31, 2018 and 2017, respectively, has been reflected in the table below as assumed by STFC Pooled Companies.

($ millions)	**2018**		2017
Direct loss and ALAE reserve:			
STFC Pooled Companies	**$**	**523.1**	527.1
Assumed by STFC Pooled Companies	**633.0**		731.5
Total direct loss and ALAE reserve	**1,156.1**		1,258.6
Direct ULAE reserve:			
	28.7		29.8

STFC Pooled Companies			
Assumed by STFC Pooled Companies	**30.7**		33.8
Total direct ULAE reserve	**59.4**		63.6
Direct salvage and subrogation recoverable:			
STFC Pooled Companies	**(20.9)**		(21.9)
Assumed by STFC Pooled Companies	**(4.0)**		(3.6)
Total direct salvage and subrogation recoverable	**(24.8)**		(25.5)
Reinsurance recoverable	**(5.5)**		(3.1)
Assumed reinsurance	**22.3**		9.2
Reinsurance assumed by STFC Pooled Companies	**(66.2)**		(50.3)
Total losses and loss expenses payable, net of reinsurance recoverable on losses and loss expenses payable of $5.5 million and $3.1 million in 2018 and 2017, respectively	**$**	**1,141.3**	1,252.5

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The following tables set forth the net losses and loss expenses payable by major line of business at December 31, 2018 and 2017:

($ millions) **December 31, 2018**	Ending Loss & ALAE Case & Formula		Ending Loss & ALAE IBNR	Ending ULAE Bulk	Total Reserves
Personal Insurance Segment:					
Personal Auto	**$**	**125.9**	**40.2**	**7.1**	**173.2**
Homeowners	**32.6**		**17.3**	**3.3**	**53.2**
Other personal	**5.3**		**8.2**	**0.6**	**14.1**
Total Personal Insurance Segment	**163.8**		**65.7**	**11.0**	**240.5**
Commercial Insurance Segment:					
Commercial Auto	**47.4**		**29.0**	**2.5**	**78.9**
Small Commercial Package	**48.8**		**65.7**	**5.5**	**120.0**
Middle Market Commercial	**63.0**		**70.2**	**14.0**	**147.2**
Workers' Compensation	**66.9**		**115.2**	**13.3**	**195.4**
Farm & Ranch	**8.1**		**4.2**	**0.6**	**12.9**
Other Commercial	**1.2**		**26.2**	**0.1**	**27.5**
Total Commercial Insurance Segment	**235.4**		**310.5**	**36.0**	**581.9**
Specialty Insurance Segment:					
E&S Property	**20.1**		**12.3**	**0.7**	**33.1**
E&S Casualty	**50.6**		**127.0**	**9.2**	**186.8**
Programs	**50.2**		**45.9**	**2.9**	**99.0**
Total Specialty Insurance Segment	**120.9**		**185.2**	**12.8**	**318.9**
Total losses and loss expenses	**$**	**520.1**	**561.4**	**59.8**	**1,141.3**

payable net of reinsurance recoverable on losses and loss expenses payable

($ millions) December 31, 2017	Ending Loss & ALAE Case & Formula		Ending Loss & ALAE IBNR	Ending ULAE Bulk	Total Reserves
Personal Insurance Segment:					
Personal Auto	$	125.7	56.4	9.7	191.8
Homeowners	28.8		18.5	3.2	50.5
Other personal	5.6		7.6	0.6	13.8
Total Personal Insurance Segment	160.1		82.5	13.5	256.1
Commercial Insurance Segment:					
Commercial Auto	53.2		35.7	3.2	92.1
Small Commercial Package	51.6		66.7	6.2	124.5
Middle Market Commercial	59.6		77.8	14.0	151.4
Workers' Compensation	68.3		112.5	12.6	193.4
Farm & Ranch	10.1		5.5	0.8	16.4
Other Commercial	3.8		22.6	0.1	26.5
Total Commercial Insurance Segment	246.6		320.8	36.9	604.3
Specialty Insurance Segment:					
E&S Property	44.3		19.6	0.9	64.8
E&S Casualty	38.7		129.2	8.9	176.8
Programs	58.6		88.1	3.7	150.4
	141.6		236.9	13.6	392.1

Total Specialty Insurance Segment					
Total losses and loss expenses payable net of reinsurance recoverable on losses and loss expenses payable	$	548.3	640.2	64.0	1,252.5

See discussion in "Results of Operations—Loss and LAE Development" section included in this Item 7.

The property and casualty industry has experienced significant loss from claims related to asbestos, environmental remediation, product liability, mold and other mass torts. Because we have insured primarily product retailers and distributors, we do not expect to incur the same level of liability, particularly related to asbestos, as companies that have insured manufacturing risks.

Asbestos reserves were $1.2 million, and environmental reserves were $16.7 million, for a total of $17.9 million, or 1.6% of net losses and loss expenses payable. Relative to December 31, 2017, asbestos reserves were unchanged and environmental reserves decreased $0.4 million.

Pension and Postretirement Benefit Obligations

Pension and postretirement benefit obligations are long-term in nature and require management's judgment in estimating the factors used to determine these amounts. We review these factors annually, including the discount rate and expected long-term rate of return on plan assets. Because these obligations are based on estimates which could change, the ultimate benefit obligation could be different from the amount estimated.

The State Auto Group has a defined benefit pension plan covering substantially all employees hired prior to January 1, 2010 and a postretirement healthcare plan covering certain associates and retirees (collectively "the benefit plans"). We record the funded status of these plans on our balance sheet while the annual net periodic costs are allocated to affiliated companies based on allocations pursuant to intercompany management agreements including the Pooling Arrangement for insurance subsidiaries and affiliates party to this agreement. We receive reimbursement of 35% of the annual net periodic costs from the Mutual Pooled Companies in accordance with the terms of the Pooling Arrangement.

Several factors, which attempt to anticipate future events, are used in calculating the expense and liability related to the benefit plans. Key factors include assumptions about the expected rates of return on plan assets, discount rates, and health care cost trend rates. We consider market conditions, including changes in investment returns and interest rates, in making these assumptions. The actuarial assumptions used by us in determining benefit obligations may differ materially from actual results due to changing market and economic conditions, higher or lower turnover and retirement rates, or longer or shorter life spans of participants. While we believe that the assumptions used are appropriate, differences in actual experience or changes in assumptions may materially affect our financial position or results of operations.

For the December 31, 2018 and 2017 valuations, the Adjusted RP-2014 mortality table was used as a baseline for the mortality assumption and to project future mortality rates. Incorporated into the table are rates projected generationally using Scale MP-2017 to reflect mortality improvement (Scale MP-2016 was used at the beginning of the year). The January 1, 2018 and 2017 actuarial reports of the benefit plans included these revised mortality assumptions.

To calculate the State Auto Group's December 31, 2018 benefit obligation for each of the benefit plans, we used a discount rate of 4.12% based on an evaluation of the expected future benefit cash flows of our benefit plans used in conjunction with the Citigroup Pension Discount Curve at the measurement date. A lower discount rate, all else being equal, results in a higher present value benefit obligation. To calculate our benefit obligation at December 31, 2018 and net periodic benefit cost for the year ended December 31, 2019, a discount rate of 4.12% and an expected long-term rate of return on plan assets of 7.00% were used. We selected an expected long-term rate of return on our plan assets by considering the mix of investments and stability of investment portfolio along with actual investment experience during the lifetime of the plans. Our assumptions regarding the discount rate and expected return on plan assets could have a significant effect on the amounts related to our benefit obligations and net periodic benefit cost depending on the degree of change between reporting periods.

As a result of revised mortality assumptions and the change in the discount rate, the benefit plan's liability increased $5.0 million for the year ended December 31, 2018 and increased $1.1 million for the year ended December 31, 2017.

The following table sets forth an illustration of variability with respect to the discount rate on the December 31, 2018 benefit obligation and expected net periodic benefit cost for the year ending December 31, 2019, along with the variability of the expected return on plan assets to the expected net periodic benefit cost for the year ending December 31, 2019. Holding all other assumptions constant, sensitivity to changes in any one of our key assumptions are as follows:

($ millions)	Pension			Postretirement		
	Discount rate			Discount rate		
	3.87%	4.12%	4.37%	3.87%	4.12%	4.37%
Benefit obligation	$ 443.1	428.1	413.2	$ 26.1	25.5	25.1
Net periodic benefit cost (benefit)	$ 5.3	4.4	3.6	$ (4.7)	(4.6)	(4.6)
	Expected return on plan assets					
	6.50%	6.75%	7.00%			
Net periodic benefit cost	$ 5.1	4.4	4.6			

The accumulated benefit obligation (“ABO”) of a defined benefit pension plan represents the actuarial present value of benefits attributed by the pension benefit formula to employee service rendered prior to the measurement date and based on current and past compensation levels, while the projected benefit obligation (“PBO”) is the ABO plus a factor for future compensation levels. The ABO, which considers current compensation levels only, provides information about the obligation an employer would have if the plan were discontinued at the measurement date. At December 31, 2018, our ABO and PBO was $406.5 million and $428.1 million, respectively. At December 31, 2018, STFC’s defined benefit pension plan’s fair value of the assets was $381.6 million, which resulted in an underfunded status within our balance sheet of $46.5 million. On a cash flow basis, we target an annual contribution level that meets at least the targeted normal cost plus any shortfall amortizations of the plan, as defined by ERISA. Currently, we expect to make a cash contribution to the pension plan up to $15.0 million in 2019.

The unfunded status on the pension plan and supplemental executive retirement plan decreased from $71.0 million at December 31, 2017, to $57.5 million at December 31, 2018. Primarily influencing the change from year to year are actuarial gains and losses arising from factors that include (i) changes in the discount rate, (ii) expected to actual demographic changes, such as retirement age, mortality, turnover, rate of compensation changes, and (iii) changes in returns on our plan assets.

See Note 11, “Pension and Postretirement Benefit Plans,” to our consolidated financial statements included in Item 8 of this Form 10-K for further disclosures regarding our benefit plans.

Income Taxes

For 2018, we recognized federal income tax benefit of $0.1 million compared to a federal income tax expense of $52.8 million for 2017 and federal income tax benefit of $0.4 million for 2016. Income taxes for the year ended 2017 reflect provisional deferred tax expense of $43.5 million attributable to the revaluation of our deferred tax assets and liabilities as a result of the enactment of the TCJA. Income taxes for the year ended 2016 reflect the impact of a correction of prior period deferred tax expense related to expired stock options. As a result of the correction, deferred federal income tax expense and additional paid-in-capital were reduced by $1.6 million, respectively.

In computing taxable income, property and casualty insurers are required to discount their unpaid loss reserves. TCJA changed the prescribed interest rates to rates based on corporate bond yield curves, required the use of IRS-prescribed claims payment patterns and extended the applicable time periods for the claims payment patterns. These changes were effective for tax years beginning after 2017 and were subject to a transition rule that spreads the additional tax payment from the amount determined by applying these changes over the subsequent eight years beginning in 2018. The pre-tax provisional change in discounted loss reserves attributable to the TCJA changes to loss reserve discounting was determined to be $50.9 million at December 31, 2017. As a result of changes to the IRS Code, deferred tax assets were increased by that amount, with an offsetting deferred tax liability. The deferred tax liability will be amortized over a period of eight years beginning in 2018. This item is a taxable temporary difference and has no direct impact on total tax expense for 2017 and future years.

Deferred income tax assets and liabilities represent the tax effect of the differences between the financial statement carrying value of existing assets and liabilities and their respective tax bases. In accordance with the FASB's ASC 740, Income Taxes (ASC 740), we periodically evaluate our deferred tax assets, which requires significant judgment, to determine if they are realizable based upon weighing all available evidence, both positive and negative, including our historical and anticipated future taxable income. In making such judgments, significant weight is given to evidence that can be objectively verified.

Management anticipates generating taxable income over the next three years that will allow for the realization of all of our net operating loss ("NOL") carryforwards by the end of 2020. The NOL carryforwards do not begin to expire until 2032 and will not fully expire until 2036.
The following table sets forth the components of our federal income tax expense (benefit) for the years ended December 31, 2018, 2017 and 2016:

($ millions)	**2018**		2017		2016	
Income before federal income taxes	**$**	**12.9**	$	35.0	$	18.8
Current tax (benefit) expense	**(1.1)**		0.4		(1.7)	
Deferred tax expense	**1.2**		52.4		1.3	
Total federal income tax expense (benefit)	**0.1**		52.8		(0.4)	
Net income (loss)	**$**	**12.8**	$	(17.8)	$	19.2

See Note 10, "Federal Income Taxes," to our consolidated financial statements included in Item 8 of this Form 10-K for further disclosures regarding our income tax matters.

Other

Other items that could have a significant impact on the financial statements include the risks and uncertainties listed in Item 1A of this Form 10-K under "Risk Factors." Actual results could differ materially using different estimates and assumptions, or if conditions are significantly different in the future.

Item 7A. Qualitative and Quantitative Disclosures about Market Risk

Qualitative and Quantitative Disclosures about Market Risk are included in Item 7 of this Form 10-K under "Results of Operations—Investment Operations Segment—Market Risk."

Item 8. Financial Statements and Supplementary Data

Our consolidated financial statements, including the notes thereto, and the reports of Ernst & Young LLP on our consolidated financial statements and our internal controls over financial reporting are as follows:

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors of State Auto Financial Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of State Auto Financial Corporation and subsidiaries (the Company) as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and financial statement schedules listed in the Index at Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 15, 2019 expressed an unqualified opinion thereon.

Adoption of ASU No. 2016-01

As discussed in Note 1 to the consolidated financial statements, the Company changed its method of accounting for the recognition and measurement of certain financial instruments in 2018 due to the adoption of ASU No. 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1994

Grandview Heights, Ohio

March 15, 2019

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Report of Independent Registered Public Accounting Firm on Internal Control over Financial Reporting

To the Stockholders and the Board of Directors of State Auto Financial Corporation

Opinion on Internal Control over Financial Reporting

We have audited State Auto Financial Corporation and subsidiaries' internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission "(2013 framework)" (the COSO criteria). In our opinion, State Auto Financial Corporation and subsidiaries (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (the PCAOB), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and financial statement schedules listed in the Index at Item 15(a)(2) and our report dated March 15, 2019, expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

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

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Ernst & Young LLP

Grandview Heights, Ohio

March 15,
2019

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STATE AUTO FINANCIAL CORPORATION AND SUBSIDIARIES
(a majority-owned subsidiary of State Automobile Mutual Insurance Companies)

Consolidated Balance Sheets

($ and shares in millions, except per share amounts)	December 31			
	2018		2017	
Assets				
Fixed maturities, available-for-sale, at fair value (amortized cost $2,188.2 and $2,173.1, respectively)	**$**	**2,159.5**	$	2,192.8
Equity securities	**315.0**		365.3	
Other invested assets	**48.8**		56.0	
Other invested assets, at cost	**5.6**		5.6	
Notes receivable from affiliate	**70.0**		70.0	
Total investments	**2,598.9**		2,689.7	
Cash and cash equivalents	**59.8**		91.5	
Accrued investment income and other assets	**32.4**		36.5	
Deferred policy acquisition costs (affiliated net assumed $48.3 and $57.2, respectively)	**101.9**		110.3	
Reinsurance recoverable on losses and loss expenses payable	**5.5**		3.1	
Prepaid reinsurance premiums	**6.6**		6.4	
Current federal income taxes	**5.9**		4.8	
Net deferred federal income taxes	**77.8**		69.5	
Property and equipment, at cost (net of accumulated depreciation of $7.5	**7.1**		7.3	

and $7.2, respectively)				
Total assets	**$**	**2,895.9**	$	3,019.1
Liabilities and Stockholders' Equity				
Losses and loss expenses payable (affiliated net assumed $593.6 and $711.4, respectively)	**$**	**1,146.8**	$	1,255.6
Unearned premiums (affiliated net assumed $112.4 and $187.9, respectively)	**584.2**		611.8	
Notes payable (affiliates $15.2 and $15.2, respectively)	**122.0**		122.1	
Pension and postretirement benefits	**83.0**		99.3	
Due to affiliate	**22.4**		18.6	
Other liabilities (affiliated net assumed $17.7 and $15.5, respectively)	**119.0**		76.7	
Total liabilities	**2,077.4**		2,184.1	
Stockholders' equity:				
Class A Preferred stock (nonvoting), without par value. Authorized 2.5 shares; none issued	**—**		—	
Class B Preferred stock, without par value. Authorized 2.5 shares; none issued	**—**		—	
Common stock, without par value. Authorized 100.0 shares; 50.0 and 49.2 shares issued, respectively, at	**125.0**		123.0	

stated value of $2.50 per share				
Treasury stock, 6.8 and 6.8 shares, respectively, at cost	**(117.0)**		(116.8)	
Additional paid-in capital	**194.2**		171.8	
Accumulated other comprehensive (loss) income	**(96.4)**		3.8	
Retained earnings	**712.7**		653.2	
Total stockholders' equity	**818.5**		835.0	
Total liabilities and stockholders' equity	**$**	**2,895.9**	$	3,019.1

See accompanying notes to consolidated financial statements.

STATE AUTO FINANCIAL CORPORATION AND SUBSIDIARIES
(a majority-owned subsidiary of State Automobile Mutual Insurance Companies)

Consolidated Statements of Income

($ millions, except per share amounts)	Year ended December 31					
	2018		2017		2016	
Earned premiums (affiliated net assumed $318.3, $459.0, and $471.2, respectively)	**$**	**1,238.0**	$	1,276.1	$	1,291.1
Net investment income (affiliates $4.9, $4.9, and $4.9, respectively)	**84.9**		78.8		74.7	
Net investment (loss) gain:						
Total other-than-temporary impairment losses	**—**		(3.5)		(6.8)	
Other investment (loss) gains	**(49.7)**		68.6		43.3	
Total net investment (loss) gain	**(49.7)**		65.1		36.5	
Other income from affiliates	**2.6**		2.3		2.3	
Total revenues	**1,275.8**		1,422.3		1,404.6	
Losses and loss expenses (affiliated net assumed $180.5, $379.4, and $383.8, respectively)	**796.4**		918.3		942.3	
Acquisition and operating expenses (affiliated net assumed $108.7, $160.7, and $154.6, respectively)	**449.8**		455.2		430.1	
Interest expense (affiliates $1.0, $0.8, and $0.7, respectively)	**5.7**		5.9		5.5	
Other expenses	**11.0**		7.9		7.9	
Total expenses	**1,262.9**		1,387.3		1,385.8	
Income before federal income taxes	**12.9**		35.0		18.8	
Federal income tax expense (benefit):						
Current	**(1.1)**		0.4		(1.7)	
Deferred	**1.2**		52.4		1.3	

Total federal income tax expense (benefit)	**0.1**		52.8		(0.4)	
Net income (loss)	**$**	**12.8**	$	(17.8)	$	19.2
Earnings (loss) per common share:						
Basic	**$**	**0.30**	$	(0.42)	$	0.46
Diluted	**$**	**0.29**	$	(0.42)	$	0.46
Dividends paid per common share	**$**	**0.40**	$	0.40	$	0.40

See accompanying notes to consolidated financial statements.

STATE AUTO FINANCIAL CORPORATION AND SUBSIDIARIES
(a majority-owned subsidiary of State Automobile Mutual Insurance Companies)

Consolidated Statements of Comprehensive Income

($ millions)	Year ended December 31		
	2018	2017	2016
Net income (loss)	$ 12.8	$ (17.8)	$ 19.2
Other comprehensive (loss) income, net of tax:			
Net change in unrealized holding (loss) gain on available-for-sale investments:			
Unrealized holding (losses) gains arising during year	(46.4)	69.0	27.8
Reclassification adjustments for gains realized in net income	(2.0)	(65.1)	(36.5)
Income tax benefit (expense)	10.1	(0.7)	3.0
Total change in net unrealized holding (loss) gain on available-for-sale investments	(38.3)	3.2	(5.7)
Net unrecognized benefit plan obligations:			
Net actuarial loss arising during period	(4.3)	(1.5)	(4.6)
Reclassification adjustments for amortization to statements of income:			
Negative prior service cost	(6.3)	(6.3)	(6.2)
Net actuarial gain	13.2	12.5	14.9
Income tax expense	(0.6)	(1.7)	(1.5)
Total net unrecognized	2.0	3.0	2.6

benefit plan obligations						
Other comprehensive (loss) income		(36.3)		6.2		(3.1)
Comprehensive (loss) income	$	(23.5)	$	(11.6)	$	16.1

See accompanying notes to consolidated financial statements.

STATE AUTO FINANCIAL CORPORATION AND SUBSIDIARIES
(a majority-owned subsidiary of State Automobile Mutual Insurance Companies)

Consolidated Statements of Stockholders' Equity

(in millions)	Year ended December 31					
	2018		2017		2016	
Common shares:						
Balance at beginning of year	**49.2**		48.6		48.1	
Issuance of shares	**0.8**		0.6		0.5	
Balance at end of year	**50.0**		49.2		48.6	
Treasury shares:						
Balance at beginning of year	**(6.8)**		(6.8)		(6.8)	
Balance at end of year	**(6.8)**		(6.8)		(6.8)	
Common stock:						
Balance at beginning of year	**$**	**123.0**	$	121.6	$	120.4
Issuance of shares	**2.0**		1.4		1.2	
Balance at end of year	**$**	**125.0**	$	123.0	$	121.6
Treasury stock:						
Balance at beginning of year	**$**	**(116.8)**	$	(116.5)	$	(116.3)
Shares acquired on stock award exercises and vested restricted shares	**(0.2)**		(0.3)		(0.2)	
Balance at end of year	**$**	**(117.0)**	$	(116.8)	$	(116.5)
Additional paid-in capital:						
Balance at beginning of year	**$**	**171.8**	$	159.9	$	153.5
Issuance of common stock	**13.3**		8.8		6.8	
Tax expense from stock option exercises	**—**		—		(3.0)	
Stock awards granted	**9.1**		3.1		2.6	
Balance at end of year	**$**	**194.2**	$	171.8	$	159.9

Accumulated other comprehensive (loss) income:			
Balance at beginning of year	**$ 3.8**	$ (2.4)	$ 0.7
Cumulative effect of change in accounting for equity securities and other invested assets and reclassification of stranded tax effects as of January 1, 2018	**(63.9)**	—	—
Adjusted beginning balance at January 1, 2018	**(60.1)**	(2.4)	0.7
Change in unrealized holding (loss) gain on investments, net of tax	**(38.3)**	3.2	(5.7)
Change in unrecognized benefit plan obligations, net of tax	**2.0**	3.0	2.6
Balance at end of year	**$ (96.4)**	$ 3.8	$ (2.4)
Retained earnings:			
Balance at beginning of year	**$ 653.2**	$ 687.9	$ 685.3
Cumulative effect of change in accounting for equity securities and other invested assets and reclassification of stranded tax effects as of January 1, 2018	**63.9**	—	—
Adjusted beginning balance at January 1, 2018	**717.1**	687.9	685.3
Net income (loss)	**12.8**	(17.8)	19.2
Dividends declared (affiliates $10.4, $10.4 and $10.4, respectively)	**(17.2)**	(16.9)	(16.6)

Balance at end of year	**$**	**712.7**	$	653.2	$	687.9
Total stockholders' equity at end of year	**$**	**818.5**	$	835.0	$	850.5

See accompanying notes to consolidated financial statements.

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STATE AUTO FINANCIAL CORPORATION AND SUBSIDIARIES
(a majority-owned subsidiary of State Automobile Mutual Insurance Companies)

Consolidated Statements of Cash Flows

($ millions)	Year ended December 31		
	2018	2017	2016
Cash flows from operating activities:			
Net income (loss)	**$ 12.8**	$ (17.8)	$ 19.2
Adjustments to reconcile net income (loss) to net cash (used in) provided by operating activities:			
Depreciation and amortization, net	**8.9**	12.5	14.6
Share-based compensation	**11.1**	4.2	3.7
Net investment loss (gain)	**49.7**	(65.1)	(36.5)
Changes in operating assets and liabilities:			
Deferred policy acquisition benefits	**8.4**	11.5	(1.4)
Accrued investment income and other assets	**3.9**	3.5	(4.5)
Postretirement and pension benefits	**(16.9)**	(14.8)	(48.0)
Reinsurance recoverable on losses and loss expenses payable and prepaid reinsurance premiums	**(2.6)**	0.2	3.0
Other liabilities and due to/from affiliates, net	**47.6**	11.3	33.7
Losses and loss expenses payable	**(108.8)**	74.0	128.6
Unearned premiums	**(27.6)**	(6.0)	1.5

Excess tax expense on share-based awards	**0.9**		—		(0.2)	
Federal income taxes	**(0.8)**		54.4		(0.2)	
Net cash (used in) provided by operating activities	**$**	**(13.4)**	$	67.9	$	113.5
Cash flows from investing activities:						
Purchases of fixed maturities available-for-sale	**$**	**(349.6)**	$	(505.4)	$	(589.3)
Purchases of equity securities	**(91.4)**		(185.9)		(143.1)	
Purchases of other invested assets	**(1.8)**		(1.4)		(1.5)	
Maturities, calls and pay downs of fixed maturities available-for-sale	**229.8**		233.6		240.9	
Sales of fixed maturities available-for-sale	**98.0**		184.8		211.6	
Sales of equity securities	**97.8**		252.7		153.0	
Sales of other invested assets	**1.2**		1.1		0.8	
Net cash used in investing activities	**$**	**(16.0)**	$	(20.5)	$	(127.6)
Cash flows from financing activities:						